

FY 2010 WORK PLAN/ October 1, 2009 - September 30, 2010

Attachment III

Optional Work Plan Format

Optional work plan format for new projects and for reporting status of ongoing projects.

*CCMP goals and Clean Water Act core program numbers can be referenced at the end of this section.

Volunteer Horseshoe Crab Monitoring Program

CCMP/Work Plan Goal: FW 1, FW 3, WQ 6

Project/Activity Name: Volunteer Horseshoe Crab Monitoring program

Project/Activity Purpose and Description: (ongoing)

To assess the current population status of Atlantic horseshoe crabs

Responsible Partners and Their Role(s):

Coastal Bays Program – program leader

Individual citizens monitor specific sites every May and June

Maryland Department of Natural Resources (DNR) synthesizes data

Outputs/Products:

Breeding, size, behavioral, and population data. Public engagement & appreciation of habitat preservation

Milestones:

Monitoring occurs every May and June and has been a viable program since 2002. This is the only survey in the state of Maryland. Results have been presented to the Atlantic Marine Fisheries Commission and are being used in fisheries management plans for horseshoe crab landings.

Budget:^b

Staff time only - 100 hrs/yr at \$23/hr or \$2,300 EPA funds. DNR staff time estimated at 20 hours at \$25/hr.

Outcomes:

- 1) Short-term – public education and newspaper coverage
- 2) Intermediate – education and anecdotal crab population estimates
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term - viable population targets, goals and management

CWA core programs: Wetland program

Volunteer and staff water quality monitoring

CCMP/Work Plan Goal: WQ 2, 4, 6, 7, CE 1-4

Project/Activity Name: Maryland Coastal Bays Volunteer Water Quality Monitoring Program

Project/Activity Purpose and Description: (ongoing) Volunteers are engaged to monitor near-shore estuarine areas to supplement other water monitoring programs. This program began in 1997 and has approximately 20 sites which are monitored monthly for nutrient concentrations and site conditions. Similarly, MCBP staff monitors areas of special concern (restoration projects, citizen concerns, CCMP partner projects, stream sampling for nutrient loading estimates).

Responsible Partners and Their Role(s):
Maryland Coastal Bays Program: Organizer

Outputs/Products: This program has an EPA approved QAPP and samples are lab analyzed using approved methods. The resulting data is used not only for public outreach and engagement, but also to supplement other studies and state/federal sampling programs. Annual stream sampling surveys are revealing areas of high nutrient loading and support TMDL scenarios.

Milestones: MCBP Volunteer Water Quality Monitoring Report (1997 – 2002)
Presentation at the Atlantic Estuarine Research Society conference (2009)
Stream data collection may be incorporated as an indicator for the Program
All Program data has been submitted to the state for incorporation into the 2010 Integrated Report of Surface Water Quality in compliance with the federal Clean Water Act.

Budget: MCBP \$20,000

Outcomes:

- 1) Short-term: public education
- 2) Intermediate: public education
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term: public education and supplemental data to support and prioritize watershed projects. Pre and post monitoring of the Bishopville Dam removal project and Lizard Hill Restoration project

CWA core programs: 2, 3, 4

Ayers Kayak Launch & Interpretive Water Trail

CCMP/Work Plan Goal: RN 5, CE 3

Project/Activity Name: Development of Canoe and Kayak Launch and trail on restored brownfield (Ocean City Municipal dump site).

Project/Activity Purpose and Description: new

Responsible Partners and Their Role(s): MDNR expertise; Town of Ocean City - property owner; Worcester County - grant sponsor; DLITE – trail design, SHA National Recreational Trails Grant. Coordinate: MCBP

Outputs/Products: The goal of the project is to provide water access along Ayres Creek at an area known as the Ocean City Dump. The area is currently owned by the Town of Ocean City and was used as a municipal and rubble dump from 1954 – 1980. From 1980 – 1989 the area was used as a police shooting range. The area has since been cleaned of toxic materials and has been cleared by MDE in 2007. The water access will provide a route for paddlers to travel along picturesque Ayres Creek and Newport, Chincoteague and Sinepuxent Bays. This water trail, starting on Ayres Creek will flow approximately six miles to the Worcester County public boat ramp at South Point on Chincoteague Bay. The development of the Ayres Creek Water Trail will be an important tool that will promote tourism to the area by providing the only public water access in upper Ayres Creek that would connect to already established areas. Expanding water trails enhances water based recreational opportunities in the area. In addition it will also help local environmental organizations protect the viewshed and water quality of Newport, Chincoteague and Sinepuxent Bays.

Milestones:

Initiated: Nov 2008

Plan design: Mar 2009

Construction: Sept 2009

Design of interpretive panels: June 2009

Panel Installation: Nov 2009

Budget: Federal and state funds requested and specific use:

Ayers Creek Canoe and Kayak Launch	
Wooden ramp	\$18,500
Automatic entrance gate	\$18,000
Road improvement	\$7,000
Shoreline improvement	\$5,500
Total Cost	\$49,000

Outcomes: (report and/ completed accomplishments)

- 1) Short-term: public recreation and education
- 2) Intermediate: Provide recreation opportunities
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term: Habitat, species protection, education

CWA core programs: Wetland program

Blue Crab Issues Investigation Program

CCMP/Work Plan Goal: WQ 1, 2; FW 2; CE 1, 2

Project/Activity Name: Blue Crab Issues Investigation Program

Project/Activity Purpose and Description:

Through their participation in Blue Crab Issues Investigation, 200 gifted & talented students from county schools are engaged in an intensive program of study investigating the blue crab. The Maryland Coastal Bays Program is hooking them up with the experts – scientists, heritage-bearers and watermen from the lower shore, officials from Delmarva Low-Impact Tourism Experiences and Assateague State Park, and more. This is a unique opportunity to involve students in an issue that is extremely relevant- and happening right in their backyard.

Responsible Partners and Their Role(s):

Board of Education – Susan Bounds, TAD Gifted & Talented teacher/coordinator
Maryland Coastal Bays Program – program coordination & program delivery
Delmarva Low-Impact Tourism Experiences – program delivery
Assateague State Park – program delivery
Community Foundation of the Eastern Shore – funder

Outputs/Products:

Comprehensive, 3 ½ month education program
Participants: 200 local students from 10 different schools
Final presentations for community leaders & elected officials

Milestones: (including initiated, target, delivery, and completion dates)

Funding received: November 2008
Program development: November 2008 – March 2009
Program delivery: March – June, 2009
Final program presentations: June 4 & 5, 2009

Budget: (amount and source, including type of non-federal cost share)

\$5,000 Excellence in Education grant received by Board of Education from Community Foundation of the Eastern Shore

Outcomes: (report anticipated and/or completed accomplishments)

The Blue Crab Issues Investigation program challenges gifted and talented students and engages them in issues-based education which helps to develop critical thinking and problem-solving skills, address diverse stakeholder perspectives, and to increase awareness and understanding of the complexities of sustainability and conservation.

By using the environment as an integrating context, the program offers unique opportunities for students to develop higher-level thinking skills, link to higher education by working side-by-side with graduate students conducting real research, engage in cooperative learning as they work in teams to address specific issues, and to be exposed to a variety of science-related careers as they interact with field experts. Additionally, students develop a fuller understanding of our local heritage and increased environmental literacy.

CWA Core Programs: 2

Coastal Stewards

CCMP/Work Plan Goal: WQ 1, 2; FW 2; CE 1, 2

Project/Activity Name: Coastal Stewards

Project/Activity Purpose and Description:

Recruit and hire 9 local high school students (ages 16 – 19), many of whom have been involved in the Upward Bound program (primarily low-income, minority students). These youth interns will develop job skills and receive special training in interpretation, outreach, and natural resource restoration. These interns will be given work experience – in green jobs – conducting programs and projects at local parks, natural areas, museums, and heritage sites. Three local youth (ages 20 – 24) will be selected to serve as Team Leaders for teams of three Coastal Stewards.

Responsible Partners and Their Role(s):

Maryland Coastal Bays Program – program coordination & administration; Delmarva Low-Impact Tourism Experiences – training; Assateague Island National Seashore – work site; Assateague State Park – work site; Lower Shore Workforce Alliance – funder; National Park Service – funder

Outputs/Products:

12 low-income youth hired for summer employment
Comprehensive job skills training delivered
Education & Outreach in the coastal area for the duration of the summer, reaching thousands of local residents & visitors – connecting them with nature & fostering stewardship

Milestones: (including initiated, target, delivery, and completion dates)

\$67,600 secured – Spring 2009
Recruitment & Training (12 youth): May-June 2009
Summer Employment (12 youth): July-August 2009

Budget: (amount and source, including type of non-federal cost share)

\$34,000 (ARRA stimulus funding) received to pay for training and wages
\$29,600 (National Park Service) received to provide equipment, uniforms, transportation, etc.
\$4,000 (Berlin-Ocean City Optimists Club)
Total: \$67,600 (as of May 09); additional funding still being sought

Outcomes: (report anticipated and/or completed accomplishments)

The Coastal Stewards program will expand our ability to deliver and develop coordinated education and outreach on Maryland's lower Eastern Shore. Coastal Stewards will develop model projects to educate the public about environmental issues in their communities. Training and compensation will encourage students to consider careers in environmental work. The Coastal Stewards program will challenge students and engage them in issues-based education which will help develop critical thinking and problem-solving skills, address diverse stakeholder perspectives, and increase awareness and understanding of the complexities of sustainability and conservation.

The intensive training program provided to Coastal Stewards will take place in a variety of locations with different partner organizations in order to maximize students' exposure to different professional organizations and missions. Locations will include opportunities for field study, workshops at partner organizations, and participation in professional conferences and activities. Additionally, students develop a fuller understanding of our shared local heritage and will increase environmental literacy.

Nutrient Reduction Action Strategy

CCMP/Work Plan Goal: WQ 1-5

Project/Activity Name: Nutrient Reduction Action Strategy

Project/Activity Purpose and Description: (ongoing) Plan to reduce nutrient inputs into the water bodies in the watershed. The Strategy involves a wide range of user groups involved in water quality improvement. It contains specific recommendations for point sources, an outstanding national resource water designation, and nonpoint sources. It will help determine effective ways to implement TMDLs. Work in the plan will help both create and achieve environmental indicators and quantifiable goals. See attachment I.

Responsible Partners and Their Role(s): MDE, MDP, MDA, NPS, DNR, NRCS, Worcester County, Towns of Berlin, Ocean City in concerted effort.

Outputs/Products: Improved water quality, TMDL implementation. Indicators, quantifiable goals dovetail this work.

Milestones: Finalized by partners December 2009
Implementation Phase – May 2008 – 2014
Creation of BMP Subcommittee - Jan 2009
See accomplishments in Section C

Budget: A budget has not been determined yet; implementation plan has not been completed. Cost will be in the millions of dollars.

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term: Incorporation of recommendations in County Sewer and Water plan, public education, agency collaboration
- 2) Intermediate: Increased use of cover crops, no new point source discharges, improved septic systems, improved stormwater management
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term – No impaired water bodies within the watershed

CWA core programs: 1, 4, 5, 6

Terrestrial Monitoring Plan

CCMP/Work Plan Goal: FW 1-5

Project/Activity Name: Development of Terrestrial Monitoring Plan

Project/Activity Purpose and Description: ongoing

Responsible Partners and Their Role(s): Data/input: DNR, Salisbury University, Towson University. Coordinate: MCBP

Outputs/Products: The plan will include a recommended project management structure, an initial set of key ecological indicators for the region, a regional monitoring methodology, a data repository infrastructure and recommended data flow. Appendices of references to existing data as appropriate for each scale of data collection will be provided as well as contributing investigators and data experts.

Milestones:

Initiated June 2007

Workshop Sept 2007

Plan submittal Jan. 2009

Habitat Workshop May 2009

Habitat monitoring implementation grant March 2009

Budget:^b \$25,000 Implementation grant from MCBP to DNR

Outcomes: (report anticipated and/or completed accomplishments)

- 5) Short-term: public education
- 6) Intermediate: Viable data on terrestrial habitats
- 7) Changes (+/-) in Pressure Targets
- 8) Long-term: Habitat and species protection

CWA core programs: Wetland program

Bishopville Dam modification and restoration

CCMP/Work Plan Goal: FW1, 3

Project/Activity Name: Bishopville Dam Removal and Wetland Restoration

Project/Activity Purpose and Description: Dam removal for fish passage and restoration of nearby abandoned gravel mine to Atlantic white cedar wetland

Responsible Partners and Their Role(s): Depart Natural Resources (technical assistance), Worcester County, State Highway Administration (property owner).

Outputs/Products:

1. Dam removal to allow for passage for river herring, white perch and the restoration of approximately 3 acres of tidal/nontidal wetland/stream habitat and opening of approximately 7 miles of upstream habitat for anadromous fish spawning.
2. **Floodplain Restoration** - **Reduction** of nitrogen loads and enhancement of 41 acres of floodplain wetland:
3. **Re-establishment of Atlantic White Cedar Wetlands Community:** – Atlantic white cedar swamps are home to multiple endangered species including pitcher plants, swamp pink, and the endangered Hessler's Hairstreak Butterfly. Atlantic white cedar wetland communities have been reduced to less than 2 percent of its original acreage. This community type has been extirpated from Maryland's Coastal Bays watershed and are declining throughout much of their range, particularly in the mid-Atlantic region.

Milestones: Date initiated Feb 2006, Construction to be initiated Jan 2010, Expected Completion June 2010. Due to state budget cuts, the project has been divided into 2 phases; dam removal and Lizard Hill wetland restoration. Construction phase of the dam removal portion of the project has been cut. Design and permitting phases will continue. The Lizard Hill phase will continue through completion. New federal grants pending for dam removal.

Budget:

Project Funding

Worcester County	\$ 20,000
MD State Highway Admin. (TEA Funds)	\$ 925,000
EPA (319 Program)	\$ 115,740
Fish Wildlife Service	<u>\$ 482,000</u>
Total	\$1,542,740

Outcomes:

- 1) Short-term - promote project buy-in by local residents
- 2) Intermediate - permitting, logistical support
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term - establishment of alewife populations in the river, Atlantic white cedar community re-introduction, reduction of nutrient inputs to the St Martins River

CWA core programs: 2, 4

Living Shorelines

CCMP/Work Plan Goal: FW 1, 3

Project/Activity Name: Demonstration of Living Shoreline stabilization procedures

Project/Activity Purpose and Description: ongoing

Shoreline construction and its associated practices are modifying local habitat and impacting the local environment. The program and several of its partners are in the process of accumulating existing data and information regarding the impacts of docks, piers, and other shoreline construction. The goal is to develop recommendations for the County and Ocean City to adopt better management techniques in an effort to provide reasonable riparian access and minimize environmental impacts. MCBP and its collaborators provided an educational opportunity to review the science and technical information related to wetland creation and low impact projects in April 2007. Tools and financial assistance opportunities for living shorelines will also be discussed to assist in determining if a particular site could benefit from a non-structural or living shoreline approach. In addition, the final session was designed as a panel discussion to allow for a range of experiences to be explored relating to project design, cost, and maintenance issues. A tech workshop, geared more towards the contractor, is being planned for the fall.

Responsible Partners and Their Role(s): MD DNR, Worcester County, MD Dept Environment, Maryland Resource Conservation and Development Council: funding and design from all.

Outputs/Products: Restoration and protection of eroding marshes

Milestones: (including initiated, target, delivery, and completion dates);

March 2008, seven project sites have been identified

June 2008, detailed construction design for 4 projects

August 2008, permit applications done

Feb. 2009 construction completed for 2 projects.

October 2009 construction scheduled for other 2 projects

Budget:

State of Maryland \$273,625

Property Owners \$142,875

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term – learning of environmentally friendly ways of shoreline stabilization, awareness of design new design criteria
- 2) Intermediate -
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term – better methods for marsh erosion control, reduction in hardened shorelines, increased water quality and improved habitat.

CWA core programs: Wetlands program

Tidal marsh ditch plugging

CCMP/Work Plan Goal: FW 3, WQ 7,

Project/Activity Name: Restoration of Tidal Marsh Hydrology

Project/Activity Purpose and Description: Fill marsh mosquito ditches to restore natural marsh community. It is necessary to increase the use of best management practices on commercial and residential properties as well as in state-run programs that control mosquitoes in order to reduce negative environmental and economic impacts.

Responsible Partners and Their Role(s): MD Dept Natural Resources, Fish and Wildlife Service, Ducks Unlimited fund and coordinate equally.

Outputs/Products: Improved marsh habitat and water quality

Milestones:

Feb 2008 - Initiation

Summer 2008 – monitoring

Fall 2008 - additional sites

Summer 2009 – continued monitoring and pick up additional sites if funding is available

Budget: \$30,000

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term – install dams in mosquito ditches that were created over 60 years ago in tidal marshes
- 2) Intermediate
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term – restoration of marsh hydrology, restoration of marsh vegetation, bird, mammal and fish communities

CWA core programs: 2 and Wetlands program

Exhibits

CCMP/Work Plan Goal: WQ 1, 6, 7, RN 3, 4, 5, CE 1-3

Project/Activity Name: Exhibits

Project/Activity Purpose and Description: Ongoing
MCBP exhibits at numerous events throughout the year, disseminating Coastal Bays information to the public.

Responsible Partners and Their Role(s):

MCBP

Outputs/Products:

Educate and inform the public about the Coastal Bays and the issues facing them by participating and exhibiting at numerous fairs, festivals, and community events.

Milestones: (including initiated, target, delivery, and completion dates):

Exhibit booths are set up annually and/or semi-annually at the following:
Springfest or Sunfest, Harbor Day, OC Home, Condo & Garden Show, OC HMRA Show, Restore America's Estuaries, Salisbury Zoo Earth Day, OC Hotel Motel Restaurant Association trade show, OC Seaside Boat Show, Coast Day, Commercial Fishing Trade Show, Surf Expo, Maryland Association for Environmental and Outdoor Education (MAEOE) Conference, Health & Wellness Expo, Wor-Wic Community College show, Berlin Chamber of Commerce, and 10 others that change annually.

Budget: \$1,000 private

Outcomes:

1-4) Opportunity to inform and educate the local community about issues affecting the Coastal Bays; increased community involvement and participation in Coastal Bays related events; foster an appreciation for our natural resources and inspire responsible environmental actions and stewardship.

Internet Outreach

CCMP/Work Plan Goal: CE 1-3

Project/Activity Name: Internet engagement (Website, Blog, Facebook page)

Project/Activity Purpose and Description: Ongoing

MCBP uses the Internet for various purposes, with the primary goal of informing and engaging the public.

Responsible Partners and Their Role(s):

MCBP

Outputs/Products:

Educate and inform the public about the Coastal Bays and the issues facing them through the internet.

Milestones:

Coastal Bays Program website overhaul. This is a more advanced, interactive and user friendly website to provide useful content so that website visitors will feel inspired by the Program's mission, achievements, commitment and potential. Websites have become both the main vehicle for nonprofits to communicate with the public and the "face" or public persona of the organization. The quality of a website can even affect someone's decision to support the Program, so it was vital that the site be updated. Expected to be online by mid-June.

Coastal Bays Program blog and continue to update the site on a regular basis, at least two to three times a week. The blog will be linked to the new website once it goes live, and will be highlighted more prominently. The blog serves several purposes: It provides a place where media can regularly check on Program activities, it is an easy way for readers to find information and resources they want or need, and also furthers overall outreach efforts.

Facebook is a social utility that connects people with friends and others who work, study and live around them. There are currently more than 500 MCBP Facebook members and more are expected to be added as we expand our use of the page. With its easy-to-use interface, Facebook is coming to be the social network, and a key tool for your nonprofit outreach. Media is embedded right in Facebook and the opportunity to do storytelling with audio, video and live-streaming video is available. Facebook is an easy and effective way to connect with target audiences, as well as engage with a broader audience. Potentials benefits are powerful promotion of your blog, e-news, events and an organic way of staying in touch with core audiences on an ongoing basis.

Budget: \$5,000 (EPA)

Outcomes:

Opportunity to inform and educate the local community about issues affecting the Coastal Bays; increased community involvement and participation in Coastal Bays related events; foster an appreciation for our natural resources and inspire responsible environmental actions and stewardship.

Events

CCMP/Work Plan Goal: WQ 1, 6, 7, RN 3, 4, 5, CE 1-3

Project/Activity Name: Events

Project/Activity Purpose and Description: Ongoing

MCBP holds and co-sponsors numerous events aimed at educating and informing the public/ local community about the Coastal Bays and how they can protect the natural resources they support.

Responsible Partners and Their Role(s):

MCBP lead on all

DLITE, Salisbury Zoo, MD DNR – Sponsor of the Great Worcester Herp Search

Salisbury University – Sponsor of the Great Worcester Herp Search

Assateague Coastal Trust – Sponsor of Coast Day

Assateague State Park – Sponsor of Coast Day

Assateague Island National Seashore – Sponsor of Coast Day

Worcester County Tourism – sponsor of Osprey Sprint Triathlon (OST)

Worcester County Comprehensive Planning – sponsor of earth day marsh planting

Worcester County Sheriff's Department – Assists with OST

Maryland State Highway Administration – Assists with OST, Coast Day, Earth Day tree planting

Sponsors – Support OST

Volunteers – Assists with all events

Outputs/Products:

Engage and educate the public about Coastal Bays issues by offering a variety of events for them to participate in.

Milestones:

Spring Clean-up: Community clean-up in watershed.

Harbor Day at the docks: Celebrates commercial/recreational fishing and the importance of water quality to these industries.

Delmarva Birding Weekend - The Delmarva Birding Weekend is a unique opportunity for wildlife enthusiasts to visit a region so rich in bird species - both local and migratory. This event was developed by a diverse group of non profits and local businesses to help promote eco-tourism on Delmarva. MCBP is a partner.

Earth Day Celebration – MCBP promotes earth-friendly activities for community members and visitors such as tree plantings.

Great Worcester Herp Search – Volunteers scour county lands for reptiles and amphibians every May.

Annual MD Coast Day – Over 30 organizations work together to celebrate the wildlife and natural resources of MD's Coastal Bays and to educate the public.

Osprey Sprint Triathlon – 9th Annual triathlon scheduled for October 4, 2008. Largest fundraiser for MCBP.

Horseshoe Crabs in the Classroom - Students learn about, raise, and then release horseshoe crabs throughout Chesapeake and Coastal Bays.

Worcester Environmental Summit – All day event with Stephen Decatur Middle School students. Provide information about Coastal bays and science-related careers.

Earth Day Marsh Planting and Cleanup – Gum Point Road Boat Ramp restoration- Volunteers planted 400 more marsh plants and participated in natural shoreline restoration at county boat ramp in April. Planting place changes annually.

Budget: \$40,000 private, 1,000 EPA

Outcomes: (report anticipated and/or completed accomplishments)

I-4) Opportunity to inform and educate the local community about issues affecting the Coastal Bays; increased community involvement and participation in Coastal Bays related events; foster an appreciation for our natural resources and inspire responsible environmental actions and stewardship.

Perdue property restoration

CCMP/Work Plan Goal: WQ 4, FW 2, 3

Project/Activity Name: Perdue Property Restoration

Project/Activity Purpose and Description: ongoing

Program will restore forests and wetlands on the former agricultural property. Wells are being monitored to track nutrient reduction from restoration.

Responsible Partners and Their Role(s): MD Dept Natural Resources/MD Dept Environment: Funding and site design. MCBP is lead.

Outputs/Products: Wetlands and contiguous forest. Implementation of conservation easement requirements for 90-acre forested site near Showell, MD that has been acquired by MCBP.

Milestones:

Draft of new conservation plan, June 2008; seek funding for the excavation portion of the project; project completion September 2009

Budget: \$40,000

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term - design of conservation plan
- 2) Intermediate
- 3) Changes (+/-) in Pressure Targets - changes in attitude that dredge material is useful in many areas
- 4) Long-term - restoration of approx 90 acres of forested wetlands

CWA core programs: 2, 4 and Wetlands Program

Delmarva Atlantic Watershed Network

CCMP/Work Plan Goal: CE 1, 2, 4

Project/Activity Name: Delmarva Atlantic Watershed Network

Project/Activity Purpose and Description: (ongoing)

This Coastal Bays Program project, which involves the creation of regional planning goals and tech transfer in the coastal counties of Delaware, Maryland, and Virginia began in Jan. 2005 with a regional meeting in Ocean City, MD. This was followed by another in Chincoteague, VA both of which were heavily attended by planners and decision-makers who looked at ways to learn from other counties and to think about wildlife and water quality on a regional level. This was followed by 1.5 years of planning which culminated in build out workshops in each of the four coastal counties in December 2007. In June, both Delaware and Virginia held big visioning-style workshops that lured hundreds of residents. DAWN continues with the goal of educating residents about how their planning decisions affect the coastal and inland bays water quality and wildlife.

Responsible Partners and Their Role(s):

Maryland Coastal Bays Program: lead
Worcester County Comprehensive Planning department: support/data input
Delaware Inland Bays Program: support/data input, funding
Delaware Seagrant: support/data input, funding
Sussex Planning department: support/data input
Accomack County Planning Department: support/data input
Northampton County Planning Department: support/data input
The Nature Conservancy: support/data input
Virginia CZM: data/funding
MD DNR: funding
MD Department of Planning

Outputs/Products:

- 1) Each county has CommunityViz derived build out scenarios to use for public education plus a new CommunityViz software for general planning purposes.
- 2) Counties now communicate, learn from each other, share a common vision for the Eastern Shore.
- 3) Public education on the importance of land use planning and how it relates to wildlife and water quality.

Milestones:

Initiated Jan. 2005 and expected to keep going through January 2012
Build out work shops, Dec. 2007
Visioning workshops, June 2008

Budget:

MD CZM: \$60,000
VA CZM: \$10,000
Delaware Center for the Inland Bays: \$1,000
University of Delaware: \$9,000

Outcomes:

- 1) Short-term: public education
- 2) Intermediate: public education, dialogue between states
- 3) Changes (+/-) in Pressure Targets: New desire to plan regionally, upgraded county zoning
- 4) Long-term: Water quality and wildlife habitat protection on a larger scale

CWA Core Programs: 1, 5, 6

Coastal Bays Program weekly columns

CCMP/Work Plan Goal: WQ 1-7, FW 1-5, RN 1, 3, 4, 5, CE 1-4

Project/Activity Name: Coastal Bays column

Project/Activity Purpose and Description: (ongoing) Weekly columns written by Coastal Bays staff and published in three local newspapers reaching 200,000 people. Educate the public about a variety of issues relating to water quality and wildlife.

Responsible Partners and Their Role(s): Maryland Coastal Bays Program writes each column.

Outputs/Products: Column printed in Daily Times, Worcester County Times, Ocean Pines Independent and sometimes MD Beachcomber.

Milestones: Initiated in 1998 and will continue indefinitely

Budget: EPA-funded staff time

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term: public education
- 2) Intermediate: public education
- 3) Changes (+/-) in Pressure Targets
- 4) Long-term: behavior change

CWA core programs: 1-6

County Comprehensive Rezoning Education Campaign

CCMP/Work Plan Goal: WQ 1-6, FW 2, 3, CE 1-4

Project/Activity Name: County Comprehensive Rezoning Education Campaign

Project/Activity Purpose and Description: (ongoing) In 2006, Worcester County finished its comprehensive plan and was then tasked with updating its zoning to be consistent with that plan. In anticipation of the rezoning, the MCBP underwent a massive public education campaign to be sure the rezoning kept with the plan's goals of no new growth in wetlands, forests or flood plains and updated numerous wastewater and stormwater provisions. The county has now begun the rezoning, and the programs has a campaign strategy utilizing TV, radio, newspaper, yard signs, and public forums to educate residents on the importance of updating the plan in a manner consistent with water quality and wildlife protection.

Responsible Partners and Their Role(s): MCBP is in charge and Assateague Coastal Trust is participating in the stronger advocacy and testimony writing for speakers.

Outputs/Products: 400 30-second TV commercials, 33 newspaper articles, and radio programs. Radio/TV appearances, yard signs, public speaking engagements, an educated public.

Milestones: (including initiated, target, delivery, and completion dates) Coaxed County into beginning zoning plans. Workshops being held now. We've been able to get hundreds involved who are calling and writing their commissioners. Giant public hearing is June 2, 2009.

Budget: (amount and source, including type of non-federal cost share) \$16,000 320 funds, \$3,000 private funds.

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term: Public education
- 2) Intermediate Public education
- 3) Changes (+/-) in Pressure Targets
 - 1) Long-term: New zoning code that protects open space, wetlands, forests, water quality.

CWA core programs: 1, 3, 4, 5, 6, Wetland program

Grow Berlin Green

CCMP/Work Plan Goal: WQ 1, 2, 3, 4, 7, CE 1-4

Project/Activity Name: Grow Berlin Green

Project/Activity Purpose and Description: (ongoing)

In May the town of Berlin began updating its comprehensive plan. Set in the heart of Worcester County, the town has had a habit of annexing large swaths of land, allowing cookie cutter subdivisions on it and adding point source nutrients to Newport Bay. This 3- year campaign aims to educate the public and elected officials, promote TDRs, green building, spray irrigation, and a walkable, bikeable community during this revamping of the town's comp plan.

Responsible Partners and Their Role(s):

Assateague Coastal Trust (lead)
MD Coastal Bays Program (co-lead)
Lower Shore Land Trust (co-lead)

Outputs/Products: Rain barrel pamphlet, TDR/conservation workshops and a new environmentally friendly comp plan.

Milestones:

Initiate May 2008
GBG town meetings and April 11 celebration
Greenbelt creation
Scholarships provided for professional development for 4 Berlin teachers
5-week afterschool program conducted at Berlin Intermediate School – Spring 2009
(schoolyard forest buffer service project completed)
8 week summer school program scheduled - Summer 2009
Finish February 2011
Extensive branding and community outreach campaign
Education of Berlin P & Z
Native plant sale

Budget:

\$125,000 grant from non-profit Town Creek Foundation. More Town Creek funding anticipated in 2009. MCBP is reimbursed by grant for expenses.

Outcomes:

- 1) Short-term: Public education
- 2) Intermediate: Behavior change
- 3) Changes (+/-) in Pressure Targets: Cost of changes, differing planning ideologies
- 4) Long-term: New Berlin comp plan that incorporates description above.

CWA core programs: 4, 5, 6

Land Conservation

CCMP/Work Plan Goal: WQ 1, FW 1-4, CE 2-4

Project/Activity Name: Land Conservation

Project/Activity Purpose and Description: (ongoing)

The Coastal Bays Program has become adept at connecting landowners with conservation organizations. We have helped protect land in the watershed with various permanent conservation programs including the Rural Legacy Program, donated easements, Maryland Agricultural Land Preservation Foundation, Trust for Public Land, US FWS, Program Open Space, and Wetland Reserve Program. We are currently engaged with five landowners owning 1,400 acres. A new Newport-Chincoteague Land Conservation Strategy has set as a goal the conservation of 475 acres/year in the two watersheds and includes a strategy to achieve this.

Responsible Partners and Their Role(s):

MCBP unites landowners with appropriate agencies which include:

- 1) MD Department of Natural Resources
- 2) Natural Resources Conservation Service
- 3) Lower Shore Land Trust
- 4) Worcester County Department of Comprehensive Planning
- 5) US F&WS
- 6) Trust for Public Land
- 7) The Conservation Fund

Outputs/Products: Permanently protected open space, land conservation pamphlet

Milestones: 475 acres per year protected.

Budget: Combined \$1 million-\$2 million/yr in county, state and federal money

Outcomes:

- 1) Short-term: Educated landowners
- 2) Intermediate: Interested land owners
- 3) Changes (+/-) in Pressure Targets: Shortage of conservation dollars
- 4) Long-term: Protected land: 600 acres/yr protected and restored (restoration may include other new/ongoing actions in this section)

CWA core programs: 4, Wetland program

Boat Poster, Boaters Guide to the Coastal Bays

CCMP/Work Plan Goal: RN 3, 4, 5

Project/Activity Name: Boat Poster, Boaters Guide to the Coastal Bays

Project/Activity Purpose and Description: (new and ongoing)

A poster on clean and safe boating is slated for marinas and tackle shops, and an upgrade to the Boaters Guide to the Coastal Bays with tips on environmentally friendly boating is on the docket.

Responsible Partners and Their Role(s): MCBP

Outputs/Products: Fish Ruler, Boat Poster, Boaters Guide to the Coastal Bays

Milestones: Find funding to complete by June 2010.

Budget: \$10,000 federal, \$1,000 private, \$7,000 state (DNR) available June 2009

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term: re-designing boaters guide and have template for poster
- 2) Intermediate: 3,000 fish rulers printed and distributed.
- 3) Changes (+/-) in Pressure Targets: Delayed DNR Funding
- 4) Long-term: The above mentioned products make boating cleaner and safer.

CWA Core programs: 4

Offshore Faunal Communities

CCMP/Work Plan Goal: FW 1

Project/Activity Name: Offshore Faunal Communities

Project/Activity Purpose and Description: (ongoing)

The proposed work is to characterize soft coral communities that are associated with rock outcrops. Very little is known of these communities. However impacts from artificial reef construction, offshore wind farms and continued fishing operations can significantly affect these communities. Many juvenile species in such communities breed in the coastal bays.

Responsible Partners and Their Role(s): MD Dept Natural Resources, University of MD Eastern Shore.

Outputs/Products: Better understanding of such communities and impacts to them.

Milestones: Proposal will be submitted to MD DNR by June 2008 for investigations to commence in July/Aug 2008.

Budget: \$30,000 state/federal

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term - Develop better understanding of the offshore communities and their relevance in production of commercially important species.
- 2) Intermediate: Data
- 3) Long-term: Provide sound management decisions for the coastal bays.

Community Stewardship Minigrant Program

CCMP/Work Plan Goal: WQ 1-7, FW 1-5, RN 2-5, 6, CE 1-4

Project/Activity Name: Community Stewardship Mini-Grants Program

Project/Activity Purpose and Description: Ongoing

The goal of the Community Stewardship Mini-Grants Program is to increase public awareness and public involvement in restoring and protecting Maryland's Coastal Bays and its tributaries. This program is made possible through private contributions made to MCBP, EPA dollars, and Chesapeake Bay Trust.

Grants are offered to 501 (c)(3) organizations, community associations, service, youth and civic groups, individuals, and public and independent primary, intermediate and secondary schools interested in performing environmental projects benefiting the Coastal Bays watershed.

Duties for the Community Stewardship Mini-Grants program include sending out requests for proposals (RFPs), selecting members to join the grants review team, working with the Chesapeake Bay Trust's Senior Grants Manager, updating application information and guidelines, tracking information related to the grants (contact information for grant recipients, index of applicants and total amount spent, reimbursement checks, midway notices, final reports and summaries), and meeting/discussing projects with grant recipients.

Responsible Partners and Their Role(s):

Project partners are the 501 (c)(3) organizations, community associations, service, youth and civic groups, individuals, and public and independent primary, intermediate and secondary schools who apply for the Community Stewardship Mini-Grant Program and implement actions that benefit the Coastal Bays watershed.

Outputs/Products:

Provide \$30,000 to local groups and schools to implement environmental projects benefiting the Coastal Bays watershed.

Milestones: (including initiated, target, delivery, and completion dates)

RFP Announced in May 2009 with funded applicants receiving approval at the beginning of August 2009. Applicants have one year to finish projects. May 2010 begins next round.

Budget: (amount and source, including type of non-federal cost share)

\$11,000 – Chesapeake Bay Trust

\$19,000 – Federal 320

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term – opportunity for increased outreach and education to community; involvement from residents, community groups, and schools who may not have been involved previously with Coastal Bays issues.
- 2) Intermediate – hands-on involvement from community groups and schools who received funding
- 3) Changes (+/-) in Pressure Targets – increased awareness and public involvement among residents and visitors about/in Coastal Bays issues.
- 4) Long-term – Increased awareness and public involvement among residents and visitors about/in Coastal Bays issues; increase number of actions implemented within CCMP; strengthen partnerships with community groups and local schools;

CWA Core programs: 1, 2, 4, 6, and wetlands program

Implementation grants

CCMP/Work Plan Goal: WQ 1-7, FW 1-5, RN 2-5, 6, CE 1-4

Project/Activity Name: Implementation Grants

Project/Activity Purpose and Description: Ongoing

Implementation Grants are offered to the Program's partners to assist in the implementation of actions outlined in the Maryland Coastal Bays Comprehensive Conservation and Management Plan.

In March program awarded \$100,000 with a maximum grant award of \$25,000 per applicant. Cycle will be March-April after federal funding prospect resolved annually. Duties for the Implementation Grants Program include working with the Science Coordinator (Roman Jesien) on updating grant applications and guidelines, sending out requests for proposals (RFPs) to local newspapers, MCBP website, and partners via email, selecting members for the grants review team, tracking information related to the grants (contact information for grant recipients, index of applicants and total amount spent, reimbursement checks, midway notices, final reports and summaries), and meeting/discussing projects with grant recipients.

Responsible Partners and Their Role(s):

Partners should implement projects that have an educational component and/or demonstrate new technologies or management approaches that will improve and protect the environmental integrity of the coastal bays.

Outputs/Products:

Fund \$100,000 in local environmental projects benefiting the Coastal Bays watershed.

Milestones: (including initiated, target, delivery, and completion dates)

Final awards announced in March 2009. Projects must be completed and all receipts in by March 12, 2010 with a completion date of April 30.

Budget: (amount and source, including type of non-federal cost share)

\$100,000 EPA; \$50-\$100k private, county, state match.

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term – Increase number of actions implemented within CCMP;
- 2) Intermediate – Increased research and knowledge about Coastal Bays related topics.
- 3) Changes (+/-) in Pressure Targets – federal funding
- 4) Long-term – increase number of actions implemented within CCMP; create and implement new methodologies for managing the health of the bay and its resources; strengthen partnerships with Program partners;

CWA Core programs: 1-6, and wetlands program

Canoe & Bike Stand – Assateague Island

CCMP/Work Plan Goal: CE 1 – 4

Project/Activity Name: Canoe & Bike Stand – Assateague Island National Seashore

Project/Activity Purpose and Description: Ongoing

Since 2004, the MCBP has operated a canoe and bicycle rental stand on Assateague Island National Seashore. This stand serves as an outreach vehicle for the MCBP and includes guided tours.

Responsible Partners and Their Role(s):

Assateague Island National Seashore – provides assistance with emergency situations, serves as outlet for MCBP publication distribution, allows us to use portion of land for rental stand.

Outputs/Products:

Generate funds to support projects and initiatives of MCBP; increased awareness of residents and visitors of the Coastal Bays watershed.

Milestones: (including initiated, target, delivery, and completion dates)

Rent kayaks, canoes and bikes to the visitors of Assateague Island National Seashore, while providing information about the Coastal Bays. Guided trips help educate locals and visitors.

Budget:

'08 Expense (equipment maintenance and replacement, advertising, payroll, etc.) - \$23,794 private

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term – rent equipment to residents and visitors of Assateague Island and Coastal Bays to support program goals, outreach and education to visitors and residents.
- 2) Intermediate – continued outreach and education to visitors and residents.
- 3) Changes (+/-) in Pressure Targets – increased outreach to visitors of Assateague Island (1 million annually)
- 4) Long-term – raise funds to support the implementation of initiatives in the Coastal Bays CCMP; increased awareness of Coastal Bays issues to residents and visitors.

CCMP Tracking & Evaluation Process

CCMP/Work Plan Goal: WQ 1-7, FW 1-5, RN 1-7, CE 1-4

Project/Activity Name: CCMP Tracking & Evaluation Process

Project/Activity Purpose and Description: (ongoing)

During Phase I of CCMP implementation, October 1999 – September 2004, a Tracking & Evaluation Subcommittee met annually to review the progress of each action that was approved in the management plan. The team consisted of representatives from CCMP partnering agencies: EPA, Worcester County, Maryland Departments of Natural Resources and the Environment, as well as Coastal Bays staff and citizens. An excel database with action numbers, start dates, phase, accomplishments, barriers, and comments was developed. Giving each action equal weight allows the subcommittee to measure progress over time. Additionally the aggregated weights of actions at the challenge level and then again at the goal level to determine progress for each section; Water Quality, Fish & Wildlife, Recreation & Navigation and Community & Economic Development. Phase II CCMP Implementation tracking is currently underway. Information will be consolidated for our partners, used in the 2010 EPA Program Evaluation and Program Strategic Planning.

Responsible Partners and Their Role(s):

Maryland Coastal Bays Program: lead
MCBP Citizen Advisory Committee: support
Worcester County Comprehensive Planning department: support/data input
EPA Region III – NEP director: support
Maryland Department of Natural Resources: support/data input
Maryland Department of Agriculture: support/data input
Maryland Department of the Environment: support/data input
Maryland Department of Planning: support/data input

Outputs/Products:

Tracking & Evaluation Reports were prepared annually in Phase I (2000 – 2004)

Milestones:

These reports have been used in EPA Implementation Reviews, outreach publications, and for adaptive management discussions among Program partners. The next tracking exercise, to document progress in Phase II CCMP implementation, began in the fall of 2008 and will be published prior to MCBP's next EPA review in 2010.

Budget:

Within existing resources

Outcomes:

- 1) Short-term: public education
- 2) Intermediate: public education,
- 3) Changes (+/-) in Pressure Targets: dialogue between CCMP partners to facilitate implementation
- 4) Long-term: Water quality and wildlife habitat protection throughout the watershed

CWA Core Programs: 4

Geographical Information System

CCMP/Work Plan Goal: WQ 1-7, FW 1-5, RN 1-7, CE 1-4

Project/Activity Name: GIS Implementation & Maintenance

Project/Activity Purpose and Description: (ongoing) Implementation and maintenance of an in-house GIS to be used for decision making, landscape analysis, nutrient loading estimates & changes over time, and many other applications. Reports, maps and graphics will be used to educate the public about a variety of issues relating to water quality, wildlife and quality of life issues. Additionally the MCBP strives to remain current with new technologies that its partners are using for planning and monitoring the watershed.

Responsible Partners and Their Role(s): Maryland Coastal Bays Program and other partners: Worcester County, Maryland Departments of Planning, Agriculture, Natural Resources and the Environment, EPA, Assateague National Seashore, U.S. Geological Survey, U.S. Natural Resource Conservation Service, Towns of Ocean City and Berlin, Salisbury University, University of Maryland, NGOs and other interested stakeholders. Each group is responsible for their data and products.

Outputs/Products: Currently, an office server has been established to access ArcGIS programs and geographical data. A data inventory consisting of maps, reports and geographical layers has been completed.

Milestones: Initiated in 2007. To date private grants and donations of software and intern assistance have totaled more than \$23,241 to support the implementation of the GISystem and training.

Budget: \$0

Outcomes: (report anticipated and/or completed accomplishments)

- 1) Short-term: public education and agency collaborations
- 2) Intermediate: public education and prioritizing resources
- 3) Changes (+/-) in Pressure Targets: Learning the software
- 4) Long-term: behavior change & ecosystem management

CWA core programs: 1-6 plus wetlands

Establish & Fund Education Coordinator Position

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Establish & Fund Education Coordinator Position

Project/Activity Purpose and Description: (ongoing) In mid-August 2007, Maryland Coastal Bays Program (MCBP) hired a full-time Education Coordinator to lead its education efforts, including minority outreach and involvement. The Education Coordinator not only teaches program participants about Maryland's coastal bays, but also helps participants build a positive relationship with nature, fosters an appreciation of the environment, and inspires behavior changes and actions which will benefit the Coastal Bays. A specific focus of the Education Coordinator's work is to engage minority communities in programs and conservation issues. The Education Coordinator also works closely with the Maryland State Department of Education and local Boards of Education to provide curriculum-based experiences for Maryland students and teachers and works with local partners to provide public and family programs.

Responsible Partners and Their Role(s):

MCBP – program management, curriculum development, partnerships for education, program oversight; Maryland Department of Natural Resources – provided start-up funding for the position; University of Maryland Eastern Shore – MOU for MCBP/DNR grant funding for position; Community Foundation of the Eastern Shore – holds endowment fund for MCBP; Doug Weidman (private donor) – established endowment fund and provided match for private contributions to establish education program

Outputs/Products:

A variety of public programs, school programs, teacher professional development opportunities, and environmental educator workshops, designed to help diverse community groups foster a connection with nature and inspire stewardship of Maryland's coastal bays and natural resource conservation.

Milestones: (including initiated, target, delivery, and completion dates)

Endowment Fund established: Education coordinator now full-time position.

Budget: (amount and source, including type of non-federal cost share)

\$62,600 – DNR funding provided to hire Education Coordinator

\$30,000 – Doug Weidman (private donation to establish endowment)

\$20,000 – private dollars raised

\$5,000 from Towne Creek through Grow Berlin Green grant

33% EPA funded

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Coordinate MCBP education efforts; ensure program effectiveness and dependability; develop, implement, and evaluate new programs and partnerships; provide quality environmental education and nature experiences for children and families; lead minority outreach efforts and ensure diverse participation in programs – all in an effort to foster an appreciation for Maryland's coastal bays and inspire responsible environmental actions and stewardship

CWA Core Programs: 2

Upward Bound Marine & Estuarine Program

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Upward Bound Marine & Estuarine Program

Project/Activity Purpose and Description: (ongoing)

MCBP leads planning for this program. Program partners include MCBP, University of Maryland Eastern Shore (UMES), Assateague Island National Seashore, Assateague State Park, MD Department of Natural Resources (DNR), and the US Environmental Protection Agency (EPA), Delmarva Low-Impact Tourism Experiences (DLITE), and more. The academic year portion of the program serves 25 students from Worcester, Wicomico, and Somerset counties. The Upward Bound Program is coordinated by the UMES, a historically-black university. The program targets minority high school students and provides a variety of experiences for the group throughout the school year.

8 sessions were conducted in the summer of 2008, with a focus on blue crabs. The 2009 Summer Upward Bound Marine & Estuarine Program will focus on cultural connections to the coastal bays, with a specific focus on local African American heritage. ..

During the 2008-2009 academic year, 20 students were enrolled in the program, which focused on the effects of storms on coastal communities and helped students with disaster preparedness. The program will continue for the 2009/20010.

Responsible Partners and Their Role(s):

MCBP – facilitate meetings, funding, program planning, staffing & instruction; UMES – program administration, funding, transportation; Living Marine Resources Cooperative Science Center – professor & graduate student involvement; Assateague Island National Seashore, Assateague State Park, & Delmarva Low-Impact Tourism Experiences – program planning, staffing & instruction.

Outputs/Products: 8 sessions during academic year, 6-8 summer sessions, 40 students enrolled per calendar year (20 school year + 20 summer)

Milestones: (including initiated, target, delivery, and completion dates)

Summer 2008 – eight sessions delivered; 2008/2009 Academic Year – five sessions delivered; Summer 2009 – five sessions scheduled

Budget: (amount and source, including type of non-federal cost share)

MCBP spends \$100-\$200 per session. Primary costs are covered by a grant received by UMES. In 2008, MCBP secured additional funding from the Community Foundation of the Eastern Shore to support the program.

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Increase involvement of minority students in MCBP programs; provide new opportunities for local students to explore local habitats and understand complexities of local environmental issues; increase student awareness of environmental careers; develop critical thinking skills and foster sense of place – in an effort to nurture a new generation of environmental stewards

CWA Core Programs: 4

Teacher Professional Development Workshops

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Teacher Professional Development Workshops

Project/Activity Purpose and Description: (ongoing)

The Maryland Coastal Bays Program, in partnership with the Maryland Park Service, offers professional development opportunities for local teachers. The workshops are offered for Delmarva teachers through local Boards of Education and are scheduled by grade-levels of instruction. The workshops focus on the physical properties of water, water chemistry, and watersheds. Teachers participate in hands-on activities designed to enhance student understanding of concepts such as adhesion, cohesion, water chemistry, and runoff. National curriculum programs including Project WET: Water Education for Teachers, Project WILD & Project WILD Aquatic, and Project Learning Tree are provided. The activities learned are incorporated into classrooms county-wide to supplement the Maryland Voluntary State Curriculum and provide all students with hands-on opportunities for learning. Based on the success of the training, the Worcester County Board of Education plans to work with the Maryland Coastal Bays Program and Maryland Park Service to develop additional training programs for teachers in the upcoming school year. By working directly with the Board of Education to provide County-wide programs, Maryland Coastal Bays Program ensures equal access for all students, including minority populations. Specific content and resources regarding Maryland's coastal bays are included in each training workshop.

Responsible Partners and Their Role(s):

MCBP – program planning, workshop facilitation & instruction; MD Park Service - program planning, workshop facilitation & instruction; Local Boards of Education – funding, teacher involvement; MD Department of Natural Resources – funding & materials

Outputs/Products:

4-6 workshops per year; 60-120 teachers trained per year

Milestones: (including initiated, target, delivery, and completion dates)

4-6 workshops per year, as scheduled; 15-20 participants per workshop

Budget: (amount and source, including type of non-federal cost share)

\$500 per workshop (grants, registration fees, in-kind contributions)

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Highly-trained teachers who are knowledgeable in MD coastal bays-related issues; aware of complexities of environmental issues; more environmentally literate; comfortable teaching about natural resources and the environment; more at ease when taking students outside for field study; able to identify action steps and behavior changes they can make for the benefit of the environment. Students who are more knowledgeable about MD coastal bays-related issues; aware of complexities of environmental issues; more environmentally literate; better able to think critically and problem-solve; able to identify action steps and behavior changes they can make for the benefit of the environment; and who feel connected to nature.

CWA Core Programs: 4

Environmental Educator Training Workshops

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Environmental Educator Training Workshops

Project/Activity Purpose and Description: (ongoing)

MCBP partners with MD Park Service to provide training and resources for environmental educators who work with diverse audiences. Workshops provided utilize nationally-recognized curricula including Project WET, Project WILD & Project WILD Aquatic, Project Learning Tree, and TEAM DNR (Teaching Environmental Awareness in Maryland). The workshops provide curriculum guides and a variety of activities and resources that can be used when working with diverse audiences. Specific content and resources regarding Maryland's coastal bays are included in each training workshop.

Responsible Partners and Their Role(s):

MCBP – administration, registration, marketing, program planning, workshop facilitation & instruction

MD Park Service – program planning, workshop facilitation & instruction

Delmarva Environmental Educators Network & GREENetwork – workshop promotion, provide participants

Outputs/Products:

4-6 workshops provided per year; 80-150 environmental educators trained annually

Milestones: (including initiated, target, delivery, and completion dates)

4-6 workshops per year, as scheduled; 20-25 participants per workshop

Budget: (amount and source, including type of non-federal cost share)

\$500 per workshop (grants, registration fees, in-kind contributions)

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Highly-trained environmental educators who are knowledgeable in MD coastal bays-related issues; aware of complexities of environmental issues; more environmentally literate; comfortable teaching about natural resources and the environment; more at ease when taking students outside for field study; able to identify action steps and behavior changes they can make for the benefit of the environment. Environmental Education program participants who are more knowledgeable about MD coastal bays-related issues; aware of complexities of environmental issues; more environmentally literate; better able to think critically and problem-solve; able to identify action steps and behavior changes they can make for the benefit of the environment; and who feel connected to nature.

CWA Core Programs: 4

Interpreting Nature & Heritage Courses

CCMP/Work Plan Goal: CE 2, 3

Project/Activity Name: Interpreting Nature & Heritage Courses

Project/Activity Purpose and Description: (ongoing)

MCBP partnered with Delmarva Low-Impact Tourism Experiences (DLITE) and a diverse group of partners to pilot a new course through Wor-Wic Community College. The course was developed to provide training for staff and volunteers of local cultural and natural heritage sites. The course provided 12+ hours in the art of effective interpretation. The diverse group of instructors included representatives from MCBP, DLITE, Assateague Island National Seashore, Assateague State Park, Crisfield Heritage Center, Ward Museum of Wildfowl Art, Sturgis One-Room Schoolhouse, and more. Topics included natural and cultural heritage, communicating with diverse audiences, and advocacy. In order to ensure accessibility for all, the Community Foundation of the Eastern Shore provided scholarships for applicants. The course filled to capacity very quickly, so another course has been scheduled for Fall 2008. Additionally, two other courses are being developed. MCBP Education Coordinator Carrie Samis serves on the course planning and curriculum development committee and is an instructor.

Responsible Partners and Their Role(s):

MCBP – curriculum development, course promotion, course instruction

Delmarva Low-Impact Tourism Experiences – course management, curriculum development, course instruction

Wor-Wic Community College – course administration, marketing, and registration

Other local nature and heritage partners (differ per course)

Outputs/Products:

2 12-hour courses per year, 25 participants per course – 50 trained nature & heritage interpreters

Milestones: (including initiated, target, delivery, and completion dates)

March 2008 – pilot course offered (sold out with a waiting list)

November 2008 – 2nd course offered

March 2009 – 3rd course offered

With grant funding, 2 new specialized courses have been developed:

Nature & Heritage of the Pocomoke River – offered April 2009 - SOLD OUT (a second offering will occur in Fall 2009)

Nature & Heritage of the Coastal Bays – scheduled for June 2009 – SOLD OUT

Additional specialized courses are in development

Budget: (amount and source, including type of non-federal cost share)

\$22,000 per course (grants, registration fees, in-kind contributions)

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Train a minimum of 50 nature and heritage interpreters per year who will then be involved in community outreach and education on behalf of MCBP and other local nature and heritage partners. Well-trained interpreters will enhance visitor experiences, raise public awareness, promote sustainable activities, and foster a sense of connectedness to nature.

CWA Core Programs: 4

Adventure Pack Program

CCMP/Work Plan Goal: FW 1, 2; RN 5; CE 1, 2

Project/Activity Name: Adventure Pack Program

Project/Activity Purpose and Description: (ongoing)

The purpose of this program is to empower children and families to cultivate a relationship with the natural world – to enjoy the physical, emotional, and spiritual benefits of spending time outdoors and to foster a new generation of environmental stewards who connect with and care for our shared natural resources. This collaborative pilot program will serve 500 children and families during the summer of 2008. Target audiences include minority children and their families who live in Worcester, Wicomico, and Somerset counties. The program is designed to offer full-immersion outdoor experiences which will build basic exploration and observation skills; address perceptions and barriers which often prevent or prohibit children and families from spending time in nature; involve experienced nature guides and interpreters to increase comfort levels, share their passion for the environment, and foster a personal connection with nature; and provide the tools and resources necessary for future nature exploration.

Responsible Partners and Their Role(s):

MCBP – program development and delivery

Assateague Island National Seashore – program development and delivery

National Park Service – funding

Assateague State Park – program development and delivery

Delmarva Low-Impact Tourism Experiences – program development and delivery

University of Maryland Eastern Shore – program development and delivery

Outputs/Products:

500 Adventure Packs distributed to children, including local underserved and minority communities

20 1-5 day nature programs delivered (summer 2008)

Milestones: (including initiated, target, delivery, and completion dates)

500 Adventure Packs and 20 programs were delivered summer 2008/2009

Budget: (amount and source, including type of non-federal cost share)

\$30,000 National Park Service

\$10,000 Community Foundation of the Eastern Shore (grant approved 5/23/08)

Outcomes: (report anticipated and/or completed accomplishments)

1-4) In an effort to combat nature-deficit disorder and foster a connection with nature, 500 local children will be provided tools for nature exploration and opportunities to hone observation and exploration skills.

CWA Core Programs: 4

MD/DE Children's Water Festival

CCMP/Work Plan Goal: WQ 1, 2; FW 2; CE 1, 2

Project/Activity Name: MD/DE Children's Water Festival

Project/Activity Purpose and Description: (ongoing)

MCBP played an important role in the 2nd Maryland/Delaware Children's Water Festival in May. The program will serve hundreds of students from schools across Maryland and Delaware with quality water-related educational activities. Diverse groups of students will be engaged in MCBP lessons related to watersheds, water quality, and local wildlife. The next MD/DE Children's Water Festival will be held in 2010.

Responsible Partners and Their Role(s):

MCBP – program delivery

Water Systems Council – funding, planning, event management

MD Department of Natural Resources – planning, program delivery

Maryland State Department of Education & Delaware Department of Education - planning

Maryland Association for Environmental and Outdoor Education – planning, program delivery

Environmental Protection Agency, Office of Groundwater & Drinking Water - planning

And multiple presenters representing water quality/water use-related organizations – program delivery

Outputs/Products:

One-day, curriculum-based educational event which serves 1,500-2,000 students with water-related education

Milestones: (including initiated, target, delivery, and completion dates)

May 8, 2008 event

Future event tentatively planned for Spring 2010

Budget: (amount and source, including type of non-federal cost share)

Funded through sponsorships and grants (organized by the Water Systems Council)

Outcomes: (report anticipated and/or completed accomplishments)

Up to 2,000 students will be provided with hands-on opportunities to learn more about water quality, habitats and wildlife, and actions they can take to minimize impacts, improve water quality, and protect our natural resources.

CWA Core Programs: 2

GREENetwork & DEEN

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: GREENetwork (Governor's Regional Environmental Education Network) & Delmarva Environmental Educators Network (DEEN)

Project/Activity Purpose and Description: (ongoing)

Carrie Samis is serving on the Governor's Regional Environmental Educators Network (GREENetwork) and is coordinating efforts of the Delmarva Environmental Educators Network (DEEN). Both networks exist to offer opportunities to promote best management practices and professional development opportunities for environmental educators. They also serve as a vehicle for communication between formal and non-formal education professionals in an effort to maximize opportunities and partnerships for the benefit of students, children, families, and the environment.

Responsible Partners and Their Role(s):

MCBP – 1) Organize communication network for environmental education-related organizations on the Delmarva Peninsula; host meetings, promote environmental education-related activities and facilitate opportunities for partnership 2) Serve as a conduit for information from/to Maryland State Department of Education and environmental education providers in Worcester, Wicomico, and Somerset counties in Maryland

Delmarva Low-Impact Tourism Experiences – Assist with organization of communication network for environmental education-related organizations on the Delmarva Peninsula; facilitate opportunities for partnership
Maryland State Department of Education – communicate with county/regional designates to disseminate environmental education-related information and opportunities
Environmental Education & Conservation organizations on the Delmarva Peninsula – contribute information, share resources, and develop partnerships and programs

Outputs/Products:

6 meetings per year; regular email contact; other communication methods to be determined

Milestones: (including initiated, target, delivery, and completion dates)

Initiated fall 2007

Meetings held 6 times per year

Budget: (amount and source, including type of non-federal cost share)

\$10,000 received from Community Foundation of the Eastern Shore to develop brochure & website

Additional funding will be sought as need arises

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Facilitate better communication among formal and non-formal educators, identify partnership opportunities, avoid duplication of services, share resources, and maximize environmental education effectiveness.

Children & Nature Initiative

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Children & Nature Initiative

Project/Activity Purpose and Description: (ongoing)

With its diversity of habitats and wildlife, rich natural resources, and dedicated environmental organizations and quality environmental educators, the Lower Shore is the perfect place to engage children and their families. MCBP is working with other local organizations, including the Community Foundation of the Eastern Shore, to spearhead a local Children & Nature Initiative. A stakeholder group, including representation from minority communities and minority-serving institutions, participated in a day-long workshop in July in an effort to bring focus to and establish support for the local initiative.

Responsible Partners and Their Role(s):

MCBP – coordinating effort

Delmarva Low-Impact Tourism Experiences – initiating committee

Community Foundation of the Eastern Shore – initiating committee

Children & Nature Network – speaker involvement, resources

MD Partnership for Children & Nature – developing strategies for increasing opportunities for children to engage in nature-based activities and for increasing environmental literacy in Maryland

Worcester County Commissioners – funding for speaker

Local stakeholders – working together to promote and support local initiative to increase opportunities for children to engage in nature-based activities

Outputs/Products:

Public kick-off event

Establishment of local working group

Delmarva's 10 Top 10 event

Milestones: (including initiated, target, delivery, and completion dates)

Speaker Series: Cheryl Charles, President of Children & Nature Network, Thursday, July 24, 2008

Stakeholder/working group meeting scheduled for Friday, July 25, 2008

Delmarva's 10 Top 10 event held Friday, July 25, 2008 – served 100 minority students

Budget: (amount and source, including type of non-federal cost share)

\$5,000 provided by Worcester County Commissioners

Future funding needs to be determined

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Provide opportunities for children to make meaningful connections with nature. Increase awareness of “nature-deficit disorder” and ways to combat it. Foster a new generation of environmental stewards.

Flying Wild

CCMP/Work Plan Goal: FW 2; CE 1, 2

Project/Activity Name: Flying Wild

Project/Activity Purpose and Description: (ongoing)

Responsible Partners and Their Role(s):

MCBP – organization, promotion, and facilitation of training and instruction; Council for Environmental Education – Flying Wild curriculum; Maryland Park Service - organization, promotion, and facilitation of training and instruction; Delmarva Environmental Educators Network (DEEN) & GREENetwork (Governor’s Regional Environmental Education Network) – promotion; Local Boards of Education – teacher and student involvement; Delmarva Low-Impact Tourism Experiences – facilitation of training and instruction, field experiences.

Outputs/Products:

100 educators (formal & non-formal) will be trained to use the curriculum in the first year. 100 Flying Wild curriculum guides will be distributed to trained facilitators.

Milestones: (including initiated, target, delivery, and completion dates)

100 educators trained in the first year. Associated programs and field experiences have been developed.

Delmarva Flying Wild City Partner MOU signed November 2008. Delmarva City Partners: Ward Museum of Wildfowl Art, Assateague State Park, & Maryland Coastal Bays Program.

Since the program start in late November 2008, 16 facilitators & 76 educators have been trained.

Two Delmarva City Partner representatives attending the Council for Environmental Education’s Flying Wild City Partners meeting in March 2009.

Budget: (amount and source, including type of non-federal cost share)

\$5,000 private

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Highly-trained environmental educators who are knowledgeable about issues affecting bird populations and species; recognize Maryland’s coastal bays as critical habitat for migrating birds; aware of complexities of bird conservation; more environmentally literate; comfortable teaching about birds, migration, diversity, and habitats; are more at ease when taking students outside for field study; able to identify action steps and behavior changes they can make for the benefit of birds; and recognize Maryland’s coastal bays as critical habitat for a tremendous diversity of bird species. Environmental Education program participants who are knowledgeable about issues affecting bird populations and species; aware of complexities of bird conservation; more environmentally literate; better understand birds, migration, diversity, and habitats; better able to think critically and problem-solve; able to identify action steps and behavior changes they can make for the benefit of the environment; recognize Maryland’s coastal bays as critical habitat for a tremendous diversity of bird species; and who feel connected to nature.

OC Coastal Bays BioBlitz Nature Camp

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Ocean City Coastal Bays BioBlitz Nature Camp

Project/Activity Purpose and Description: (ongoing)

Camp Description: Help your child combat nature deficit disorder by plugging into the Coastal Bays BioBlitz. New to our camp line up, we are proud to offer this new nature camp in coordination with Maryland Coastal Bays Program and Delmarva Low-Impact Tourism Experiences. Become a wildlife scientist and discover what it takes to keep a heron happy, a terrapin tickled, a horseshoe crab content, a pipefish pleased, and a dolphin delighted. Learn what kids can do to help improve their own backyards and make our world a better place for the coastal bays and our animal friends. In this hands-on camp, participants will experience nature up-close. They'll get their hands dirty and their feet wet and get eye-to-eye with other species. Participants will discover the riches of coastal bay habitats and learn how scientists test water quality, utilize collection techniques, identify plant and animal species, and evaluate human impacts to assess overall habitat quality. Campers will connect with nature, hone observation skills, and develop a sharpened sense of the natural world.

Responsible Partners and Their Role(s):

MCBP – program planning, curriculum development, instruction & evaluation

Delmarva Low-Impact Tourism Experiences – program planning, curriculum development & instruction

Ocean City Recreation & Parks Department – advertising, registration, administration, & facility use: Northside Park

University of Maryland Eastern Shore – facility use: Coastal Ecology Teaching & Research Center

Outputs/Products:

Advertising & curriculum development

Program delivery

Milestones: (including initiated, target, delivery, and completion dates)

Initiated: winter 2007/2008

Planning: spring 2008

Delivery: summer 2008, fall 2008, summer 2009

Budget: (amount and source, including type of non-federal cost share)

\$4,000 camper registration fees (for summer sessions); slightly less for fall session

\$1,080 National Park Service

Outcomes: (report anticipated and/or completed accomplishments)

1-4) In the summer of 2008, 30 children will participated in 2 days of outdoor exploration, facilitating a personal connection to Maryland's coastal bays and a desire to help protect our natural resources. The program was so popular that a fall session was conducted and a summer 2009 session is scheduled.

CWA Core Programs: 2

Minority Outreach & Involvement Strategy

CCMP/Work Plan Goal: CE 1, 2

Project/Activity Name: Minority Outreach and Involvement Strategy

Project/Activity Purpose and Description: (ongoing)The MCBP Minority Outreach and Involvement Strategy was developed to expand outreach and education efforts to specifically include minority populations of the coastal bays watershed by incorporating a proactive approach of informing citizens on how to participate in program activities with emphasis on increasing participation of low income, minority, and non-English speaking communities. Primary objectives include Environmental Awareness, Career and Job Training, and Stewardship and Involvement. A Diversity Advisory Committee (DAC) was established by the Policy Committee in Dec. 2008 to help accomplish these goals.

Responsible Partners and Their Role(s): MCBP, MD DNR, UMES, EPA, MDE, & NAACP – all partners worked together on the Steering Committee to develop the Minority Outreach and Involvement Strategy. Partners also collaborate on projects and work together to secure funding to support the initiative.

Outputs/Products: Linking Environmental and Academic Programs (LEAP) Memorandum of Understanding – The purpose of LEAP is to formalize and strengthen the ties between the Mid-Atlantic Region of the EPA, UMES, MCBP, MD DNR, and MDE, to enhance research, teaching, outreach, career development and stewardship in environmental science.

Maryland Coastal Bays Minority Internships MOU – MDE & MCBP provide funds to employ two interns and to produce educational materials associated with non-point source water quality issues and minority outreach.

Minority participation in programs such as Upward Bound, Earth Day, Great Worcester Herp Search, Delmarva Birding Weekend, and MCBP internships.

Milestones: (including initiated, target, delivery, and completion dates)

Minority Outreach and Involvement Strategy – adopted August 2006; Linking Environmental and Academic Program (LEAP) MOU signed June 19, 2007; MDE & MCBP MOU and funding for Minority Internships - June 2007 through December 2009; Received Clean Water Act 319 (h) FFY 2006; Incremental Grant to fund MCBP Minority Internships; Hired Education Coordinator – August 2007; Task Force on Minority Participation in the Environmental Community Final Report – November 2007 Diversity Advisory Committee established – December 2008

Budget: (amount and source, including type of non-federal cost share)

\$30,967 (\$18,580 Clean Water Act Federal 319(h) + \$12,387 Non-Federal Match) – received June 2007

\$62,600 (DNR/UMES Minority Outreach & Environmental Education) – received June 2007

\$50,000 (\$30,000 National Park Service + \$30,000 Non-Federal Match) – summer 2008

\$33,000 (Non-Federal – estimated annual interest generated from Endowment Fund)

Outcomes: (report anticipated and/or completed accomplishments)

1-4) Increased communication and collaboration between partners and increased involvement of minority communities have resulted from initiative.

Coastal Bays Comprehensive Conservation and Management Plan goals

WATER QUALITY (WQ)

- Goal 1: Decrease nutrient inputs to groundwater from residential and commercial land uses.**
- Goal 2: Decrease nutrient inputs from stormwater runoff.**
- Goal 3: Decrease nutrient inputs from the atmosphere.**
- Goal 4: Decrease nutrient inputs from agricultural sources.**
- Goal 5: Reduce nutrient inputs from point sources.**
- Goal 6: Improve water clarity by reducing sediment inputs.**
- Goal 7: Decrease inputs of chemical contaminants.**

FISH AND WILDLIFE (FW)

- Goal 1: Increase fish and shellfish species.**
- Goal 2: Enhance forest habitats to protect songbirds, other wildlife populations and aquatic resources.**
- Goal 3: Protect and enhance wetlands to benefit water quality, aquatic resources, waterfowl and other wildlife.**
- Goal 4: Protect threatened and endangered species.**
- Goal 5: Limit impacts to native plants and animals from non-native and nuisance species.**

RECREATION AND NAVIGATION (RN)

- Goal 1: Reduce the amount of sand and sediment entering the coastal bays from the inlet.**
- Goal 2: Improve the management of navigation and dredging in the coastal bays.**
- Goal 3: Balance resource protection with recreational use.**
- Goal 4: Improve boating safety in the coastal bays.**

Goal 5: Improve water-based recreational opportunities and diversity of access to coastal bays and tributaries.

Goal 6: Create guidelines for locating new marina facilities.

Goal 7: Implement sustainable management practices at harbors and marinas.

COMMUNITY AND ECONOMIC DEVELOPMENT (CE)

Goal 1: Educate and inform the population so it can make knowledgeable decisions about what it wants for its community and future.

Goal 2: Foster a community consensus on the desired future condition of the Maryland coastal bays region and a vision of how to promote the county as a vacation destination, farming region, resource protection area, and retirement community, while protecting and preserving the coastal bays.

Goal 3: Manage the watershed to maximize economic benefits while minimizing negative resource impacts.

Goal 4: Enhance the level of sustainability in land use decision making.

Clean Water Act Core Programs - reference numbers

- (1) Strengthening water quality standards**
- (2) Improving water quality monitoring**
- (3) Developing total maximum daily loads**
- (4) Controlling non-point source pollution on a watershed basis**
- (5) Strengthening National Pollutant Discharge Elimination System permits**
- (6) Supporting sustainable wastewater infrastructure.**