

**Final Evaluation Findings  
Maryland Coastal Zone Management Program  
April 2004 to September 2007**

**February 2008**



Office of Ocean and Coastal Resource Management  
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*Boats at Crisfield, MD.*

## I. EXECUTIVE SUMMARY

Section 312 of the Coastal Zone Management Act (CZMA) of 1972, as amended, requires the National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean and Coastal Resource Management (OCRM) to conduct periodic evaluations of the performance of states and territories with federally-approved coastal management programs. This review examined the operation and management of the Maryland Coastal Zone Management Program (Maryland Coastal Program) by the Maryland Department of Natural Resources (MDNR), the designated lead agency, for the period from April 2004 through September 2007.

This document describes the evaluation findings of the Director of NOAA's OCRM with respect to the Maryland Coastal Program during the review period. These evaluation findings include discussions of major accomplishments as well as recommendations for program improvement. The evaluation concludes that MDNR is successfully implementing and enforcing its federally-approved coastal management program, adhering to the terms of the federal financial assistance awards, and addressing the coastal management needs identified in section 303(2)(A) through (K) of the CZMA.

The evaluation team documented a number of the Maryland Coastal Program accomplishments during this review period. The Coastal Program provided great leadership, through a number of initiatives and activities, in building local government capacity to address the various impacts of coastal development and other critical coastal issues. The Coastal Program continued its innovative coastal hazards work, providing local governments with a host of coastal hazards tools and fostering adoption of an Executive Order establishing the Maryland Climate Change Commission. Low levels of permitted wetlands losses through the Maryland Coastal Program's tidal and freshwater management programs, combined with improvements in the program's selection process for land acquisition projects, have benefited coastal habitats in the state. The Maryland Department of Environment was instrumental in passage of a 2007 Stormwater Management Law that will enhance coastal water quality. Finally, The Maryland Coastal Program's participation in and support of BayStat, the new state government performance measurement system, will likely strengthen coastal management in the state.

The evaluation team also identified areas where the Maryland Coastal Program could be strengthened. The recommendations take the form of four necessary actions and seven program suggestions. Necessary actions address the following: given the recent lead agency reorganization, and growing coastal management challenges in the state, the program must address staffing issues to ensure that core program activities are maintained and that the program operates as efficiently as possible. The Maryland Coastal Program must broaden and complete its current programmatic visioning project. The Maryland Coastal Program must immediately begin managing CZMA awards consistent with NOAA guidance and clarify the program's enforceable policies.

Program suggestions call for the Maryland Coastal Program to accelerate adoption of local land use controls to more effectively implement state policies related to coastal water quality improvement, hazards mitigation, and habitat protection and should strive to better coordinate and streamline state data acquisition, as well as delivery of that data and other technical assistance, to local governments to accomplish this. The Maryland Coastal Program should consider expanding the use of the Federal Consistency Provision, undertaking an analysis of existing programs such as the Critical Area Program and the Coastal Nonpoint Program, to inform changes in the implementation of those programs as well as funding allocation decisions. Finally, the Maryland Coastal Program should proactively address the emerging ocean management issues in the state.



*Maryland Coast after Hurricane Isabelle*

## II. PROGRAM REVIEW PROCEDURES

### A. OVERVIEW

The National Oceanic and Atmospheric Administration (NOAA) began its review of the Maryland Coastal Program in August 2007. The §312 evaluation process involves four distinct components:

- An initial document review and identification of specific issues of particular concern;
- A site visit to Maryland, including interviews and public meetings;
- Development of draft evaluation findings; and
- Preparation of the final evaluation findings, partly based on comments from the state regarding the content and timetables of recommendations specified in the draft document.

The recommendations made by this evaluation appear in boxes and bold type and follow the findings section where facts relevant to the recommendation are discussed. The recommendations may be of two types:

**Necessary Actions** address programmatic requirements of the CZMA's implementing regulations and of the Maryland Coastal Program approved by NOAA. These must be carried out by the date(s) specified;

**Program Suggestions** denote actions that the OCRM believes would improve the program, but which are not mandatory at this time. If no dates are indicated, the state is expected to have considered these Program Suggestions by the time of the next CZMA §312 evaluation.

A complete summary of accomplishments and recommendations are outlined in Appendix A.

Failure to address Necessary Actions may result in a future finding of non-adherence and the invoking of interim sanctions, as specified in CZMA §312(c). Program Suggestions that are reiterated in consecutive evaluations to address continuing problems may be elevated to Necessary Actions. NOAA will consider the findings in this evaluation document in making future financial award decisions relative to the Coastal Program.

### B. DOCUMENT REVIEW AND ISSUE DEVELOPMENT

The evaluation team reviewed a wide variety of documents prior to the site visit, including: (1) 2004 Coastal Program §312 evaluation findings; (2) federally approved Environmental Impact Statement and program documents; (3) financial assistance awards and work products; (4) semi-

annual performance reports; (5) official correspondence; and (6) relevant publications on natural resource management issues in Maryland.

Based on this review and on discussions with NOAA's Office of Ocean and Coastal Resource Management (OCRM), the evaluation team identified the following priority issues:

- Program accomplishments since the last evaluation;
- Use of NOAA funding, and management of grants awarded by Coastal Program;
- Implementation of federal and state consistency authority;
- Changes to the Program organization and core authorities of the MCZMP;
- Collaboration and coordination among the Maryland Coastal Program's networked partners as well as federal partners, non-government organizations, and industry;
- Public participation and outreach efforts;
- Public access;
- Coastal habitat;
- Coastal hazards;
- Water quality;
- Coastal dependent uses and community development;
- Performance measurement efforts; and
- The manner in which the Maryland Coastal Program has addressed the recommendations contained in the §312 evaluation findings released in 2004.

### **C. SITE VISIT TO MARYLAND**

Notification of the scheduled evaluation was sent to the MDNR, the Coastal Program networked agencies, relevant environmental agencies, members of Maryland's congressional delegation and regional newspapers. In addition, a notice of NOAA's "Intent to Evaluate" was published in the Federal Register on May 31, 2007.

The site visit to Maryland was conducted on September 10 -14, 2007. The evaluation team consisted of Bill O'Beirne, team leader, National Policy and Evaluation Division (NPED), John Kuriawa, Program Liaison, Coastal Programs Division, Zac Hart, NPED and the NOAA Coastal Services Center, and Steve Holland, Federal Consistency Coordinator, Ohio Coastal Management Program.

During the site visit, the evaluation team met with representatives of State and local governments, federal agencies, national and local NGOs, and the Coastal and Watershed Resource Advisory Committee (CWRAC). Appendix C lists people and institutions contacted during this review.

As required by the CZMA, NOAA held an advertised public meeting on September 10, at 7:00PM, at the Tawes State Office Building, 580 Taylor Avenue in Annapolis. The public meeting gave members of the general public the opportunity to express their opinions about the overall operation and management of the Coastal Program. Appendix D lists individuals who registered at the meeting. NOAA's responses to written comments submitted during this review are summarized in Appendix E.

### III. COASTAL MANAGEMENT PROGRAM DESCRIPTION

NOAA's Office of Ocean and Coastal Resource Management (OCRM) approved the Maryland Coastal Zone Management Program (Maryland Coastal Program) in September 1978. The lead Coastal Zone agency is the Maryland Department of Natural Resources (MDNR), which at the time of the site visit to Maryland for this evaluation was undergoing a departmental reorganization. MDNR is responsible for coordinating the Maryland Coastal Program through a network of State and local agencies using existing regulatory programs, a Governor's Executive Order, a Secretarial Order, Memoranda of Understanding (MOU) among State agencies, and project evaluation and regulatory review procedures. At the time of the evaluation, the Maryland Coastal Program was also in the midst of a visioning exercise designed to better articulate the program's niche and strategic direction.

The Maryland coastal zone is comprised of the land, water and subaqueous land between the territorial limits of Maryland in the Chesapeake Bay, coastal bays, and Atlantic Ocean, as well as the towns, cities, and counties that contain and help govern the coastline. It falls in two distinct regions: the Atlantic Coast, including the Atlantic Coastal Bays, and the Chesapeake Bay, which together represent thousands of miles of shoreline. The Maryland Coastal Zone extends from three miles out in the Atlantic Ocean to the inland boundaries of the sixteen counties bordering the Atlantic Ocean, Chesapeake Bay, and the Potomac River up to the District of Columbia. Local governments in the coastal zone include Anne Arundel, Baltimore, Calvert, Caroline, Charles, Cecil, Dorchester, Harford, Kent, Prince George's, Queen Anne's, Somerset, St. Mary's, Talbot, Wicomico, and Worcester counties, and Baltimore City. This area encompasses two-thirds of the State's land area and is home to almost seventy percent of Maryland's residents.

The Maryland Coastal Program is a "networked" coastal management program; that is, the implementation of the State's coastal policies relies on a number of state agencies and authorities. Those networked partners and authorities include:

- The Maryland Department of the Environment (MDE), which administers a number of the Maryland Coastal Program core regulatory authorities, including the Tidal and Non-tidal Wetlands Acts, Erosion and Sediment Control Laws, and the state Stormwater Management Act. MDE also has responsibilities in partnership with the Maryland Department of Planning (MDP) under the new HB1141 for managing water resources. MDE also coordinates the State's review and issues concurrences or objections pursuant to the Federal Consistency provisions (Section 307) of the Coastal Zone Management Act;
- The MDP, which promotes "smart growth" principles in the state through the 1992 Planning Act, the Smart Growth Priority Funding Areas Act of 1997 and related mapping efforts, the "Rural Legacy" program, land use intervention authority, a state data



clearinghouse, local government technical assistance via circuit riders, trend analysis, and historic preservation;

- The Maryland Department of Agriculture (MDA), which leads management of agricultural nonpoint source pollution;
- The Maryland Department of Transportation (DOT), which leads port administration, harbor development, infrastructure planning, and highways and aviation; and
- The Maryland Department of Housing and Community Development (DHCD), which provides community development, block grants and a small urban waterfront development program.

Other networked partners in the MCZMP include:

- the Maryland Critical Area Commission for the Chesapeake and Atlantic Coastal Bays, an arm of the MDNR, which administers and enforces the Maryland Critical Areas Act;
- the Maryland Environmental Trust, a statewide land trust governed by a citizen Board of Trustees, which accepts conservation easements and provides technical assistance to local land trusts; and
- the Coastal and Watershed Resources Advisory Committee (CWRAC), comprised of citizens, representatives from a variety of special interest groups, and local, State, and federal government representatives, which advises the Secretary of MDNR on matters referred to the Committee by the director of the Maryland Coastal Program.

Together these authorities and programs combine to have broad jurisdiction over land and water uses, coastal resources, and activities affecting them.

## **IV. REVIEW FINDINGS, ACCOMPLISHMENTS, AND RECOMMENDATIONS**

### **A. OPERATIONS AND MANAGEMENT**

#### **1. Program Organization and Staffing**

The Department of Natural Resources (MDNR) is the lead coastal zone management agency in Maryland and is responsible for both administrative and policy aspects of the program, including: administering the CZMA awards, monitoring implementation of the program by other networked agencies, reporting on and submitting program changes, developing and implementing CZMA section 309 assessments and strategies, and developing background information for policy development and program innovation. For most of the evaluation period, the Coastal Program Office within the Watershed Services Center housed most of the staff carrying out these “core” tasks and included subject matter, grants management, and project management experts.

However, MDNR has recently reorganized, creating a new unit housing the core staff of the Coastal Program Office and assigning a new coastal program manager. The reorganization also created a new Office of Sustainability in MDNR, which was partially inspired by and now staffed with former coastal program staff. The new structures are partially attributable to the perseverance and work of the Maryland Coastal Program during the evaluation period in raising the importance of critical coastal management issues in the state such as sea level rise, coastal community planning, and ocean management.

As a result of the reorganization, however, nearly all of the coastal management subject matter experts have been reassigned to other divisions and offices in MDNR. While this dispersion of coastal management expertise and experience will help communicate and improve understanding of the coastal program mission throughout MDNR, it has immediate impacts on many priority projects and program elements. After reviewing and discussing the new organizational structure and current staffing levels, NOAA remains concerned about the ability of the State to implement some of the core Maryland Coastal Program functions that had been performed by these reassigned staff. Specifically, it was not clear to the evaluation team who would be responsible for: ensuring that program changes are incorporated into the federally approved program; developing and tracking performance measures; overseeing local assistance awards; conducting planning and policy development and program innovation in priority and emerging coastal issue areas; and enhancement of grants management capability to remedy problems identified below.

The CZMA requires that states be organized to effectively implement their approved programs, including conducting the core program functions. NOAA completed the evaluation convinced of the value and benefits of the “policy development and program innovator” role that MDNR staff has fulfilled over time, but it remains paramount for coastal programs to fund and sustain core

program functions in addition to tackling emerging issues and implementing progressive projects. NOAA looks forward to working with the State to ensure that adequate staff members are hired to maintain the administrative functions of the program and to continue implementing projects in priority areas.

**NECESSARY ACTION #1: The Maryland Coastal Program must ensure that there is adequate staff to undertake core program activities. By March 31, 2008, the Maryland Coastal Program must identify and submit to NOAA a detailed explanation of how and by whom core functions will be carried out. These core functions include program changes, performance measure development, grants management, and the identification and implementation of approaches to priority and emerging issues.**

During the site visit it became clear that, in addition to addressing core functions, there are a number of significant issues and initiatives that will require the program's attention in the near-term. Among these issues are significant population growth and coastal development pressures, impacts resulting from military base realignment near Baltimore (primarily expansions in the Aberdeen Proving Grounds and Fort Meade), and a major statewide initiative to reduce sources of, and adapt to, climate change and sea level rise/land subsidence. While the current budget climate doesn't appear to be conducive to adding new staff, decreasing existing workload or not addressing these emerging issues does not appear to be an option. Therefore, efforts to increase the existing staff's efficiency will likely be needed, as well as the possibility of increasing staff capacity. Alternatively, the Coastal Program could direct Federal or state funding to other offices or networked agencies to accomplish specific tasks necessary to the program's operation.

## **2. Program Priorities and Visioning**

The Maryland Coastal Program was established to develop and administer state coastal policies and implementation mechanisms to comprehensively manage coastal land and water uses, with an emphasis on priority coastal issues facing the state. To this end, the MDNR Coastal Program Office's responsibilities include: coordination of projects, initiatives, and the development of policies related to coastal resources and issues, including land and water uses, climate change and sea level rise, living shorelines, nutrient reduction, clean marinas, and living resource protection and restoration. In addition there are program goals relating to strengthening its legal framework, partnerships, accountability, and identity.

As the lead agency, MDNR has several department-wide goals, which align with Maryland Coastal Program goals, including oyster restoration, habitat protection and restoration, and nutrient reduction. The Department's approach includes working locally to produce on-the-ground results; creating and implementing planning programs for protection and restoration of coastal resources; provision of scientific data for management needs; and the creation and distribution of geographic information system (GIS) based models. The focus of activities within the newly created Chesapeake and Coastal Watershed Services Unit is service, specifically service to local governments and non-governmental organizations.

In the 2004 Section 312 evaluation of the Maryland Coastal Program, NOAA found that the program lacked focus and encouraged the State to “develop a [Maryland Coastal] Program-wide strategic vision to improve communication and coordination and identify gaps in program implementation and emerging coastal issues.” In response, the MDNR has engaged Maryland Sea Grant in a “visioning” process to help define where the program should focus in the future, what the current network looks like, and how to articulate the vision statement of the Maryland Coastal Program. The process, and in particular the exercise in mapping the current network and the roles and responsibilities of the various entities within MDNR, has been a useful internal tool thus far, outlining the relationships of MDNR Coastal Program Office staff to network partners and customers.

NOAA firmly believes that to truly develop a vision for the “Maryland Coastal Program” as opposed to the Coastal Program Office of the MDNR, all Maryland Coastal Program network partners should be engaged immediately in the overall visioning efforts of the Program, and that this effort must be completed as soon as practicable. The last section 312 evaluation recommendations called for the completion of this activity, and with the recent reorganization and new staffing it is imperative that the Maryland Coastal Program complete a comprehensive, objective, and thoughtful assessment of its strengths, weaknesses, opportunities, and threats. NOAA encourages the Maryland Coastal Program to use its existing 309 Assessment and Strategy as a primary input to the visioning process. Since there is no formal “Coastal Coordinating Committee” for assisting in soliciting input from the networked partners, the program might want to consider a “workgroup” model. In this model, there are not standing committees, but instead are workgroups created to address a specific issue for a finite period of time. Perhaps the first workgroup implemented by the Maryland CZM program could be a visioning workgroup, which could move forward after the initial input is received from the networked partners. Finally an outside facilitator might be used to obtain input and ensure optimal communication.

Throughout the evaluation numerous persons noted the role of the Maryland Coastal Program as that of an innovator, and praised the MDNR Coastal Program staffs role in “spawning” new and successful management approaches. It is clear that the program has provided both innovative ideas and solutions to pressing coastal problems. The visioning process should address how this capability can be maintained and enhanced over time. In an effort to more formally recognize the contribution of the Maryland Coastal Program, the mapping approach, which visually depicts programmatic coordination mechanisms and partner relationships, might also be employed to highlight the many well established programs, such as the critical areas program, that were initiated through the core staff of the coastal program.

Further, the visioning process should consider creating a clearer, more consistent and more readily recognized "brand" for the Maryland Coastal Program. It was apparent that many different participants in the 312 had widely divergent views of the program--from a “pot of money” to a comprehensive, legally defensible framework for preventing environmental degradation. Throughout the evaluation, it became apparent that there are inconsistencies in how the program is titled (i.e., Maryland's coastal program, Maryland Coastal Management Program, Maryland Coastal Zone Management Program, etc.), and there was no evidence of a program logo.

Finally, as part of the overall visioning process, the role of the Coastal and Watershed Resources Advisory Committee (CWRAC) should be assessed, and if necessary modified. The CWRAC is comprised of citizens, representatives from a variety of special interest groups, and local, State, and federal government representatives and was constituted to advise the Secretary of MDNR on matters referred to the Committee by the director of the Maryland Coastal Program. The CWRAC also assists the Maryland Coastal Program in State-level activities both as a committee and through use of specific subcommittees. The chairman heads the Executive and Full Committee and is elected for a maximum of two terms at two years each. The Full Committee meets bi-monthly, with the scheduling of additional meetings determined by the director of the Maryland Coastal Program, the chairman, or by other factors, including budget restrictions and interest culminating in petition by a majority of members. MDNR Coastal Program staff provides coordination and administrative support, and technical assistance is provided to the Committee by state executive departments, federal agencies with coastal management responsibilities, and academic institutions.

Even current members of CWRAC admit that the group serves more as an information exchange than a true advisory committee. Membership levels and representation have also languished in recent years. Yet, the core CWRAC members have helped the Maryland Coastal Program maintain its position as a leader and innovator by being forward thinking and questioning the status quo.

**NECESSARY ACTION #2: By December 31, 2008, the Maryland Coastal Program must expand and complete the visioning process underway to arrive at a final strategic vision. The vision must include input from all network partners and should be useful in guiding future investments of the Maryland Coastal Program. In addition, to address the concerns outlined in Section 1 above and to ensure that the Chesapeake and Coastal Programs Division can be responsive to the new vision, a business plan should be developed for the coastal program within the Chesapeake and Coastal Program Division. The business plan should describe: 1) how federal (CZMA) funding will be aligned with shared priorities; 2) how core MDNR coastal program staff will perform core functions and maintain their ability to identify and propose solutions to priority coastal issues in the State; and 3) how the Coastal and Watershed Resources Advisory Committee (CWRAC) will support Maryland Coastal Program goals. Deliverables due by December 31, 2008 to OCRM include the final visioning document and a complete business plan for core coastal program staff.**

### **3. Grants Management**

Grants management has become an issue in Maryland. Numerous, significant post-award actions, extensions of multiple open awards for a full three years, overdue and incomplete performance reports, and a large number of re-programmings late in award periods have caused administrative burdens for both the Maryland Coastal Program grants management staff and NOAA. While some issues have causes beyond the program's control, some do not. Although

some of the issues, such as supporting multiple network partner agency staff via the CZMA award, will necessitate many tasks and more complex tracking and reporting, the State must become more proactive in identifying troubles before they occur and dealing with unspent funds expeditiously. It is not entirely clear whether the State needs to enhance its grants management capacity or if it can resolve issues through increased efficiencies.

For example, the majority of tasks in both the 2004 and 2005 awards were subject to revision, extension, or both. A higher number of task changes is sometimes necessary for pass-through grants to local governments or other sub-awardees. However, given that more than three quarters of total funding was used for ongoing funding of core MDNR staff or agency partners, NOAA expects that expenditures will be more timely and straightforward for the remaining open awards. The 2004 award was also open for two years before even half of the tasks had been completed. Sixteen of the 2004 tasks required extensions for a full three years. The State needs to get back to managing CZMA awards as intended, consistent with NOAA guidance, and completed in a 12 to 18-month timeframe.

One area for improvement would be to have sub-grantees, either local governments or contractors in consultation with the State, improve the accuracy of both time and cost estimates associated with the array of services most often sought by the Maryland Coastal Program. Some of these services include: planning and zoning assistance to local governments, planning and design of stormwater BMPs, and "Smart Growth" policy implementation.

Another method of dealing more efficiently with necessary reprogrammings, which has been successfully used in the past, involves including tasks which can be easily supplemented, such as expanding data acquisition, for the majority of reprogrammings. In addition, NOAA encourages the Maryland Coastal Program to investigate the possibility of implementing a pooled, competitive request for proposal to support the development and implementation of comprehensive plans, codes, and ordinances by county and municipal governments. This might allow federal funds (e.g., NOAA CZMA, EPA Chesapeake Bay Program) to be directed to a more coordinated assistance approach managed by a lead Maryland agency.

With regard to performance reporting, the State must provide complete and accurate information that clearly ties project outcomes and deliverables to the original project goals, and when possible to both Maryland Coastal Program performance measures and the NOAA required national performance measures. Other states, such as Ohio, have begun the process of linking performance reporting to performance measurement, and NOAA looks forward to sharing their approaches with Maryland. The reports must also be submitted to NOAA on time.

Finally, the awards should more clearly align with priority coastal management issues identified in the Maryland Coastal Program's strategic vision and business plan.

**NECESSARY ACTION #3: The Maryland Coastal Program must immediately begin managing CZMA awards consistent with NOAA guidance, ensure that all awards are spent in a one year to 18-month timeframe, and must meet all reporting requirements in a timely manner. By June 30, 2008, the Maryland Coastal Program must submit to NOAA for review and approval a clear plan that addresses the resources necessary to manage all open awards, discusses proposed changes to the recipients of funding, highlights how the state will ensure timely performance reporting, and identify the methods that the Maryland Coastal Program will use to deal with unanticipated changes to the award. In addition, the Maryland Coastal Program's 2008 CZMA award application needs to demonstrate alignment with the Maryland Coastal Program priorities, and future grant applications should clearly link tasks/projects to BayStat or other state defined performance measures, and where relevant, to the NOAA CZMA Performance Measurement System.**

#### **4. Measuring Program Effectiveness**

Over the past several years NOAA has developed the National Coastal Management Performance Measurement System (NCMPMS) to track national indicators of the effectiveness of Coastal Management Programs and National Estuarine Research Reserves in achieving CZMA and strategic objectives. This information is critical to communicating the success of the national program, and development of this measurement system is tied to future CZMA funding. State coastal programs are just finishing the second year of providing the raw data to populate these measures. Again, staff in the MDNR's Coastal Program office that have been compiling and providing that information have recently been reassigned.

At the state level, the launch of BayStat, the Governor's new accountability system of statewide performance indicators, provides a potential opportunity to integrate and align measurement approaches. BayStat is designed to increase the efficiency and effectiveness of Bay programs by providing timely and accurate information to policymakers; tracking and assessing progress of programs and enforcement; and providing a forum for the continuous analysis of data, the establishment of measurable goals, and the identification of new threats.

MDNR, MDE and MDA must gather, present, and be prepared to discuss with the Governor, BayStat representatives and each other, programmatic and a wide range of outcome data. For example, outcome data include: water quality; nutrient and sediment loads; biotic integrity; fisheries and other living resources; growth and development impacts; the status and cost of efforts to restore Bay wetlands and forest buffers implementing nonpoint BMPs and upgrade or replace wastewater treatment facilities and onsite sewage disposal systems, among others.

BayStat is thus viewed as an important organizational management tool. It currently tracks the success of 39 programs identified in Tributary Strategies targeted to meet State nutrient and sediment reduction goals. These include a wide variety of agricultural best management practices, improvements to point sources (such as upgrades to waste water treatment plants), runoff from urban lands, and added protections to streams and shorelines. In future years, it is expected that BayStat will add additional programs and adaptively respond to measurement data. The evaluation team learned from multiple participants that BayStat is compelling coordination

among Maryland agencies. It appears clear that the Maryland Coastal Program must develop and share its key measures and contributions to BayStat goals or risk marginalization.

The BayStat process will eventually be expanded to address State programs to mitigate coastal hazards and assist in adaptation to climate change and sea level rise. This performance measurement system is certainly consistent with the spirit and objectives of NOAA's NCMPPMS. NOAA encourages MDNR staff to continue their engagement in the BayStat rollout, and to seek ways to align the NCMPPMS requirements with BayStat indicators.

**ACCOMPLISHMENT: The Maryland Coastal Program is actively involved in the State's BayStat accountability system, which is a significant positive step to increase the efficiency and effectiveness of coastal management in Maryland.**

## **B. PUBLIC ACCESS**

Public access to coasts in Maryland is mixed. According to the Surfrider Foundation's 2007 State of the Beach Report (see [http://www.surfrider.org/stateofthebeach/05-sr/state\\_summary.asp?zone=MA&state=md](http://www.surfrider.org/stateofthebeach/05-sr/state_summary.asp?zone=MA&state=md)), access to the Maryland ocean shoreline is very good, with an access site per every mile of ocean shoreline. However, access to Chesapeake Bay shorelines may be more limited. Demand for coastal public access appears to be fairly high in Maryland. MDNR conducted a Maryland Waterway Use Survey in 2003, with a public access demand component. Results of the survey were compiled in Maryland's Recreational Boating and Infrastructure Plan (MDNR, 2004). The plan indicates that there are substantial new and ongoing needs with regard to boating facilities. As the state's population continues to increase, the demand for boating facilities and access will also grow. Existing facilities are aging and in need of ongoing maintenance and substantial upgrades, and it is more challenging to find suitable sites for new facilities.

The State is enhancing access through a number of means. First, the Maryland Coastal Program has undertaken a limited number of land acquisition projects through ongoing efforts such as Program Open Space, Rural Legacy, and Water Trails. Moreover, the criteria for the new "targeted land acquisition program" initiated by Governor O'Malley and under development in MDNR will provide for appropriate public recreation opportunities such as trails and Bay access while prioritizing preservation of lands that will provide the most significant environmental benefits.

In addition, the Maryland Coastal Program has funded a few 306A projects during the evaluation period to create or enhance public access. The MDNR Coastal Program Office is also participating in the Chesapeake Bay Program Public Access Workgroup. The workgroup is composed of representatives from State, federal, and local governments and is charged with addressing the public access commitments set forth in the Chesapeake 2000 Agreement. The Workgroup promotes public access to the Chesapeake Bay and its tributaries. Inventories, mapped existing sites, and technical reports on how to select and develop public access areas are products of the workgroup. The Gateways Program is currently promoting the linkage of access



areas and the development of water trails. A future focus will include working with localities to address public access in local comprehensive plans. Other useful products sponsored by the Maryland Coastal Program related to public access include maps of public access sites enhanced by the program, a “Boater’s Guide to Maryland’s Coastal Bays,” and water trails and maps provided online at [www.dnr.state.md.us/greenways/watertrails.html](http://www.dnr.state.md.us/greenways/watertrails.html).

Although there has been some success providing public access within the coastal zone, the need for additional shoreline access is recognized. There are a number of factors that present challenges to enhancing shoreline access, including: the amount of private property along the shoreline; the cost of property; neighborhood concerns; property maintenance and liability; and the lack of a comprehensive plan that includes shoreline access as a focus.

The Maryland Coastal Program continues to look for public access opportunities each year. Proposed activities include: sponsoring a Local Government Information Exchange to explore the obstacles, barriers, and liability issues which appear to be hindering public access opportunities; working with the Coastal and Watershed Resources Advisory Committee to identify ways to improve public access opportunities; identifying appropriate sites through existing Programs; and continuing communication with Program Open Space. The Maryland Coastal Program will be partnering with local governments to enhance access where possible. While important, the provision of public access in Maryland has not been and will likely not be as high a priority as other issues for the state. In the State’s 309 assessment, public access ranked medium.

Nevertheless, there are some additional activities the state could consider to enhance public access, such as: developing or finding a mechanism through which the three State databases can be used collaboratively to track public access in the State; reevaluating the state’s methodology for identifying acquisition sites to make provision of access a higher priority; continuing to target discrete public access projects with CZMA funds; sponsoring a local government information exchange to explore the obstacles, barriers, and liability issues which appear to be hindering public access opportunities; and engaging CWRAC to identify ways of improving public access opportunities.

### **C. COASTAL HABITAT**

Maryland is preparing for an increase of over a million new citizens, over the next 25 years. This population growth and the associated development continue to drive the primary threats to coastal habitat in the state. Direct threats include conversion and/or fragmentation of habitat during development. Indirect threats include: impediments to the migration of habitat in response to sea level rise; stress or degradation of habitats from introduction of pollutants; alteration of habitat hydrology from increased impervious surfaces; and erosion, all of which can vary significantly from region to region. In response, the Maryland Coastal Program employs a broad range of management techniques to address habitat protection, enhancement, and restoration including planning, regulatory approaches, and acquisition tools.

During the evaluation period, the Maryland Coastal Program continued to work with MDP and local governments to assist local governments in developing “sensitive area elements” for their comprehensive plans and land use ordinances to implement these elements. These sensitive areas include: streams and their buffers; 100-year floodplains; habitats of threatened and endangered species; and others as called for in the Planning Act of 1992. Of note, the Maryland Coastal Program continued to work with the Coastal Bays Aquatic Sensitive Areas Initiative to address boating in shallow water environment, construction of docks and piers through wetlands, and awareness and preservation of sensitive areas’ locations, among others. While many local governments have developed and revised their comprehensive plans to better address habitat issues, there is still much to be done to have those local governments adopt local land use ordinances or other controls to implement the plans. For recommendations, see the discussion of accelerating adoption of local land use controls in F.1 and technical assistance to local governments in Section G.3 of this report.

The Maryland Coastal Program works with other stakeholders in a number of coastal counties to develop and implement watershed plans in partnership with MDNR’s Watershed Restoration Action Strategies (WRAS) Program. Together they provided planning support, technical assistance, and funding to Worcester County and others to complete these watershed plans, which were designed to develop priority water quality and habitat preservation and restoration plans within a comprehensive watershed context. The MDNR Coastal Program Office executed this function until the funds available via the section 319 grant program were transferred to MDE.

MDNR’s Ecosystem Analysis Center has led a statewide effort to identify critical habitat, or “green infrastructure,” through its Green Infrastructure Assessment (GIA). The assessment identifies habitat hubs and corridors and large parcels with an analysis of relative conservation value of lands based on MDNR Natural Heritage Program “ecologically significant areas.” This information provides an exceptional framework that will be useful to a number of other planning and management efforts.

## **1. Tidal and Freshwater Wetlands Programs**

In the face of a significant increase in development, the State the Maryland tidal and freshwater management programs appear to be minimizing direct impacts. Regarding tidal wetlands, MDE regulates “state wetlands,” or wetlands channel-ward of mean high water shoreline, and “private wetlands,” which includes all others. State wetlands are subject to licenses; other wetlands are private and are issued permits. MDE regulates all isolated nontidal wetlands, which are not regulated by the Army Corps of Engineers (Corps), as well as a 25-foot buffer to nontidal wetlands. Under the State Programmatic General Permit, MDE staff review about 3,000 activities per year in coordination with the Corps of Engineers. Some activities receive a general permit for minimal impacts; many activities (about 80%) are “category 1 activities” and are reviewed by the state in lieu of the Corps. For some projects with potentially greater impacts (category 2 activities), a joint public notice is issued the Corps, and both the State and Corps authorize the projects. The remaining activities are individual permits issued by the Corps. Most of the Corps Nationwide permits (NWP) have been suspended for use in Maryland where

the state's programmatic general permit is used in their place. According to MDE wetlands and waterways staff, the wetlands management programs only allowed 5,000 square feet of permitted tidal wetlands loss and less than 34 acres of permitted non-tidal wetlands loss coast-wide in 2006, the state's last reporting period. In addition, the Maryland Coastal Program is also revisiting its mitigation provisions to ensure that offsets are providing functionally equivalent habitats where losses are unavoidable.

**ACCOMPLISHMENT: Implementation of the Maryland tidal and freshwater management programs has resulted in very low levels of permitted wetlands losses even as coastal development pressure has significantly increased.**

As with many state CZM programs, monitoring and enforcement continue to be challenging in times of tight budgets. While the team did not hear any major concerns during evaluation interviews or the public session, MDE and other programs acknowledged that compliance monitoring and enforcement rates and staffing were not ideal.

In response, the Maryland Coastal Program networked agencies and the State are taking actions to address this issue. First, MDE has already taken low-cost steps to increase enforcement, such as increasing communications, focusing monitoring and enforcement on higher risk facilities, and enhancing standard operating procedures. The MDE is undertaking a fiscal analysis to determine how best to align resources with needs (Department-wide there are currently 132 inspectors for 198,000 facilities), and an analysis of how to better target enforcement resources to high risk areas. MDE hopes that these studies will reinforce the need to add staff to enforcement programs and that they may also reveal opportunities for new MDNR-MDE collaboration. The state has also significantly increased penalties for violations of tidal and non-tidal wetlands laws. Finally, in the executive order establishing BayStat, the importance of enforcing current laws is highlighted and appears to be part of the process to improve accountability. NOAA encourages the State to continue to pursue these promising efforts.

## **2. Maryland Critical Area Act for the Atlantic and Coastal Bays**

The Maryland Critical Areas Act established that the waters of the Chesapeake Bay, its submerged lands and wetlands, and all upland areas 1000 feet from tidal wetlands comprise the critical areas of the state. It also established a program to oversee development on these critical buffer zones around tidal waters. More recently, coastal bay areas were added to the Act's jurisdiction. To protect these critical areas, all 16 counties, Baltimore City, and the 46 municipalities bordering the bays and their tidal tributaries must develop and implement critical area plans and regulations to protect water quality and fish, plant, and wildlife habitat. The Maryland Critical Area Commission for the Chesapeake and Atlantic Coastal Bays (Critical Area Commission), an administrative arm of the MDNR, implements the Act. The Act requires that counties update their implementing ordinances every six years, and those changes must be approved by the State Commission before they become law. Perhaps most importantly, the Critical Area Commission provides comments and recommendations on both amendments to

local critical areas laws and on site specific cases brought before local boards of appeals, which determine how to apply the local laws.

During the evaluation period, the State enacted changes to the Act, including: restriction of development in designated "growth allocation" land to commercial and industrial projects; setting of standards and outline requirements for work in the existing buffer-exempt areas for new development and redevelopment for industrial, institutional, recreational, and multifamily uses; and provisions to encourage the use of natural vegetation for shoreline stabilization wherever possible. Other changes included revision of previously advisory language to clearer and more binding guidance to the local governments.

A 2003 study of the Critical Area Act by the Abel Foundation suggests that the Act has been a success in the designated resource protection areas, due in large part to the 1 unit per 20-acre requirements, but has been less successful in the limited development areas (see [http://www.abell.org/pubsitems/env\\_critical.area\\_1203.pdf](http://www.abell.org/pubsitems/env_critical.area_1203.pdf)).

Ensuring site specific compliance with local laws is challenging in part due to limited resources, but also due to the need to educate both landowners and local government officials, especially attorneys general offices, county attorneys prosecuting cases, and judges, who can undermine the fines levied for infractions. To address this issue, the Critical Area Commission has established an education coordinator in its office and is working with the MD NERR Coastal Training Program to increase targeted education. For example, the evaluation team heard that there may be some loopholes in the criteria related to "landscape walls," which are allowed, but which may be functioning as bulkheads and which over time threaten to degrade habitat as sea level rises.

Notwithstanding the former, the major challenge facing the Critical Area Commission appears to be modernizing the Critical Area Act to make it more compatible with precepts of "smart growth," a belief shared by Critical Area staff. Two additional issues were identified by the Abel Foundation Study. The first is that "the Critical Area Criteria's promotion in the Limited Development Area of low-density development and the impediments they impose to mixed-use development clash with the policies central to smart growth to promote mixed-use communities, a variety of housing types, walkable communities, close knit neighborhoods, and transportation choices." The second issue is that the Critical Area Criteria's concept of growth allocation "sanctions conversion of an arbitrary percentage of resource lands to development without any demonstration of need and without compliance with any requirements for density, mix of uses or proximity to areas that are already developed." While acknowledging the need for some flexibility and growth opportunities, the report recommended that criteria be principled, "governed by a rational planning process and not project driven" and allocation should incorporate "standards based on the principles of smart growth related to where expansion can occur and standards for how it can be used, including density and type of use in expanded growth areas."

Given the challenges at hand, NOAA suggests a continuation and strengthening of the educational and outreach methods underway to all relevant audiences. For example, the Critical Area Program could clarify to homeowners what can and cannot take place in buffers, and work

with appropriate stakeholders to revisit allowable densities and types of uses to better conform to Maryland’s emerging smart growth strategy and polices.

**PROGRAM SUGGESTION #1: As a means to inform the legislature and to make positive changes in agency and county-level implementing rules, the Maryland Coastal Program should consider the development of a white paper or policy document, potentially using federal funding, which allows the Critical Area Commission to highlight Critical Area Program successes as well as the need to modernize the Program. This would be most valuable when done in conjunction with other state programs whose impacts will affect the critical area and the growth allocations articulated via the Critical Area Act.**

### 3. Land Acquisition Programs

Maryland has developed a number of statewide programs to conserve and protect key habitat. Program Open Space, a state-wide program providing dedicated funds for acquiring state and local parks and conservation areas, has protected 312,000 acres since its inception in 1969.

The “Rural Legacy” program, initiated in 1997, is the preservation counterpart to Priority Funding Areas and provides funding for preservation of lands designated as Rural Legacy areas. There was limited rural legacy activity during most of the evaluation period, but that appears to be changing.

Beginning in 2001, the Maryland GreenPrint Program has provided yet another set of criteria with which to acquire lands in Maryland. As part of the GreenPrint program MDNR has identified over two million acres of “green infrastructure” lands through its Green Infrastructure Assessment, and the program has brought additional funding to acquire these parcels. The GreenPrint Program expanded the pool of existing acquisition funds in Program Open Space and Rural Legacy to target the large-lot purchases anticipated under GreenPrint. According to the state’s website, only 30 percent of the over two million acres of Maryland's Green Infrastructure has been protected.

The Maryland Environmental Trust (MET) is a statewide land trust created by the General Assembly in 1967 for preservation of open land, such as farmland, forest land, and significant natural resources through the acceptance of donated conservation easements, a voluntary agreement between a landowner and MET. The MET also promotes the protection of open land through the Local Land Trust Assistance Program.

Finally, specific to the coast, the Maryland Coastal Program is working to develop an approved Coastal and Estuarine Land Conservation Program (CELCP) plan, which will identify key sites in the coastal zone for acquisition and enhance the state’s ability to receive federal CELCP funds to acquire valuable habitat areas.

Recently, MDNR has initiated changes to improve land acquisition in the state. First, as part of the recent MDNR reorganization, all State land acquisition and conservation programs have been

grouped in one office, the office of Land Acquisition and Planning. Second, the MDNR has developed a new “targeted land acquisition program” which is a targeting and ranking system to more scientifically and objectively prioritize its land conservation work. Conservation opportunities first experience an “ecological screening” in which ecological criteria, derived in part from the state’s Green Infrastructure Assessment, are used to identify high priority conservation areas. Projects next undergo a “programmatic screening” where projects are further prioritized based on programmatic, funding, and partner criteria. Finally, projects undergo a “parcel screen” that assesses multiple benefits and management considerations to prioritize parcels within project areas. While a majority of funding will go towards protection of high priority conservation areas, some funding will remain available for acquiring properties outside of the updated Green Infrastructure Plan that offer unique active recreational, Bay access, cultural and historical protection, and in-holding acquisition opportunities. Finally, the success of the acquisition program will be measured and reported through BayStat, which will measure progress on annual acreage goals and will quarterly track such items as: state dollars spent protecting updated Green Infrastructure and dollars spent for other purposes; the percentage of total Program Open Space acquisition dollars and acres protecting targeted priority conservation areas; cost per acre by county; dollars leveraged through partnerships or below market value offers; acres of updated Green Infrastructure restored; and the percentage of new acres acquired in areas with complementary conservation zoning.

The consolidation, and potential integration of land acquisition programs, especially the criteria used for targeting, is impressive. There is, however, a need to improve the understanding of land ownership patterns and to be able to proactively identify willing sellers, especially in those geographic areas of interest to all Maryland acquisition programs. The Maryland Coastal Program might consider funding the development of a simple brochure directed at landowners (especially those with properties being targeted), which explains the various options available for working with the Maryland Environment Trust, including selling, easements, and donations. The newly developed targeting process, based primarily on ecological criteria, might benefit from consideration of the end (human) users of the protected space and the proximity of acquisition sites to population centers. NOAA also encourages continued use of the blue-green infrastructure mapping for the sake of implementing ecosystem approaches to management.

**ACCOMPLISHMENT: The Maryland Coastal Program has continued to make improvements in its land acquisition programs through the development of more science-based and objective selection criteria. The Maryland Coastal Program has taken a leadership role in developing a rational, prioritized, and “targeted” acquisition program.**

#### **D. WATER QUALITY**

Water quality remains the foremost issue in Chesapeake Bay restoration activities, and many of the Maryland Coastal Program efforts affect water quality indirectly. Overall success in implementing best management practices (BMPs) to reduce nutrient loadings to the Bay, reestablishing submerged vegetation, improving turbidity and dissolved oxygen levels, and increasing living resources has been limited. Generally, gains made in restoring the Bay water

quality and living resources seem to be overtaken by the pace and impacts of coastal development in the watershed and the need to implement additional BMPs to reduce loadings.

The State has established a host of programs to address improving water quality. At the state level, MDNR administers the State's Coastal Nonpoint Program. In addition to point source programs, MDE administers state-wide stormwater management, erosion and sedimentation, nutrient management and Total Maximum Daily Load allocations (TMDL), and the Clean Water Act Nonpoint Source Program, most of which are implemented by local governments. From a planning perspective, MDE coordinates with MDNR, local governments, and others to develop Watershed Restoration Action Strategies, Tributary Strategies, and targeted agricultural assistance. The Maryland Coastal Program has been a key player in the establishment, support, and implementation of many of these water quality focused initiatives.

Of particular note, MDE was instrumental in the passage of the Stormwater Management Act of 2007, signed into law by the Governor in April, and which became effective on October 1, 2007. Prior to the 2007 changes, environmental site design was encouraged through a series of credits found in Maryland's Stormwater Design Manual. The 2007 changes now require that environmental site design through the use of nonstructural BMPs and other better site design techniques, such as low impact development design, be implemented to the maximum extent practicable. MDE is in the process of addressing the requirements of the Act, including changes to regulations, the 2000 Maryland Stormwater Design Manual, and other guidance materials.

**ACCOMPLISHMENT: The Maryland Department of the Environment was instrumental in the passage of the 2007 Stormwater Management Law that will make Low Impact Development designs the state's preferred stormwater management practices.**

MDA continues to administer a number of water quality related programs including the Agriculture water quality management program, soil conservation districts erosion and sediment control, and drainage maintenance. Most of these programs work with individual landowners to implement BMPs on agricultural lands. During the evaluation, the team learned that more widespread use of recommended agriculture BMPs will be necessary to achieve nutrient and sediment reduction goals and that compliance audits and enforcement actions are very limited at this time.

During the evaluation period, Maryland Coastal Program funds were used by MDA soil conservation district staff to fill in gaps, or to accelerate technical assistance in certain watersheds. These funds supported MDA's only outreach coordinator. Continuing to provide funding to MDA to hire district technical assistance staff may be logical and appropriate as long as the geographic areas impacted by the assistance are high priority coastal watersheds, and so long as high staff turnover rates do not hamper the achievement of desired outcomes. Numerous resignations and personnel changes have compromised outcomes in the past and created difficulties in reallocating funds. Thus, the Maryland Coastal Program should reconsider whether or not its current support of conservation district staff is the most effective use of these funds to accelerate implementation of BMPs. For example, the MCZMP could consider using the

funding to increase compliance audits and enforcement actions as a priority activity for funding to MDA.

The value added in continuing to support MDA is apparent; however, there is the need to more clearly articulate the connections between water quality programs, Maryland Coastal Program goals, and expected environmental outcomes. The manner in which projects are targeted and selected for CZMA funding assistance should be transparent to NOAA and all networked agencies and based on the strategic vision. In addition, there was no mention during the evaluation of how the core MDNR staff are attempting to use the authorities and approaches approved by NOAA and EPA pursuant to Section 6217 of the CZMA, including 5/15 year plans and strategies that were designed to prioritize limited resources to focus on the most effective nonpoint source management measures. The strategic Maryland Coastal Program “vision and business plan” under development should address this shortcoming.

**PROGRAM SUGGESTION #2: The Maryland Coastal Program should assess the value of using Maryland Coastal Nonpoint Program authorities and planning documents to guide future funding allocation decisions. MDNR staff should work with MDA to ensure that outcomes associated with NOAA funded awards to MDA are obtained, or that funding is redirected to meet objectives.**

Finally, MDNR administers the Maryland Biological Stream Survey (Stream Survey). The Stream Survey uses random sampling to determine the status of wadeable streams and rivers in Maryland. Since 1994, water samples, biological, and habitat data for over 2,500 streams in the state have been collected. The Stream Survey was designed to take periodic snapshots of the state’s streams and to help target streams and watersheds for protection, restoration, or both. The Stream Survey has generated extensive monitoring data and research results, particularly results related to watershed imperviousness and water quality, and NOAA believes that this information would be an effective component of outreach and educational efforts on water quality and coastal growth issues if incorporated into outreach tools to local governments, elected officials, NGOs, and the public.

Many of the activities to address cumulative and secondary impacts of development on water quality are undertaken by local governments though implementation of statewide policies and standards for stormwater management, erosion and sediment control, and often through development of, or revisions to, local comprehensive plans and land use ordinances. MDNR, MDE and MDP all provide technical assistance to local governments to develop, adopt and implement these plans and ordinances.

While the state has done a great deal of planning work, developed significant technical assistance and capacity building programs, and has worked with locals to revise land use plans, a significant number of local governments still need to adopt or revise land use controls to implement those plans and reduce loadings into the Bay. For recommendations, see the discussion of accelerating adoption of local land use controls in F.1 and technical assistance to local governments in Section G.3 of this report.



## E. COASTAL HAZARDS

The Maryland Ocean and Bay shoreline is extensive. There are thousands of miles of Chesapeake Bay and tributary shoreline, and 31 miles of Atlantic shoreline. Many of these shorelands are low lying and subject to multiple hazards such as erosion, flooding or inundation from sea level rise. According to MDNR information, approximately 69 percent of Maryland's coast is currently eroding. The average rate of erosion along the coast is just over one half feet per year. Approximately 48 miles of shoreline are experiencing erosion rates greater than eight feet per year. Regarding flooding, approximately 12 percent of land in the State is designated as "special flood hazard area" under the National Flood Insurance Program. In addition, these low-lying lands are potentially subject to storm surge. Tropical Storm Isabel in 2003 caused water to rise four to eight feet higher than normal. According to MDNR hazards staff, sea level rise rates along Maryland's coastline is three to four mm/yr or about twice the national/global average. Maryland's relative sea level rise is among the highest in nation, partly due to land subsidence from tectonic plate rebound. Sea level has risen approximately one foot in the last century and is expected to rise another two to three feet by the year 2100. Principal impacts of concern to the state from sea level rise are exacerbated coastal flooding, existing and potentially increased shoreline erosion, and the submergence of low-lying lands, structures, and critical coastal habitat (e.g., tidal wetlands).

During the evaluation, addressing coastal hazards—especially preparing for impacts of sea level rise—was consistently identified as one of the highest priority coastal issues facing the State. Against this backdrop, the Maryland Coastal Program played a leadership role in raising awareness and positioning the State and local governments to better address coastal hazards issues including the impact of sea level rise and coastal storms. Building on earlier work such as the Shore Erosion Task Force recommendations and recommendations in the "Sea Level Rise Response Strategy for the State of Maryland," the state has undertaken a number of hazard related efforts during the evaluation period. Some of the more notable projects are discussed below.

MDNR partnered with the MDE Flood Hazard Mitigation Section, the Army Corps of Engineers, and NOAA's Coastal Services Center to acquire high-resolution topographic data (LIDAR), develop elevation maps for nearly all of the state's shorelines, and make the data available online. This information and maps will be critical for floodplain map modernization, storm surge and sea level rise inundation modeling, as well as emergency management planning (e.g., evacuation planning). Maryland now has as comprehensive a set of coastal LIDAR data as any state in the nation. MDNR also worked with program partners to complete historic shoreline position maps and document statewide historic erosion rates.

MDNR provided considerable financial support to the Virginia Institute of Marine Science (VIMS) to conduct a "Comprehensive Shoreline Inventory for the State of Maryland." VIMS developed a shoreline inventory for all of Maryland's tidal shorelines. The inventory, begun in 2002 and completed in 2006, provides an array of information on the general conditions of shorelines (for example, riparian land use, bank condition, and shoreline features--erosion control and access structures) to assist policy development at local and state levels of government.

MDNR also is partnering with a number of entities to promote nonstructural shoreline erosion responses, or what is becoming known as “living shorelines.” “Living shorelines” is an increasingly popular approach to erosion control that uses strategically placed plants, stone, and sand to deflect wave action, conserve soil and simultaneously provide critical shoreline habitat. Living shorelines often stand up to wave energy better than solid bulkheads or revetments, which add to the problem by amplifying waves on neighboring shores.

Of considerable note, the Maryland Coastal Program, and specifically the MDNR Coastal Program staff played an instrumental role in inspiring and formulating an Executive Order on Climate Change. In April 2007, Governor Martin O’Malley signed Executive Order 01.01.2007.07, establishing the Maryland Commission on Climate Change. The Commission is charged with collectively developing an action plan to address the drivers and causes of climate change, preparing for the likely consequences and impacts of climate change to Maryland, and establishing firm benchmarks and timetables for implementing the Commission’s recommendations. Initially the Commission, in cooperation with the University System of Maryland, will be undertaking an assessment of climate change impacts, calculating Maryland’s carbon footprint, and investigating climate change dynamics. The Commission will also be working with the MDE, the Maryland Energy Administration, and a broad set of stakeholders, including renewable and traditional energy providers and the business community, to develop a comprehensive greenhouse gas and carbon footprint reduction strategy. The Commission, in coordination with the MDNR and MDP, and a comprehensive group of planners, emergency responders and environmental organizations, as well as business and insurance representatives, will develop a strategy for reducing Maryland’s vulnerability to climate change, with an initial focus on sea level rise and coastal hazards.

The management of coastal development to mitigate coastal hazards is largely accomplished through local land use authorities, including building codes, planning and zoning and subdivision controls. As a result, each of the State’s 16 coastal counties and incorporated municipalities may handle the management of its coastline and ensuing coastal hazards in a different manner. MDNR staff are working with a number of local governments to incorporate additional hazards mitigation measures in local land use controls. The Maryland Coastal Program developed a number of innovative tools during the evaluation period to help local governments and communities understand and respond to coastal hazards.

To help make sense of the significant amount of information and analysis developed by the State and to provide information to local governments and the public on coastal hazards, the MDNR launched Shorelines Online. Maryland Shorelines Online is a coastal hazards web portal, centralizing information and data on shoreline and coastal hazards management in Maryland. Target audiences include coastal managers, coastal property owners, marine contractors, and educators. The portal contains a wide range of hazards information on federal, State and local hazards-related laws and regulations, coastal hazards management approaches and techniques, an interactive mapping tool, historical rates of shoreline change and the Comprehensive Shoreline Inventory, available technical and financial assistance, and educational resources on coastal hazards, such as a series of interactive education lessons. The website works to enhance coordination and understanding of shoreline management processes, assistance, and practices

appropriate for maintaining the rich cultural and natural resources associated with the State's coastal and shoreline areas.

The Maryland Coastal Program also produced a number of publications on using living shoreline practices to prevent coastal shoreline erosion. "Shore Erosion Control: The Natural Approach" was targeted at coastal homeowners throughout the state, while "Living Shorelines in Kent County" was designed for construction contractors and other professionals.

In addition to traditional outreach vehicles MDNR is developing Targeted Outreach and On-Line Support (TOOLS), which is an online information service to assist local level decision makers. Targeted users include city resource managers, planners, and elected officials; watershed organizations; land trusts; non-governmental organizations, educators, businesses, and homeowners. TOOLS aims to increase active management of natural resources by building capacity at the local level. Portions of TOOLS came online on September 2006.

Additionally, the Maryland Coastal Program provided direct technical assistance to local governments on hazards planning and modeling. The Worcester County Sea Level Rise Inundation Model, for example, was created through a partnership with the USGS and offers sea level rise projections for the county under several scenarios. The model predicts the inland extent of inundation from sea level rise based on various sea level rise rates. The importance of this assistance was immediately evident in that Worcester County moved quickly to change zoning (restricting development up to category 3 inundation areas) in light of the forecasted impacts of sea level rise.

**ACCOMPLISHMENT: The Maryland Coastal Program has played a national leadership role in raising awareness of and positioning the State and local governments to comprehensively address coastal hazards issues including the impact of sea level rise and climate change. Exemplary efforts include Shores Online, a comprehensive shoreline inventory, nonstructural response and living shorelines work, LIDAR, and inundation models. Moreover, the Maryland Coastal Program promoted and was instrumental in the adoption of an Executive Order establishing the Maryland Climate Change Commission, charged with addressing the causes and impacts of climate change.**

While the Maryland Coastal Program has made great strides during the evaluation period in the understanding of coastal hazard vulnerability, shore erosion planning, sea level rise response, and local hazard mitigation, the desired incorporation of coastal hazard planning measures into State and local level decision-making processes is yet to be fully realized. For example, it was noted by the evaluation team that living shorelines are not yet required or even promoted through wetlands permitting or the Critical Area Act requirements, although the Maryland Coastal Program could articulate a series of policy options to change or improve existing policies that may be hindering the adoption of economically and ecologically sound living shoreline approaches.

The Maryland Coastal Program has acknowledged this obstacle and has identified a number of projects as part of its CZMA section 309 strategy to address these gaps, including: building the capacity to integrate data and mapping efforts into State and local planning efforts; working with local governments to identify specific opportunities (i.e., code changes, comprehensive plan amendments) for advancing coastal hazard mitigation planning; and improving State agency coordination of coastal hazard planning and response activities.

**PROGRAM SUGGESTION #3: NOAA encourages the Maryland Coastal Program to accelerate efforts to incorporate its well developed coastal hazard planning measures into State and local level decision-making processes. The Maryland Coastal Program should now develop a clear state policy and ensure that actions at the state (e.g., incorporation of policy to promote use of living shorelines, adaptation to sea level rise, etc., into state law or regulations) and local level (e.g., revisions to local land use ordinances) are adopted to allow for implementation of hazards policies.**

## **F. COASTAL DEPENDENT USES AND COMMUNITY DEVELOPMENT**

Almost everyone with whom the evaluation team met agreed that accommodating significant growth in a sustainable manner is one of, if not the, highest priority issues facing the state. According to projections prepared by MDP, the State's population will increase from 5.6 million (2005) to 6.5 million by the year 2025, a 16 percent increase. Households are estimated to increase by 21 percent from 2.1 million to 2.5 million. The largest increase in population is expected to occur in the Baltimore and Washington suburban region, although substantial growth will also occur in the southern Maryland region (Calvert, Charles and St. Mary's counties) and on Maryland's Eastern Shore (Queen Anne's, Talbot, Caroline, Dorchester, Wicomico, and Worcester counties). The effects of the recently completed military base relocation and closure decisions will result in the addition of approximately 25,000 households and 45,000-60,000 new jobs for Maryland. Primarily affecting Harford, Baltimore, Anne Arundel and Howard counties and Baltimore City over the next three to ten years, this base realignment has the potential to accelerate coastal development in the State, and if not done in a well planned manner, to erode the gains the State has made and exacerbate existing problems.

As noted earlier, cumulative and secondary impacts associated with increased population growth include increased impervious coverage, and increases nutrient and toxic loadings entering State waters, stress and degradation and potential loss of wetlands, habitat fragmentation, conversion of forests, farmland and open space to development, increase in invasive species, loss of stream buffers, and increased life, property, and infrastructure in coastal hazards areas.

### **1. Statewide Initiatives**

MDP, in conjunction with municipalities, continues to implement the Maryland Economic Growth, Resource Protection, and Planning Act of 1992 (the Planning Act) to better balance land use, economic growth, and resource protection at the state and local levels. Local development

plans and land use controls and ordinances, state program activities and state and local funding decisions on public construction projects must adhere to the objectives of the Act including: concentrating development in suitable areas; planning and protecting sensitive areas; and directing growth in rural areas to existing population centers while protecting resource areas, among others.

Local comprehensive plans must contain a “sensitive areas plan element,” which describes goals, objectives, principles, and standards designed to protect streams and their buffers, 100-year floodplains, habitats of threatened and endangered species, and steep slopes from the adverse effects of development. The element also includes actions to streamline review of development applications within areas designated for growth and flexible development regulations to promote innovative and cost-saving site design while protecting the environment. Zoning ordinances and subdivision regulations must be amended to be consistent with the Plan and the objectives of the Act. Local governments must review and update, if necessary, the Comprehensive Plan at least once every six years.

At the state level, MDP also continues to implement the 1997 Priority Funding Areas Act, which directs State spending to Priority Funding Areas. Priority Funding Areas are existing communities and places where local governments want State investment to support future growth. Growth-related projects covered by the legislation include most State programs that encourage or support growth and development such as highways, sewer and water construction, economic development assistance, and State leases or construction of new office facilities.

Given the important role local governments play in managing growth and determining the locations most suitable for projects, counties may designate areas as Priority Funding Areas if they meet guidelines for intended use, availability of plans for sewer and water systems, and permitted residential density.

Implementation of the priority funding areas program appears to be mixed. A 2007 University of Maryland's National Center for Smart Growth Research and Education report on results of the state's 1997 shift toward land conservation and urban redevelopment found that: 1) there are problems with monitoring of smart growth investments--some agencies are unable to determine whether all their infrastructure money went to growth-designated "priority funding areas;" 2) while about 75 percent of housing built between 2000 and 2004 is in priority funding areas, the total number of units built outside of these priority areas not only went slightly up, but also accounted for some 75 percent of all land developed in those five years; and 3) most of the \$1.1 billion in the state's annual growth-related spending helped transportation, with 60 percent of those outlays benefiting growth areas, although funding for toll highways, Baltimore harbor tunnels, the Chesapeake Bay Bridge, and school construction and renovation exempted from the priority-funding areas law.

HB 1141, passed in the 2006 session by the Maryland Legislature and signed by then-Governor Robert L. Ehrlich, Jr. requires local governments to include expanded Sensitive Areas and new Water Resources elements in their comprehensive plans by October 1, 2009. The Act requires MDE and MDNR to review and approve the expanded sensitive area element, which includes

wetlands, agricultural, and forest resource protection or conservation areas. In addition, MDE is charged with reviewing the water resources element of local plans to determine consistency with the “general water resources program” required by Environment Article §5-203—“Local growth plans must direct growth to areas where sufficient wastewater capacity exists to ensure that water quality goals can be achieved.”

The evaluation team heard from participants that HB1141 has quickly become the dominant driver of local activity to address state planning requirements. Coordinating state assistance among the Maryland Coastal Program partners to address local capacity issues will be a key determinant in the ultimate success of county and municipal responses to HB1141.

As noted in the hazards section of this document, the State, with leadership and assistance from networked program agencies and with CZMA funding, has developed needed data, information, analysis, as well as policy to better manage coastal development. The Maryland Coastal Program has raised state and local government awareness of cumulative and secondary impacts from coastal development, has made local governments aware of sustainable development tools and techniques, and has supported the revision and adoption of many local comprehensive plans addressing these issues. Nevertheless, the desired incorporation of sustainable coastal development measures into State and local level decision-making processes is yet to be fully realized. With the State’s assistance if necessary, local governments need to take the final step and adopt appropriate local land use controls.

**PROGRAM SUGGESTION #4: The Maryland Coastal Program should move aggressively from the planning to implementation stage of its efforts to manage cumulative impacts from coastal development related to habitat, water quality, and living resources. The adoption of local ordinances is essential to ensure real on-the-ground improvements, and the Maryland Coastal Program should develop strategies to accelerate their adoption.**

## **2. Building Local Government Capacity**

As noted in other sections, local governments are largely responsible for land use management in Maryland, and as such, many of the programs noted above to protect habitat, improve water quality, mitigate coastal hazards and otherwise provide for sustainable development are ultimately to be delivered through local government action, which requires development of local government plans and implementation ordinances. These include the Critical Areas Act, Stormwater Act, Erosion sediment control, sensitive area protection, priority funding areas, HB1141 Water Resources and Municipal Growth Elements, Tributary Strategies, Total Maximum Daily Load allocations, living shorelines, and sea level rise adaptation. The various networked agencies of the Maryland Coastal Program have a number of programs to assist local governments develop and implement local land use controls to address these requirements or assist in implementing coastal objectives.

From 2000 to 2005, one of the Maryland Coastal Program’s section 309 Strategies for cumulative and secondary impacts was tied to the development of Watershed Restoration Action

Strategies (WRAS) for “priority” watersheds. Priority watersheds were identified through Maryland’s Unified Watershed Assessment (UWA). The UWA was a comprehensive, integrated analysis of state watersheds to identify and prioritize those watersheds most in need of protection and restoration. Section 309 funds were used to provide financial and technical assistance to local governments to develop watershed plans to improve local water quality and habitat. WRAS plans also help fill a critical void in counties not required to prepare watershed plans under the Federal Clean Water Act national pollution discharge elimination system (NPDES) “MS4 permit program.” A considerable area is covered by local NPDES plans in Baltimore, Anne Arundel, Prince George’s and Charles counties, and other non-WRAS plans have been prepared in Calvert and St. Mary’s counties. By the close of 2006, WRASs will have been developed for 14 coastal watersheds.

In the course of providing technical assistance to local governments through such efforts as WRAS, the Maryland Coastal Program recognized a need for additional resources to assist local governments with issues related to balancing natural resource protection with growth and development pressures. The Maryland Coastal Communities Initiative (Coastal Communities Initiative) was subsequently designed by the Maryland Coastal Program and supported with CZMA funds to address this need. The Coastal Communities Initiative is an opportunity for counties and municipalities to work with the MDNR and its partners to plan for growth and economic development while taking into account the natural, coastal, and socio-cultural characteristics of the area. Specifically, the Coastal Communities Initiative is targeted at communities in the process of reviewing and considering changes to local codes, ordinances, regulations and related implementation mechanisms. A Request for Proposals for a pilot phase of the Coastal Communities Initiative was issued in October 2005, and the Maryland Coastal Program funded five proposals. Over the next year, the Maryland Coastal Program will be piloting implementation of the Coastal Communities Initiative and will be providing both technical and financial assistance to select coastal communities to “promote the incorporation of natural resource and/or coastal management (e.g., coastal hazards, public access, water-use activities) issues into local planning and permitting activities. CZMA §306 and §309 funds have been used to support the Coastal Communities Initiative.

Established in 1996, the Maryland Coastal Bays Program (MCBP) is included in the national network of 28 National Estuary Programs and is focused on protecting the land and waters of a series of bays on the eastern seaboard. The management plan of the MCBP includes over 500 priority actions and is modeled after the Chesapeake Bay Program. As noted in past CZMA section 312 evaluations, the Maryland Coastal Program has been instrumental in the development and implementation of the MCBP. Currently, the key issues for the MCBP are nutrient reduction, sea level rise, and supplementing funding for the program. During the evaluation period, the Maryland Coastal Program has continued to provide funding for numerous projects and provided technical assistance to the MCBP. This is one area where intensive local coordination, led by the MCBP in coordination with the Maryland Coastal Program, is evident and resulting in both in-the-town-halls and on-the-ground outcomes. NOAA commends the Maryland Coastal Program for its consistent and sustained engagement in leading and coordinating the MCBP, in collaborating with local governments to implement the MCBP, and in working with local governments and individuals to implement and demonstrate the on-the-ground benefits of BMP installation. Perhaps this approach can be modeled elsewhere by MDNR

or used as a way to promote more integrated assistance from all Maryland Coastal Program partners.

The Maryland Coastal Program is also looking at measures to enhance regional collaboration and planning to address coastal community growth and development. One such approach is the Maryland Coastal Program’s support of the Delmarva Atlantic Watershed Network project, associated community visualizations, and other efforts to enhance regional collaboration and planning among the communities of the Delmarva Peninsula.

The MDP has a program to bring planning and implementation assistance to local governments that cannot afford additional planning staff or consultants’ fees to develop the required plans and ordinances. Maryland CZM funds have been used to support MDP land use planners to serve as planning staff for municipalities lacking such staff. These circuit riders assist communities to respond to RFPs, compile data, develop plan elements and draft ordinances, and work with governing bodies to adopt comprehensive plan amendments and ordinances. There have been as many as six circuit riders but now there are fewer. This “circuit rider program” has been very effective in creating capacity in these municipalities. Given the expansion of requirements local governments are facing and the need to move from development of comprehensive plans to adoption of ordinances to achieve real outcomes, there is a clear need for this type of assistance. The expansion of this circuit rider program appears to make a great deal of sense.

**ACCOMPLISHMENT: The Maryland Coastal Program is a leader in building local government capacity to address coastal development through a number of efforts including the provision of financial and technical assistance to local governments to develop Watershed Restoration Action Strategy (WRAS), provision of Circuit Rider assistance and fostering regional coastal management and planning through support of the Delmarva Atlantic Watershed Network, the Coastal Communities Initiative (CCI), and its “model” efforts in the Maryland Coastal Bays.**

Finally, from a local government’s perspective, the list of locally delivered (and required) programs can be daunting. The evaluation team heard from several local government officials that many local governments may lack capacity to understand, compile or develop necessary data, conduct necessary analysis, or develop (not to mention find the political will to adopt) and implement complex ordinances. Some municipalities are overwhelmed by the multiple requests and may come to see these as unfunded mandates from the state. To assist local governments meet these requirements efficient and effective State technical assistance is needed—see recommendations in section G.3. The team also heard a controversial but critical point raised by some related to whether or not the State should recommend removal of planning and zoning authority from those small eastern shore incorporated towns that have not yet demonstrated an ability to effectively use the land use management powers they have been granted.



## **G. GOVERNMENT COORDINATION AND DECISION-MAKING**

### **1. Federal Consistency**

For states with federally approved coastal programs, the federal consistency provisions of the CZMA impose an obligation on federal agencies undertaking, permitting, licensing or funding activities that may affect coastal resources or uses to be consistent to the maximum extent practical with the State's enforceable coastal policies. State Coastal programs evaluate proposed federal activities, permits or funding affecting the State's coastal zone to ensure consistency with those enforceable policies. In the Maryland Coastal Program, federal consistency requirements are carried out by the Coastal Zone Consistency Division in the Wetlands and Waterways Program of the Water Management Administration in the MDE. Although Water Management Administration is responsible for the official federal consistency decision, the decision is often based partially or entirely upon the findings of a variety of agencies within the Maryland Coastal Program network, depending upon the nature of the proposed activity.

The state is using its federal consistency authority consistent with the federal consistency guidelines. The state is seeking early consultation with federal agencies, it is adhering to federal consistency timelines, and its objections contain requisite information on unmet enforceable policies and alternatives for proposed actions. However, the evaluation team identified two areas for improvement in the application of federal consistency.

First, there is a need to clarify for the affected parties the enforceable policies that are incorporated into the program. There has been a longstanding need to provide a coherent up-to-date program description including the full array of enforceable authorities. Past evaluations included program suggestions calling for updating the enforceable policies and documenting the State's federal consistency process. The issue of having clearly identified enforceable policies was raised again during the public meeting component of the evaluation by the AES Corporation, which is currently applying for permits to construct a liquefied natural gas facility in Maryland's coastal zone. While the State has updated and amended the enforceable policies in the approved program, without a new program document or specific document identifying those policies, it is difficult for applicants to discern exactly what policies are included in the state's federal consistency program. Thus, when Maryland's federal consistency guidebook is updated, the Maryland Coastal Program must clearly set out the enforceable coastal policies of the program, along with applicants' responsibilities, the State review and oversight role, the timelines associated with the process, and the full suite of approved coastal program components.

|  |
|--|
| <p><b>NECESSARY ACTION #4: By December 31, 2008, the Maryland Coastal Program must clarify, document, and make publicly accessible the enforceable coastal policies of the Maryland Coastal Program.</b></p> |
|--|

Second, while the Maryland Coastal Program has not shied away from using the federal consistency authority in the past, several persons interviewed during the evaluation indicated,

and the evaluation team agreed, that the Maryland Coastal Program could and should make fuller use of federal consistency authorities by reviewing all critical federal actions, such as major transportation proposals, reviewing and updating its listed federal activities (i.e., federal activities, licenses permits and funding activities designated for review), and investigating whether the state has incorporated the full range of enforceable policies to address priority and emerging issues.

**PROGRAM SUGGESTION #5: The Maryland Coastal Program should consider expanding the use of the CZMA federal consistency provisions by exploring the incorporation of additional enforceable policies into the Maryland Coastal Program, reviewing and updating its listed federal activities (i.e., federal activities, licenses permits and funding activities designated for review), and ensuring that all critical federal actions, including all transportation and other major expenditures, are analyzed.**

## **2. Other Coordination with Federal Agencies**

While Maryland Coastal Program appears to coordinate well with federal agencies, the team did hear about a number of possible actions that could improve coordination. Although the Maryland Coastal Program-targeted land acquisition initiative has coordinated well with partners at the state level, the Maryland Coastal Program may be able to involve more federal partners. Specifically, representatives from the US Fish & Wildlife Service indicated an interest in providing input on this acquisition initiative. In addition, staff from a couple of federal agencies noted during the evaluation that the Maryland Coastal Program could assist with the coordination of numerous state and federal efforts to restore the Chesapeake Bay by providing a vehicle or forum to coordinate and set critical data and information standards among state, federal and other agencies (i.e., data acquisition, data resolution and scale, and especially land use and land cover data and information from aerial photos or satellite imagery).

Given the wide array of Maryland entities purchasing remotely sensed data (e.g., satellite imagery, LIDAR, GIS data layers), the Maryland Coastal Program should consider holding a forum to discuss ways of improving efficiencies and saving money in acquiring the data. This forum could include the many federal partners who play a role in generating this data either through funding mechanisms or through direct acquisition, including US Geological Service, the Department of Defense, Army Corps of Engineers, the Environmental Protection Agency and NOAA.

## **3. Technical Assistance to Local Governments**

The NOAA evaluation team heard that many agencies provide educational tools, technical assistance, model ordinances and other assistance on a wide variety of subject areas, all of which are interdependent and in some way affect local land use decision-making. Taken together, these programs represent the various methods used by Maryland to address the cumulative and secondary impacts of development. In order for local governments to be successful in

responding to State requirements and to benefit from State assistance, NOAA believes that opportunities to integrate programs and simplify planning requirements should be pursued. The combination of overwhelmed and understaffed local governments and uncoordinated state agencies is not likely to lead to sustainable land use practices in Maryland.

Specifically, it appears that there is a need and opportunities for the State of Maryland to better integrate, or at a minimum coordinate, the delivery of data, information, and technical assistance to local governments. For example, many networked Maryland Coastal Program agencies are working on model ordinances to assist in local responses to many State laws. It would be highly beneficial to develop internal mechanisms to cross-check and catalogue these ordinances, to highlight recommendations that consistently appear, and to provide the models through locally appropriate means, which could include interactive websites for some and paper notebooks for others.

There are multiple levels of coordination that come into play when embarking on state to local land use and watershed assistance. First, as MDNR settles into its new structure, internal communications and coordination are paramount. Second, interagency coordination among key partners, notably MDP, MDA, and MDE is critical to identifying and capitalizing on integration opportunities. Lastly, organizing the State assistance in ways that are responsive to local needs will help assure success.

There are many ways to improve coordination or integration of technical assistance programs. For example:

- A joint (i.e., inter-agency) Request For Proposal could be developed to simplify the manner in which local governments access state assistance and the multiple agencies offering separate financial and technical assistance tools.
- The Maryland Coastal Program could seek out assistance from Maryland Sea Grant's Cooperative Extension, including the conservation districts to aid in local government assistance efforts.
- The Maryland Coastal Program could consider incorporating coordination of technical assistance as an element in its business plan for core MDNR staff, and the Maryland Coastal Program could use the "mapping" approach to document the myriad state assistance efforts to local governments. The mapping exercise could serve as the current process diagram, and therefore be useful in considering how to improve coordination and integration of the various programs. At a minimum, state staff would come to an understanding of the roles and responsibilities of the following players: MDP circuit riders, MDNR's Coastal Communities Initiative, the Chesapeake Bay-Maryland Estuarine Research Reserve's Coastal Training Program, and Hazards outreach and assistance, non-governmental organizations, such as the Riverkeepers, Tributary Strategy Teams, cooperative extension, MDA technical assistance providers, Sea Grant's Coastal Community Development Program, the University of Maryland Smart Growth Institute, and Chesapeake Nonpoint Education for Coastal Officials. Desired outcomes could include a consolidated and cohesive summary of funding and technical assistance available for use by local governments, non-governmental organizations, and homeowners.

- There are existing educational trainings available to citizen planners offered by the University of Maryland and a Planning Commissioners Guide issued by MDP. NOAA heard concerns that these tools are not used as frequently or as efficiently as they might be. For example, the University of Maryland training is offered on weekends, which is particularly difficult time to engage the majority of volunteer planners. NOAA recommends that the Maryland Coastal Program convene a small workgroup to assess existing training tools and outline new approaches to ensuring that planning and zoning education is available and provided to all in need.
- The Maryland Coastal Program could initiate discussion on identifying a lead entity, for example the state Interagency Smart Growth Committee, to provide leadership in coordinating local government assistance programs and policies throughout the state.
- To enhance regional collaboration and planning among Delmarva counties, NOAA encourages the continuation of the Delmarva Atlantic Watershed Network (DAWN) project in such a way that the involved counties can effectively analyze and respond to the outputs from the build-out analyses.

**PROGRAM SUGGESTION #6: As part of the effort to accelerate adoption of local ordinances, the Maryland Coastal Program should enhance delivery of technical assistance through better coordination, and where possible, integration of delivery of education, capacity building, and assistance from MDNR, MDP, MDE, Maryland Sea Grant and others. This could be achieved by looking for economies of scale or holding joint coordinated workshops. The Maryland Coastal Program should include coordination and integration of technical assistance in its efforts to complete the strategic vision and business planning processes discussed in Section A2.**

#### 4. Emerging Issues

National Park Service staff along with some state and local staff noted to the evaluation team that an emerging area of concern related to state controlled ocean waters and their habitats is the potential for increasing impacts arising from new and expanding ocean uses, such as the development of energy delivery facilities and transmission structures, and sediment mining. Offshore energy, as well as dredging and sand replenishment along the Maryland Atlantic shore will become increasing controversial issues requiring new management attention, including the protection of critical coastal habitats.

Given the historical leadership provided by the Maryland Coastal Program staff on emerging issues and the recognition of that leadership throughout the leadership structure of Maryland's State agencies, the Maryland Coastal Program should continue to position itself to analyze emerging issues, recommend management approaches to address them, and facilitate implementation of the selected approaches.

Another area that will likely require further investment is ecosystem based management approaches, which will benefit from the extensive remote sensing and GIS data available in the State. NOAA suggests that the Maryland Coastal Program continue to engage partners,

including the NOAA Chesapeake Bay Office, in its efforts to foster more holistic management approaches to coastal stressors.

**PROGRAM SUGGESTION #7: Significant new uses of the Maryland coastal zone with potentially significant impacts are imminent. NOAA encourages the Maryland Coastal Program to position itself to proactively address these emerging ocean management issues and to avoid the undesirable position of addressing these issues in a reactive manner.**

## V. CONCLUSION

For the reasons stated herein, I find that Maryland is adhering to the programmatic requirements of the Coastal Zone Management Act and its implementing regulations in the operation of its approved Maryland Zone Management Program (Maryland Coastal Program).

The Maryland Coastal Program has made notable progress in the following areas: measuring program effectiveness, tidal and freshwater wetlands programs, land acquisition programs, water quality, coastal hazards, and building local government capacity in addressing coastal community development.

These evaluation findings also contain eleven recommendations. The recommendations are in the form of four Necessary Actions and seven Program Suggestions. The state must address the Necessary Actions by the dates indicated. Of particular urgency are the Necessary Actions related to grants management and the maintenance of core program activities. The Program Suggestions should be addressed before the next regularly-scheduled program evaluation, but they are not mandatory at this time. Program Suggestions that must be repeated in subsequent evaluations may be elevated to Necessary Actions. Summary tables of program accomplishments and recommendations are provided in section VI.

This is a programmatic evaluation of the Maryland Coastal Program that may have implications regarding the state's financial assistance awards. However, it does not make any judgment on or replace any financial audits.

/signed/ David M. Kennedy  
David M. Kennedy  
Director, Office of Ocean and Coastal  
Resource Management

2/4/08  
Date

## VI. APPENDICES

### Appendix A. Summary of Accomplishments and Recommendations

The evaluation team documented a number of MDNR’s accomplishments during the review period. These include:

| Issue Area                                       | Accomplishment  |
|--|---|
| Operations and Management                        | The Maryland Coastal Program is actively involved in the State’s BayStat accountability system, which is a significant positive step to increase the efficiency and effectiveness of coastal management in Maryland.  |
| Coastal Habitat                                  | Implementation of the Maryland tidal and freshwater management programs has resulted in very low levels of permitted wetlands losses even as coastal development pressure has significantly increased.  |
| Coastal Habitat                                  | The Maryland Coastal Program has continued to make improvements in its land acquisition programs through the development of more science-based and objective selection criteria. The Maryland Coastal Program has taken a leadership role in developing a rational, prioritized, and “targeted” acquisition program.  |
| Water Quality                                    | The Maryland Department of Environment was instrumental in the passage of the 2007 Stormwater Management Law that will make “Low Impact Development” designs the state’s preferred stormwater management practices.   |
| Coastal Hazards                                  | NOAA commends the Maryland Coastal Program for playing a national leadership role in raising awareness of and positioning the State and local governments to comprehensively address coastal hazards issues including the impact of sea level rise and climate change. Exemplary efforts include Shores Online, a comprehensive shoreline inventory, nonstructural response and living shorelines work, LIDAR, and inundation models. Moreover, the Maryland Coastal Program promoted and was instrumental in the adoption of an Executive Order establishing the Maryland Climate Change Commission, charged with addressing the causes and impacts of climate change. |
| Coastal Dependent Uses and Community Development | The Maryland Coastal Program is a leader in building local government capacity to address coastal development through a number of efforts including the provision of financial and technical assistance to local governments to develop Watershed Restoration Action Strategy (WRAS), provision of Circuit Rider assistance and fostering regional coastal management and planning through support of the Delmarva Atlantic Watershed Network, the Coastal Communities Initiative (CCI), and its “model” efforts in the Maryland Coastal Bays.  |

In addition to the accomplishments listed above, the evaluation team identified several areas where the program could be strengthened. Recommendations are in the form of Program Suggestions and Necessary Actions. Areas for improvement include:

| <b>Issue Area</b>         | <b>Recommendation</b>   |
|---------------------------|---|
| Operations and Management | NECESSARY ACTION #1: The Maryland Coastal Program must ensure that there is adequate staff to undertake core program activities. By March 31, 2008, the Maryland Coastal Program must identify and submit to NOAA a detailed explanation of how and by whom core functions will be carried out. These core functions include program changes, performance measure development, grants management, and the identification and implementation of approaches to priority and emerging issues.  |
| Operations and Management | NECESSARY ACTION #2: By December 31, 2008, the Maryland Coastal Program must expand and complete the visioning process underway to arrive at a final strategic vision. The vision must include input from all network partners and should be useful in guiding future investments of the Maryland Coastal Program. In addition, to address the concerns outlined in Section 1 above and to ensure that the Chesapeake and Coastal Programs Division can be responsive to the new vision, a business plan should be developed for the coastal program within the Chesapeake and Coastal Program Division. The business plan should describe: 1) how federal (CZMA) funding will be aligned with shared priorities; 2) how core MDNR coastal program staff will perform core functions and maintain their ability to identify and propose solutions to priority coastal issues in the State; and 3) how the Coastal and Watershed Resources Advisory Committee (CWRAC) will support Maryland Coastal Program goals. Deliverables due by December 31, 2008 to OCRM include the final visioning document and a complete business plan for core coastal program staff. |
| Operations and Management | NECESSARY ACTION #3: The Maryland Coastal Program must immediately begin managing CZMA awards consistent with NOAA guidance, ensure that all awards are spent in a one year to 18-month timeframe, and must meet all reporting requirements in a timely manner. By June 30, 2008, the Maryland Coastal Program must submit to NOAA for review and approval a clear plan that addresses the resources necessary to manage all open awards, discusses proposed changes to the recipients of funding, highlights how the state will ensure timely performance reporting, and identify the methods that the Maryland Coastal Program will use to deal with unanticipated changes to the award. In addition, the Maryland Coastal Program's 2008 CZMA award application needs to demonstrate alignment with the Maryland Coastal Program priorities, and future grant applications should clearly link tasks/projects to BayStat or other state defined performance measures, and where relevant, to the NOAA CZMA Performance Measurement System.   |



| <b>Issue Area</b>                                | <b>Recommendation</b>  |
|--|--|
| Coastal Habitat                                  | PROGRAM SUGGESTION #1: As a means to inform the legislature and to make positive changes in agency and county-level implementing rules, the Maryland Coastal Program should consider the development of a white paper or policy document, potentially using federal funding, which allows the Critical Area Commission to highlight Critical Area Program successes as well as the need to modernize the Program. This would be most valuable when done in conjunction with other state programs whose impacts will affect the critical area and the growth allocations articulated via the Critical Area Act. |
| Water Quality                                    | PROGRAM SUGGESTION #2: The Maryland Coastal Program should assess the value of using Maryland Coastal Nonpoint Program authorities and planning documents to guide future funding allocation decisions. MDNR staff should work with MDA to ensure that outcomes associated with NOAA funded awards to MDA are obtained, or that funding is redirected to meet objectives.  |
| Coastal Hazards                                  | PROGRAM SUGGESTION #3: NOAA encourages the Maryland Coastal Program to accelerate efforts to incorporate its well developed coastal hazard planning measures into State and local level decision-making processes. The Maryland Coastal Program should now develop a clear state policy and ensure that actions at the state (e.g., incorporation of policy to promote use of living shorelines, adaptation to sea level rise, etc., into state law or regulations) and local level (e.g., revisions to local land use ordinances) are adopted to allow for implementation of hazards policies.                |
| Coastal Dependent Uses and Community Development | PROGRAM SUGGESTION #4: The Maryland Coastal Program should move aggressively from the planning to implementation stage of its efforts to manage cumulative impacts from coastal development related to habitat, water quality, and living resources. The adoption of local ordinances is essential to ensure real on-the-ground improvements, and the Maryland Coastal Program should develop strategies to accelerate their adoption.   |
| Government Coordination and Decision Making      | NECESSARY ACTION #4: By December 31, 2008, the Maryland Coastal Program must clarify, document, and make publicly accessible the enforceable coastal policies of the Maryland Coastal Program.   |
| Government Coordination and Decision Making      | PROGRAM SUGGESTION #5: The Maryland Coastal Program should consider expanding the use of the CZMA federal consistency provisions by exploring the incorporation of additional enforceable policies into the Maryland Coastal Program, reviewing and updating its listed federal activities (i.e., federal activities, licenses permits and funding activities designated for review), and ensuring that all critical federal actions, including all transportation and other major expenditures, are analyzed.   |

| <b>Issue Area</b>                           | <b>Recommendation</b>   |
|---|---|
| Government Coordination and Decision Making | PROGRAM SUGGESTION #6: As part of the effort to accelerate adoption of local ordinances, the Maryland Coastal Program should enhance delivery of technical assistance through better coordination, and where possible, integration of delivery of education, capacity building, and assistance from MDNR, MDP, MDE, Maryland Sea Grant and others. This could be achieved by looking for economies of scale or holding joint coordinated workshops. The Maryland Coastal Program should include coordination and integration of technical assistance in its efforts to complete the strategic vision and business planning processes discussed in Section A2. |
| Government Coordination and Decision Making | PROGRAM SUGGESTION #7: Significant new uses of the Maryland coastal zone with potentially significant impacts are imminent. NOAA encourages the Maryland Coastal Program to position itself to proactively address these emerging ocean management issues and to avoid the undesirable position of addressing these issues in a reactive manner.  |

## **Appendix B. Response to Previous (2004) Evaluation Findings**

### **Recommendation #1: Developing a Strategic Vision for the Program**

**Program Suggestion** - The MCZMP is encouraged to develop a Program-wide strategic vision to improve communication and coordination and identify gaps in Program implementation and emerging coastal issues.

**State Actions:** During 2005 and early 2006, the Maryland Coastal Program worked on Phase I of its effort to develop a strategic vision for the Program. During this phase, the Coastal Program prepared and submitted the State's §309 Assessment and Enhancement Strategy. The draft document was prepared and circulated to the Coastal and Watershed Resources Advisory Committee, State agency representatives, and other interested parties for review and comment. The Final Draft was submitted to NOAA on February 1, 2006. The document includes three sections. The first section provides a summary of CZMA, §309 funded enhancement efforts conducted between 2001 and 2005. The summaries address accomplishments and program changes. The second section contains the updated analysis of nine enhancement areas: public access, coastal hazards, ocean resources, wetlands, cumulative and secondary impacts, marine debris, special area management planning, energy and government facility siting, and aquaculture. The final section of the report contains the 2006 – 2010 Enhancement Strategy for high priority enhancement areas: Ocean Resources, Secondary and Cumulative Impacts and Coastal Hazards. Pursuant to NOAA comments, the draft was revised and the Final Strategy was submitted to NOAA in July 2006.

During 2006, the loss of MCZMP staff, the statewide hiring freeze, and subsequent workload challenges prevented the Program from pursuing its Phase II strategic planning activities. In late 2006 and early 2007 when new staff were hired, MCZMP attempted to find and secure a project partner to help with its strategic planning initiative. While a number of potential partners were considered, these contractual proposals were ultimately disqualified for a number of reasons, including cost, timing, administrative burden and inability to meet the needs of the MCZMP.

Finally, in June 2007, MCZMP entered into a contractual agreement with the University of Maryland Center for Environmental Science (UMCES) entitled "Building a Collective Vision for the Maryland Coastal Program." This project, a cooperative initiative with Maryland Sea Grant (MDSG) via UMCES, will complete the following tasks:

- 1) Mapping Organizational Relationships that Define the MCZMP;
- 2) Understanding the Organizational History of the MCZMP;
- 3) Analysis of MCZMP Strengths, Weaknesses, Opportunities and Threats (SWOT Process);
- 4) Defining a Collective Vision; and
- 5) Vision Review and MCZMP Briefing(s).

The overall process, which is engaging MCZMP staff, partners, and current and former MCZMP leaders, will be completed in early 2008. The resulting organizational vision created through this process should provide a strong foundation to refine priorities, identify gaps or weaknesses in Program implementation, make better strategic decisions and help develop a coherent outreach plan to improve communication and coordination.

On July 3, 2007 MCZMP staff attended a meeting where they were asked to describe their jobs and to define the key organizational relationships and interactions that define their jobs. During a structured, interactive discussion, staff relationship maps were reviewed and edited. This included both a staff self analysis of their work and feedback from their colleagues and supervisors. An important byproduct of this job-relationship-mapping exercise was an increased awareness of what each of the staff are doing and how each of our jobs fit together in an administrative and thematic context. Since many of the staff is new to the Coastal Program, this exercise was especially valuable. The meeting also explored MCZMP's relationships outside MDNR, such as the Coastal and Watershed Resources Advisory Committee, the Maryland Department of the Environment and NOAA. Toward the end of the meeting, MCZMP staff were asked to describe their view of priorities such as growth management, ocean policy and coastal hazards and how these priorities might shape future directions of MCZMP.

On August 7, a follow-up meeting was held to (1) clarify and correct any errors or misrepresentations, complete remaining profiles and to discuss the newly defined, "unified picture (map)" of MCZMP at the functional level and (2) begin the SWOT analysis. Following this meeting, MDSG submitted a final synthetic organizational "map" with appropriate explanations to MCZMP leadership. During August, MCZMP staff continued to contribute to the SWOT process.

During July and August 2007, MDSG also began the survey of key individuals with deep institutional memory to construct a corporate history and help get a better sense of how and why the MCZMP functions. MDSG developed a set of critical questions based on input from MCZMP staff. With survey participants identified by MCZMP leadership, MDSG contacted prospective participants via phone, letter and email. Following these initial communications, MDSG has been conducting individual interviews with willing participants and may conduct a group meeting or teleconference where necessary. Notes from the interviews and survey responses will be synthesized and delivered to MCZMP.

A summary report of interim findings resulting from the above activities will be presented to the 312 Evaluation Team on September 10, 2007.

### **Recommendation #2 - Continued Focus on the Near Shore Environment**

**Program Suggestion** -The MCZMP is encouraged to continue and improve its focus on the near shore environment and seek opportunities for partnerships to further identify, address and improve management of near shore resources.

**State Actions:** The Coastal Program continues to provide leadership on shoreline and near shore issues, especially related to flooding, erosion, and inundation from sea level rise. The Program focused its efforts on comprehensive shore erosion planning, sea level rise response planning, and hazard mitigation planning. A detailed listing of accomplishments was included in the July 1, 2006 CZMA Section 309 Assessment and Strategy (pages 5 – 9). Some of the highlights include:

- **Maryland Shorelines Online.** Maryland’s Coastal Program, in cooperation with Towson University, developed an Internet portal for coastal hazards, titled *Maryland Shorelines Online* (<http://shorelines.dnr.state.md.us/>). The portal provides information and tools for coastal managers and decision makers, educators, and the public on coastal hazards and shoreline management. This site houses information on Maryland’s legal framework, permitting and regulatory guidance, educational materials, assessments, and spatial decision support tools for shore erosion and sea level rise. The tools provided on the website allow for the identification of potential shoreline protection and restoration options throughout the State to mitigate hazards and enhance natural shoreline habitat. The Portal also assists with enhancing shoreline planning and regulatory activities by centralizing access to shoreline environmental, physical, and infrastructure information. The availability of new information and data, including the interactive map viewer, has enabled a number of improvements to State and local government shoreline management activities. Examples include: Kent County uses *Shorelines Online* to determine if non-structural shoreline erosion control methods are suitable in lieu of requested structural erosion control projects and Calvert County uses *Shorelines Online* to calculate setbacks based on erosion rate to implement the County’s Bluff Setback Policy.
- **Comprehensive Shoreline Inventory (CSI).** Maryland’s Coastal Program contracted with the Virginia Institute of Marine Sciences (VIMS) to prepare a Comprehensive Shoreline Inventory that captures baseline shoreline conditions throughout the tidal portions of Maryland’s coastal counties. Shoreline features and conditions were identified through a three-tiered shoreline assessment approach. The Inventory divided the shore-zone into three regions: 1) immediate riparian zone (land use), 2) bank (bank characteristics such as height, bank type, etc., and shoreline buffers), and 3) shoreline features (shoreline attributes including bulkheads, riprap, marinas, boat ramps, docks, etc.). Data from the survey was processed to create three GIS coverages, displayed through reports, summary tables, and maps, which are viewable online at <http://ccrm.vims.edu/gisdatabases.html>.
- **Promotion of Alternative Stabilization Methods.** “Living Shorelines” describes a shoreline management practice that: (1) provides erosion control benefits; (2) protects, restores or enhances natural shoreline habitat; and (3) maintains coastal processes through the strategic placement of plants, stone, sand fill and other organic materials. The Coastal Program has been particularly active in promoting “living shoreline” efforts locally and regionally. In December 2006, the Living Shoreline Summit was held and over 175 individuals attended from state and federal government, local government, non-profit organizations, environmental consultants, state and local regulatory boards, academicians, marine contractors, local nurserymen, and private landowners. Summit

proceedings will be peer-reviewed and published in the fall of 2007. All Living Shoreline Summit attendees will receive a CD of the proceedings.

- **Improved Coordination.** The right to protect private property from coastal erosion is at times in conflict with our regulations to conserve, enhance or restore near shore resources. The State of Maryland currently does not allow for the construction of new bulkheads along tidal marshes except under a reconstruction application. In cases of reconstruction, the State Tidal Wetlands Program works with homeowners to consider other options constructed of rock and natural materials. However, the placement of rip rap along low energy areas is still continuing at a steady pace, leading to cumulative and secondary impacts to near shore resources.

The Coastal Program has worked to build partnerships with its local governments, Maryland Department of Environment and Critical Areas Program to improve coordination to resolve near shore management challenges. Sequencing of permits by local and State governments is important when addressing near shore conflicts. Currently, the State Tidal Wetlands permit is authorized before the local staff is able to review the application and conduct a site visit. Several counties are now requiring more marsh creation projects, which may not be consistent with the project permitted by the tidal license. By allowing the local permit to be authorized first, the State can act in a more supportive role to the local decision. The Coastal Program is encouraging the local governments to be more involved by building their capacity to utilize the online tools, providing technical specifications and guidance for local permitting bodies, increasing demonstration project implementation for homeowners to view, and training local marine contractors in “living shoreline” designs.

- **Chesapeake Bay Shoreline Erosion Feasibility Study.** The Coastal Program has been working with the Corps of Engineers to update the 1990 Chesapeake Bay Shoreline Erosion Feasibility Study. The updated study, titled the Maryland Coastal Management Feasibility Study, is an effort to comprehensively examine erosion hotspots and areas of concern throughout the Maryland portion of the Chesapeake Bay. Final products of this study will be completed mid-2008 and will include a Master Plan for addressing “areas of concern,” partial designs for 14 projects, and two outreach manuals for waterfront property owners and marine contractors.
- **Executive Order Establishing a Commission on Climate Change.** Maryland Governor Martin O'Malley signed an Executive Order establishing a Commission on Climate Change on April 20, 2007. The Commission will advise the Governor and Maryland's General Assembly on matters related to climate change and is charged with developing a Plan of Action that will address climate change on all fronts, including both the drivers and the consequences, particularly those associated with sea level rise and coastal hazards. Three working groups, comprised of a broad set of stakeholders and representatives of all levels of government, will work together to develop the following components of the Plan of Action: The Scientific and Technical Working Group will develop a Comprehensive Climate Change Impact Assessment; The Greenhouse Gas and Carbon Mitigation Working Group will develop a Comprehensive Greenhouse Gas and

Carbon Footprint Reduction Strategy; and The Adaptation and Response Working Group will develop a Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change. The Plan, including recommendations and draft legislation, will be presented to the Governor and General Assembly in April 2008. Maryland's Coastal Program played a key role in the development of the Executive Order and is staffing the Adaptation and Response Working Group.

- **LIDAR Acquisition.** The Coastal Program worked with State and local partners to acquire high resolution topographic data for the majority of the State's coastal counties. This data can be used to develop sea level rise inundation models that demonstrate both the impact of gradual sea level rise inundation over time, as well as impacts associated with increased storm surge from episodic flood events.
- **Worcester County Sea Level Rise Inundation Modeling.** Starting in 2004, DNR has been working with the U.S. Geological Survey (USGS) to model sea level rise inundation for Worcester County. USGS used three sea level rise scenarios to model the potential zones of inundation. Outputs were also developed coupling sea level rise projections with storm surge associated with Category 1 – 4 hurricanes. Data from the model and the final report were presented and transferred to Worcester County. Sea level rise issues were addressed in the Worcester County Comprehensive Plan (2006). The Comprehensive Plan calls for the development of a Sea Level Rise Response Strategy; directs future growth to areas outside of Category 3, Hurricane Storm Surge boundaries; and discourages hard shoreline stabilization.
- **Town of Crisfield, Comprehensive Plan Update.** The Town of Crisfield was selected as a Priority Place in 2005. To receive program redevelopment funds and technical assistance through the Priority Places Program, an updated comprehensive plan was required that outlines opportunities to implement smart growth principles. Crisfield is a low-lying coastal community with a large portion of the community one foot above sea level and at an elevation below a Category 1 Storm Surge event. Therefore, smart growth concepts of clustering and increasing density were not compatible with flood hazard mitigation strategies. The Coastal Program provided the Town of Crisfield the best data available related to sea level rise, coastal flooding and storm surge for analysis during their ongoing comprehensive planning process. The Program also provided information and data on erosion hazards and outlined opportunities to redirect critical facilities like a hospital and new development out of harms way. This effort provided a framework of products and services the Coastal Program is hoping to provide to many other Eastern Shore communities.

### **Recommendation #3 - Increasing Local Government Capacity**

**Program Suggestion** - The Coastal Program should continue to assist local governments to address coastal resource issues through direct technical assistance, sponsoring workshops, or financial support. Efficiencies in providing assistance regionally or otherwise should be explored.

## State Actions:

- The Coastal Program launched the **Maryland Coastal Communities Initiative** in 2005. This Initiative is an opportunity for counties and municipalities to work with the Department of Natural Resources and its partners to plan for growth and economic development while taking into account the natural, coastal, and socio-cultural characteristics of the area. The program includes funding for local governments for capacity building, local planning efforts and education of local officials in addition to the provision of technical assistance from DNR and its coastal partners.

Since the inception of the Initiative, the Coastal Program has funded 19 projects totaling over \$980,000 with more projects currently under review. Projects have included a local code and ordinance roundtable focused on parking and landscape requirements, a refinement of stream valley boundary lines, an Eastern Shore Community Pattern Book, Comprehensive Plan development and local elected official training, and the study and refinement of a local TMDL policy. Technical assistance provided to the local governments have included activities such as code review, mapping, GIS analysis, TMDL analysis assistance and extensive modeling for the refinement of the stream valley boundary.

It is the intention of the CCI that the resulting projects will have some transferability and will serve as models for other coastal communities, and in particular those communities in the same region that are facing similar issues. An example of this will be the development of Water Resource Elements on the Maryland Eastern Shore that will serve as examples to other small communities working towards the development of similar planning elements.

To promote the sharing of resources and resulting products from the CCI projects, the Coastal Program hosted a local government exchange. This exchange was a one day workshop for Coastal Community grantees to exchange information regarding coastal planning grants. First year grant recipients presented the results of their projects to other coastal communities, state partners and grant review team members. Presentations included results of projects, products developed, and problems encountered. Staff led the local governments in a discussion of future technical needs. Future exchanges will be held for other local government partners.

- An online resource called **TOOLS** (Targeted Outreach and On-Line Support) was launched to aid in the delivery of technical assistance to local governments, landowners, educators, and business operators. The TOOLS site explains what these stakeholders can do to maximize resource efficiency, minimize environmental impacts, save money, and still meet specific goals. The site includes information on such topics as Environmental Design, Watershed Planning and Green Infrastructure.
- Coastal Program staff continued to provide **technical assistance** to local governments through programs such as the **Priority Place Communities**. This program, designed to



- Staff hosted an **environmental design charette** for the Poppleton area of Baltimore City (a Priority Place). The goal of the workshop was to identify some of the possible techniques that could be used in the fourteen acre development site, determine if the techniques were feasible under current city code and to identify possible code revisions that may necessary. In addition, the work session began to identify potential funding sources that may assist in the application of these techniques. Highlights of the day included the developer of the project meeting with community leaders, environmental design specialists, state representatives and representatives from the Baltimore City Housing, Planning and Public Works departments.
- **Environmental Design Demonstration Projects:** Given the trends and projections regarding urban and suburban growth and the increase of imperviousness, the State of Maryland acknowledges the urgent need to manage urban runoff to reduce nonpoint source pollutant loads to the Chesapeake and Coastal Bays. Through the Environmental Design Initiative, the Coastal Program and its partners worked with local governments and State agencies to establish demonstration projects on already developed public lands and facilities. Projects were completed at eleven sites and included such public facilities as local libraries, public schools, community colleges, local government buildings and state parks. Projects included such techniques as bioretention facilities, permeable pavers and green roofs.

Staff worked with planners, public works departments and construction teams to get the projects installed, educational signage in place and in some cases monitoring of projects in place. Following the installation of the projects, information was shared via tours and information posted on-line.

- The Coastal Program has also worked with the **Eastern Shore Regional GIS Cooperative** to address the geographic information system (GIS) and hazard data technical capacity needs of Maryland's eastern shore counties. The Eastern Shore Regional GIS Cooperative (ESRGC) is an organization that seeks to provide access to GIS technology, data, technical support, and training to the local governments of Maryland's Eastern Shore. Housed at Salisbury University, the ESRGC is a joint effort between the Mid-Shore Regional Council, the Tri-County Council of the Lower Eastern Shore of Maryland and Salisbury University. The Coastal Program provided funding assistance to ESRGC to assist Dorchester County with installation of its first GIS workstation, training, and digitization of land use/zoning maps to assist with its

- **The Maryland Department of Planning (MDP)** worked to link comprehensive planning, growth management, county planning and the Tributary Strategies. CZM funded staff provided technical assistance to local governments on addressing growth related issues such as agricultural preservation, natural resource protection, community revitalization, and stream and water quality restoration. Staff also provided outreach and education to the tributary teams, local jurisdictions, State and federal agencies on the potential impacts of new growth on land and water resources through fact sheets, websites and informational brochures that highlight growth trends, issues, and potential management options.
- The Coastal Program continued its efforts to build local government capacity through the **Watershed Restoration Action Strategies (WRAS) program**. Through this program, local governments received technical assistance to assess the attributes of a watershed's landscape and streams. The Coastal Program and its partners worked with the local governments to develop supporting documents for the WRAS planning process including Watershed Characterizations, Synoptic Surveys, and Stream Corridor Assessment reports as well as assisting with the development of the Action Strategies themselves.

During this evaluation period, the MD Coastal Program partnered to complete four WRASs. WRASs were completed for the Upper Chester River in Queen Anne's County, the Upper Chester in Kent County, Chincoteague Bay in Worcester County and the Anacostia River in Prince Georges County.

#### **Recommendation #4 - Program Changes and Updates to the Legal Framework**

**Necessary Action** - The MCZMP must make it a high priority to complete the requirements for updating the Program's legal framework, including:

- Draft and sign a meaningful Memorandum of Understanding with the Maryland Department of the Environment, as required by the CZMA; and
- Submit remaining program changes to NOAA to make current the statues and regulations that comprise the program so that Federal Consistency can be applied.

**State Actions:** A memorandum of understanding (MOU) was made and entered into June 28, 2007, by and between the Maryland Department of Natural Resources (DNR) and the Maryland Department of the Environment (MDE). The purposes of this MOU was to establish the responsibilities of DNR and MDE in coordinating intrastate review of consistency determinations, consistency certifications and federal assistance proposals required by the Coastal Zone Management Act (CZMA), 16 USC 1456, et seq., and implementing federal regulations, 30 C.F.R. 930, et seq. This MOU also establishes the responsibilities of DNR and

MDE in implementing the State of Maryland's Coastal Zone Management Program (MCZMP) and ensuring consistency of projects and activities, to the extent consistent with statutorily prescribed responsibilities and authorities, as required by Executive Order 01.01.1978.05 and further defined in the Maryland Coastal Management Program.

Only July 5, 2007, the State of Maryland requested the concurrence of NOAA's Office of Ocean and Coastal Resource Management (OCRM) with the incorporation of the MOU as a routine program change (RPC) to the Maryland Coastal Management Program (MCMP). OCRM concurred on August 15, 2007.

Also, since April 2004, Maryland has submitted RPC packages and received NOAA approval of various provisions of the:

- Forest Conservation Act, and its associated regulations;
- Reforestation Act;
- Oil Pollution Management Program statute, and its associated regulations;
- Stormwater Management Program statute, and its associated regulations;
- Statutes relating to Marine Sanitation Devices;
- Statutes relating to Dredging in the Chesapeake Bay and Its tributaries; and
- Coastal Facilities Review Act, and its associated regulations.

#### **Recommendation #5 - The Role of the Coastal and Watershed Resources Advisory Committee (CWRAC)**

**Program Suggestion** - The State should work with CWRAC to look at ways to enhance its role as an advisory body to the MCZMP including the Secretary of DNR and the Program's networked agencies.

**State Actions:** A number of activities have been implemented to help the Coastal and Watershed Resources Advisory Committee (CWRAC) improve its role as an advisory body to the MCZMP, the Secretary of DNR, and the Program's networked agencies. Following are examples of how CWRAC has been actively engaged in shaping DNR and State-wide policy decisions and planning.

CWRAC played a vital role in steering the development and usefulness of Maryland Shorelines Online (MSO), an Internet tool intended to provide better access and integration of shoreline related data. In December 2004, CWRAC was first briefed on MSO. Since then, MCZMP staff have regularly briefed CWRAC, who in turn has provided advice on how MSO can best serve its intended audience: local decision-makers and the general public. With its public release in January 2007, MSO today is best described as an interactive web portal that provides convenient, one-stop access for diverse stakeholders to help them understand, assess and manage coastal hazards, shoreline changes, and flooding. Important applications include public education, risk identification and assessment, project planning and design, and technical and financial assistance.

CWRAC has also guided MCZMP with its strategic planning initiatives. For instance, in

February 2006, concurrent with the NOAA review, input was solicited from CWRAC members on the final Draft CZMA Section 309 Assessment and Strategy. The draft document was circulated to CWRAC members, State agency representatives, and other interested parties for review and comment.

At the October 2006 CWRAC meeting, MCZMP staff presented a Proposal to Develop a Strategic Action Plan for Maryland's Coastal Zone Management Program. MCZMP staff asked members about their opinion on the technical approach and suggested how CWRAC might be involved. This included advice on what issues to cover, who should be interviewed and the general format for the process. MCZMP briefly described the need to understand drivers that affect our Coastal Program and the identification of strengths, weaknesses, opportunities and threats (or SWOT analysis).

CWRAC has provided a valuable forum for engaging various stakeholders involved with coastal management to help the Program better define its role while aiding in the coordination of related programs and activities. For instance, in 2006 the National Park Service and the Center for Watershed Protection gave an update of the Chesapeake Bay Network for Education of Municipal Officials (CB NEMO). This was followed by a discussion on potential needs and opportunities that the CB-NEMO Program can address. During 2006 and 2007, CWRAC discussed and heard presentations on topics that included land use planning and water-sewer planning, and how the Maryland Department of Planning and Maryland Department of the Environment are attempting to reach out to local governments to start a dialogue on the needs and challenges of coordinating the two.

CWRAC has played a pivotal role with resource planning, protection and conservation. For instance in October 2004, the Committee held a public meeting related to the Maryland Coastal and Estuarine Land Conservation (CELC) Plan. This stakeholder-based meeting provided a solid foundation for the Plan's development and eventual submittal to NOAA for review.

In addition, CWRAC has also been given regular updates on Maryland's Marine Managed Areas Inventory and the draft national framework for Marine Protected Areas and has been asked to help guide the development of the MCZMP's Aquatic Resources Network/Blue Infrastructure initiative. At CWRAC's December 2006 meeting, the Chairman of the Maryland Aquaculture Coordinating Council gave a presentation on Maryland's aquaculture industry and fielded questions from the group. CWRAC and MCZMP staffs were particularly interested in the concept of aquaculture enterprise zones and their relationship with the Aquatic Resources Network.

As a testament to its role as an advisory body, a DNR certificate of appreciation was presented to CWRAC that acknowledged the 30-year anniversary of the Committee. Acting on behalf of the DNR Secretary, Deputy Secretary Ron Guns described accomplishments of the group and endorsed CWRAC's 2007 agenda. CZM staff presented a proposed 2007 agenda to the Committee and asked members for comments or questions. CWRAC considered the agenda to be on target and a good fit for the group. Committee members also provided some preliminary recommendations on executing the agenda.

While acknowledging the above accomplishments, there is still a need to strengthen CWRAC's advisory role. There have been several attempts to define what needs to be done to make CWRAC more effective and relevant. However, while a number of good recommendations have been proposed on more than one occasion, only some of the suggestions have been fully implemented. Reasons for not fully implementing these recommendations include the Coastal Program's lack of a coherent strategic vision (i.e., how can you advise a Program that is hard to define or understand), insufficient follow-through from CWRAC, and MCZMP staff turnover affected CWRAC's ability to function and communicate.

Since June 2004, numerous discussions have been held with and among Committee members to identify actions that could be taken to strengthen CWRAC's advisory role in the future. Many ideas were generated during the subsequent CWRAC meetings. Ideas included ways to involve the Committee in the development of upcoming MCZMP initiatives, including the review of funding and recommendations on mechanisms to facilitate communication and improve membership. MCZMP staff has worked with CWRAC to identify and prioritize issues to address in future meetings. There were also suggestions for the MCZMP to develop reports that detailed outcomes of the funded projects.

In response to CWRAC's request, MCZMP staff presented a one-page document entitled *Defining CWRAC's Niche: A Proposed Framework for Action (2007 & Beyond)* to the Committee at the December 2006 CWRAC meeting. CWRAC members were asked to provide feedback on this document. MCZMP staff explained that this 2007 schedule of meetings and topics for CWRAC accommodates state and federal legislative schedules and NOAA's Section 312 Evaluation of Maryland's Coastal Program. There was a general consensus that the 2007 Agenda made sense both in terms of CWRAC's and DNR's priorities (e.g., HB1141 and coastal hazards) and timing (e.g., preparing for the 312 evaluation). CWRAC to a large extent followed this agenda for 2007.

At the June 2007 meeting, CWRAC began a SWOT analysis of the Maryland Coastal Program that included a view of where CWRAC is today relative to past accomplishments such as shaping forestry legislative, dredge materials management policy, and ocean policy. A draft table containing the results of this exercise was sent to meeting attendees for their review, with the goals of clarifying compiled information and adding additional examples. This document began a process that will be continued at the August 2007 CWRAC meeting when MCZMP staff, in partnership with Maryland Sea Grant, plans to conduct an intensive, strategic planning exercise to help CWRAC redefine its niche. Results from this exercise will be presented to the 312 Evaluation Team on September 10, 2007.

## Appendix C. Persons and Institutions Contacted

### State of Maryland Representatives

| Name                 | Title  | Affiliation                    |
|----------------------|--|--------------------------------|
| John R. Griffin      | Secretary  | MD Dept. of Natural Resources  |
| Frank Dawson         | Assistant Secretary                                      | MD Dept. of Natural Resources  |
| Gwynne Schultz       | Program Manager  | MD Dept. of Natural Resources  |
| Joe Abe              | Maryland Coastal Program                                 | MD Dept. of Natural Resources  |
| Jeff Horan           | Director, Chesapeake and Coastal Watershed Services, DNR | MD Dept. of Natural Resources  |
| Matt Fleming         | Chesapeake Bay Program Coordination                      | MD Dept. of Natural Resources  |
| James (Chip) Price   | Program Open Space                                       | MD Dept. of Natural Resources  |
| Audra Luscher        | Maryland Coastal Program                                 | MD Dept. of Natural Resources  |
| Kevin Boone          | Watershed Information Center                             | MD Dept. of Natural Resources  |
| Lee Karrh            | Tidewater Ecosystem Assessment                           | MD Dept. of Natural Resources  |
| Scott Stranko        | Monitoring and Nontidal Assessment                       | MD Dept. of Natural Resources  |
| Catherine McCall     | Maryland Coastal Program                                 | MD Dept. of Natural Resources  |
| Laura Younger DNR    | Maryland Coastal Program                                 | MD Dept. of Natural Resources  |
| Jay Kilian           | Monitoring & Non-Tidal Assessment Div                    | MD Dept. of Natural Resources  |
| Beth Ebersole        | Director Chesapeake Bay NERR                             | MD Dept. of Natural Resources  |
| Carrie Decker        | Coastal Nonpoint Program                                 | MD Dept. of Natural Resources  |
| Ken Miller           | Office of Sustainability                                 | MD Dept. of Natural Resources  |
| Zoe Johnson          | Office of Sustainability                                 | MD Dept. of Natural Resources  |
| Sandi Olek           | Office of Sustainability                                 | MD Dept. of Natural Resources  |
| Sean McGuire         | Office of Sustainability                                 | MD Dept. of Natural Resources  |
| Ren Serey            | Executive Director                                       | Critical Area Commission       |
| Saundra Canedo       | Staff  | Critical Area Commission       |
| Marianne Dise        | Attorney   | Office of the Attorney General |
| Johnathan Krammer    | Director   | Maryland Sea Grant             |
| Jack Greer           | Assistant Director for Communications and Public Affairs | Maryland Sea Grant             |
| Vickie Carrasco      | Coastal Communities Specialist                           | Maryland Sea Grant Extension   |
| Jessica Smits        | Writer/Editor  | Maryland Sea Grant             |
| Nick Williams        | Director   | Maryland Environmental Trust   |
| Louise Lawrence      | Chief, Program Planning and Development                  | MD Dept. of Agriculture        |
| Shari T. Wilson      | Secretary  | MD Dept. of the Environment    |
| Elder Ghigiarelli,   | Deputy Program Administrator                             | MD Dept. of the Environment    |
| Jay G Sakai          | Director, Water Management Administration                | MD Dept. of the Environment    |
| Dave Lyons           | Enforcement and Compliance                               | MD Dept. of the Environment    |
| Tom Boone            | Enforcement and Compliance                               | MD Dept. of the Environment    |
| Ken Pensel           | Sediment, Stormwater and Dam Safety                      | MD Dept. of the Environment    |
| Stu Comstock         | Program Review Division                                  | MD Dept. of the Environment    |
| Donald Halligan      | Assistant Secretary                                      | MD Dept. of Planning           |
| Stephanie M. Martins | Land Use and Analysis Section                            | MD Dept. of Planning           |
| Dan Baldwin          | Land Use and Analysis Section                            | MD Dept. of Planning           |
| Tracey Greene Gordy  | Director, Lower Eastern Shore Planning Services          | MD Dept. of Planning           |
| Dave Blazer          | Director   | MD Coastal Bays Program        |

### Local Government Officials

| Name             | Title                          | Affiliation          |
|------------------|--------------------------------|----------------------|
| Jesse Houston    |                                | Town of ocean City   |
| Don Regenhardt,  | Planning Commission            | Town of Queenstown   |
| Carolyn Cummins, | Planning Commission            | Worcester County     |
| Sandy Coyman     | Comprehensive Planning,        | Worcester County     |
| Jesse Houston    | Planning and Community Develop | Ocean City           |
| Happy Mayer      | Grants Manager                 | Town of Federalsburg |
| Kesta Silaphone  |                                | Worcester City       |

### Federal Agency

| Name              | Title                         | Affiliation                  |
|-------------------|-------------------------------|------------------------------|
| Mary Y. Dan       | Baltimore District            | U.S. Army Corps of Engineers |
| Carin Bisland     | Chesapeake Bay Program Office | US EPA                       |
| Scott Phillips    |                               | U.S. Geologic Service        |
| Jennifer Greiner  | Chesapeake Bay Program        | U.S. Fish & Wildlife Service |
| Carl Zimmerman    | Assateague National Seashore  | USDOJ/ National Park Service |
| Meg Gaffney Smith | Baltimore District            | U.S. Army Corps of Engineers |

### Non Governmental Organizations

| Name                  | Title                      | Affiliation  |
|-----------------------|----------------------------|--|
| Bhaskaran Subramanian | Natural Resource Scientist | Maryland Eastern Shore Resource Conservation and Development Council (RC&DC) |
| Dave Wilson           | Coordinator                | Maryland Eastern Shore RC&DC   |
| Gwen Shaughnesey      |                            | Maryland Eastern Shore RC&DC   |
| Bob Abele             | Chair                      | Coastal Bays Foundation  |
| Mark Bryer            | Chesapeake Bay Initiative  | The Nature Conservancy (TNC)   |
| Margo Burnham         | Conservation Operations    | The Nature Conservancy (TNC)   |

### Coastal Watershed Resource Advisory Committee (CWRAC)

| Name             | Title                             | Affiliation                  |
|------------------|-----------------------------------|------------------------------|
| Richard Robinson | Chair                             | CWRAC                        |
| Brice Gamber     | CWRAC Member                      | Talbot County Creek Watchers |
| Harriett Hankins | Citizen Rep., Dorchester County   | CWRAC                        |
| David Brownlee   | Local government Calvert County   | CWRAC                        |
| Erin Dorsey      | Local government Worcester County | CWRAC                        |

### Governors Bay Cabinet Executive Committee

| Name                          | Title | Affiliation                   |
|-------------------------------|-------|-------------------------------|
| Dan Baldwin                   |       | MD Dept of Planning           |
| Dr. Don Boesch                |       | Univ. of Maryland             |
| LaVon Boston                  |       | MD Dept. of Natural Resources |
| Frank Dawson                  |       | MD Dept. of Natural Resources |
| Jason Dubow                   |       | MD Dept of Planning           |
| Dave Goshorn                  |       | MD Dept. of Natural Resources |
| Secretary John Griffin        |       | MD Dept. of Natural Resources |
| Secretary Richard Hall        |       | MD Dept of Planning           |
| Jeff Horan                    |       | MD Dept. of Natural Resources |
| Beth Horsey                   |       | MD Dept of Agriculture        |
| Louise Lawrence               |       | MD Dept of Agriculture        |
| Lindsay Major                 |       | Office of the Governor        |
| Brenton McCloskey             |       | MD Dept. of Natural Resources |
| Kenneth Miller                |       | MD Dept. of Natural Resources |
| Dave Nemazie                  |       | Univ. of Maryland             |
| Janice Outen                  |       | MD Dept of the Environment    |
| Secretary Roger Richardson    |       | MD Dept of Agriculture        |
| John Roderick                 |       | MD Dept of Agriculture        |
| Deputy Secretary Eric Schwaab |       | MD Dept. of Natural Resources |
| Asst Secretary Doug Scott     |       | MD Dept of Agriculture        |
| Catherine Shanks              |       | MD Dept. of Natural Resources |
| Tom Simpson                   |       | Univ of Maryland              |
| Helen Stewart                 |       | MD Dept. of Natural Resources |
| Deputy Secretary Bob Summers  |       | MD Dept of the Environment    |
| Sakai                         |       | MD Dept of the Environment    |
| Don Halligan                  |       | MD Dept of Planning           |
|                               |       |                               |



### Appendix D. Persons Attending the Public Meeting

| <b>Name</b>       | <b>Affiliation</b>   |
|-------------------|--|
| Vince Dick        | AES Corporation Counsel, Haley & Aldrich Inc               |
| Kent Morton       | AES Corporation  |
| Brice Gamber      | Coastal and Watershed Resources Advisory Committee, member |
| Richard Robinson  | Coastal and Watershed Resources Advisory Committee, Chair  |
| Elder Ghigiarelli | Maryland Department of the Environment                     |
|                   |  |

## **Appendix E. NOAA's Response to Written Comments**

NOAA received written comments regarding the Maryland Coastal Management Program. The letter and legal briefs are part of the official record, and is briefly summarized below.

### **AES Corporation Arlington, Virginia.**

**Comment:** AES submitted a legal brief for the federal consistency appeal as its written comments to the evaluation. The briefs provided information on the merits of the liquefied natural gas project and why the State's objection should be overridden. It also reiterated comments that AES made at the public hearing with related to regard to the need for clarification of MCZMP enforceable policies have been noted and addressed in the findings.

**NOAA Response:** The legal briefs submitted as written comments from AES representatives, related to the merits of the AES project and its consistency with the state's management program and cannot be responded to because the action is the subject of a pending federal consistency appeal to the Secretary of the Department of Commerce, and related litigation. The comments with regard to the need for clarification of MCZMP enforceable policies have been noted and addressed in the findings.