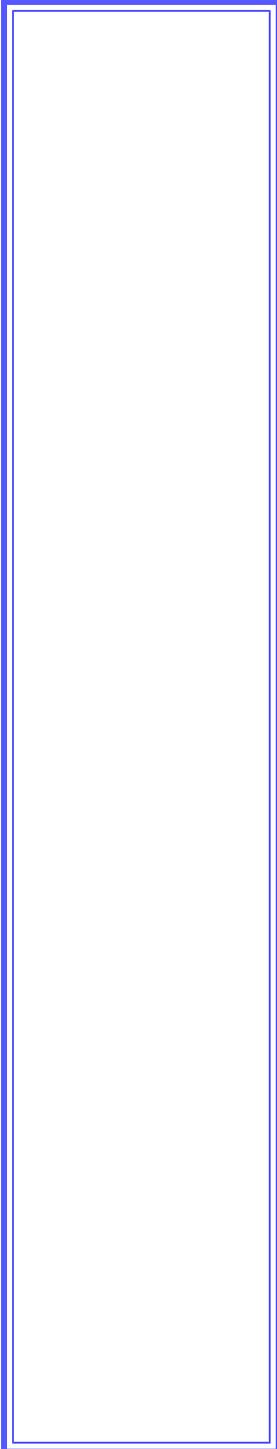


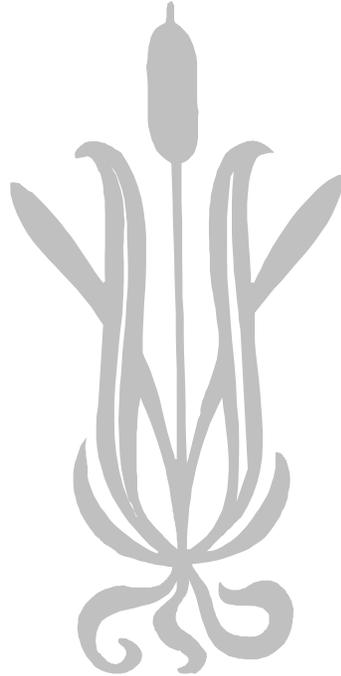
# *CHARLES COUNTY*



ORIGINAL ADOPTION:  
REVISED & READOPTED:  
REVISED & READOPTED:

JUNE 1989  
NOVEMBER 1994  
JUNE 2001

*CHARLES COUNTY*  
**CHESAPEAKE BAY**  
**CRITICAL AREA PROGRAM**



Prepared by

The Charles County Department of Planning and Growth Management

for

The County Commissioners of Charles County, Maryland  
and  
The Chesapeake Bay Critical Area Commission

*June 1989: Original Program Adoption*  
*November 1994: Revised and Re-adopted*  
*June 2001: Revised and Re-adopted*

## **COUNTY COMMISSIONERS OF CHARLES COUNTY**

Murray D. Levy, President

Robert J. Fuller

James M. Jarboe

William D. Mayer

Allan R. Smith

### **Mission Statement**

The mission of Charles County Government is to provide our citizens the highest quality service possible in a timely, efficient, and courteous manner. To achieve this goal, government must be operated in an open and accessible atmosphere, be based on comprehensive long and short term planning, have an appropriate managerial organization tempered by fiscal responsibility.

### **Vision Statement**

Charles County is a place where . . .

- < Private initiative is rewarded and businesses grow and prosper, while the preservation of our heritage is paramount,
- < Government services have reached the highest level of excellence, and
- < The quality of life is felt by its citizens to be the best in the region and its government is recognized as a leader in support of these expectations.

***SAY NO TO DRUGS***

**An Equal Opportunity Employer**

## **ACKNOWLEDGMENTS**

### **PLANNING COMMISSION**

JoAnn Ptack, Chairperson  
Edward Blanchard (Served through December 4, 2000)  
Ernest Cruea  
Thomas Datcher, Jr.  
Harry Foxwell (Served through December 4, 2000)  
Jon Johnson  
Charles McPherson  
Bobbie Wise  
Carolyn Woodside

Eugene T. Lauer, County Administrator  
Roy E. Hancock, Director, Planning  
and Growth Management

Steve Magoon, Planning Director  
Zakary Krebeck, Senior Planner  
Kipling Reynolds, Senior Planner

### **PLANNING DIVISION STAFF**

Mary Grant  
Kevin Vienneau  
Karen Wigger

### **PUBLICATION INFORMATION**

This update of the Charles County Chesapeake Bay Critical Area Program was approved by the Chesapeake Bay Critical Area Commission on February 7, 2001 and adopted by the County Commissioners of Charles County on June 19, 2001.

CHARLES COUNTY  
CHESAPEAKE BAY CRITICAL AREA PROGRAM

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COUNTY COMMISSIONERS OF CHARLES COUNTY, MARYLAND  
CHESAPEAKE BAY CRITICAL AREA PROGRAM  
RESOLUTION 01- 22

WHEREAS, the County Commissioners of Charles County, Maryland are empowered to adopt a Chesapeake Bay Critical Area Program; and

WHEREAS, the County is required by the State of Maryland under the Natural Resources Article, Title 8, Subtitle 18, of the Annotated Code of Maryland, to review and update its Charles County Chesapeake Bay Critical Area Program, hereinafter called the "Program," every four years for approval by the Maryland Chesapeake Bay Critical Area Commission; and

WHEREAS, the Planning Commission of Charles County, Maryland held a Public Hearing on the proposed revision of the Program in its entirety on January 24, 2000; and

WHEREAS, the Planning Commission of Charles County, Maryland at its regular monthly meeting on March 20, 2000, held a work session to address public comments on the Program and passed a motion to recommend that the Program be adopted by the County Commissioners of Charles County, Maryland; and

WHEREAS, on June 27, 2000 the Charles County Commissioners held a Public Hearing on the Program, holding the record for public comment open until July 12, 2000; and then on July 31, 2000 and August 28, 2000 held work sessions to address the comments received both at the Public Hearing and subsequently during the public record period; and

WHEREAS, the Commissioners of Charles County tentatively approved the Critical Area Program on August 28, 2000 and submitted it on October 16, 2000 to the Maryland Chesapeake Bay Critical Area Commission for review and adoption; and

WHEREAS, after deliberation, study, and holding a Public Hearing in Charles County on January 9, 2001 the Maryland Chesapeake Bay Critical Area Commission adopted the February, 2001 amended Program with no exceptions at its monthly meeting on February 7, 2001; and,

WHEREAS, after deliberation and study, the County Commissioners of Charles County, Maryland, are of the opinion and belief that it is in the best public interest of, and in order to secure the health, safety and general welfare for, the present and future residents of Charles County, and in order to achieve the purposes set out in Article 66B of the Natural Resources Article of the Annotated Code of Maryland, as amended, as delineated above, to adopt the Charles County Chesapeake Bay Critical Area Program, adopted February, 2001;

NOW THEREFORE, BE IT RESOLVED, THIS 19<sup>th</sup> DAY OF June, 2001, by the County Commissioners of Charles County, Maryland, as follows: That the Charles County Chesapeake Bay Critical Area Program, dated February, 2001, as attached, be, and it hereby is ADOPTED. \*

FURTHER, IT IS RESOLVED, that if any provision of this Program or the application thereof to any person or circumstance is held invalid for any reasons, such invalidity shall not affect the other provisions or any other application of this Program which can be given effect without the invalid provisions or application, and to this end, all the provisions of this Program are hereby declared to be severable.

FINALLY, IT IS RESOLVED, that this Program shall take effect on the 19<sup>th</sup> day of June, 2001.

COUNTY COMMISSIONERS OF  
CHARLES COUNTY, MARYLAND

  
Murray D. Levy, President

Unavailable for Signature

Robert J. Fuller

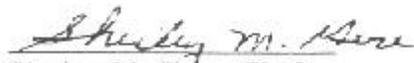
  
James M. Jarboe

  
Wm. Daniel Mayer

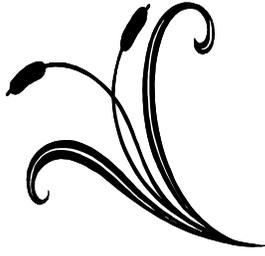
Did No Participate

Allan R. Smith

ATTEST:

  
Shirley M. Gore, Clerk

\*A copy of the Charles County Chesapeake Bay Critical Area Program, dated February, 2001, is available for review in the Department of Planning & Growth Management



## INTRODUCTION

The Charles County Critical Area Program is a set of policies and regulations designed to meet the requirements of the State's Chesapeake Bay Critical Area Act, which was enacted to protect the valuable resources of the Chesapeake Bay.

The Chesapeake Bay is the largest and most fertile of our nation's 840 estuaries, fed by nearly 50 rivers and hundreds of smaller creeks, streams, and marshes. The Bay stretches 200 miles through the coastal plain of Maryland and Virginia. There is more than 8,000 miles of shoreline around the Bay, of which 183 miles are in Charles County.

In an average year, the Chesapeake Bay and its tributaries produce seafood products with a retail value in the hundreds of millions of dollars. Harvesting the more than 40 salable species of aquatic life in the Bay provides a livelihood for thousands of watermen, seafood processors, packers, and laborers.

Recreational activities associated with the Bay and its tributaries, including boating, sport fishing, and hunting, provide enjoyment for many and enrich the local economies. On an average summer weekend, approximately 100,000 people fish for recreation in the Bay area. The tidal waters of Charles County are an important component of both the commercial and recreational fishing industries, since they provide vital spawning grounds for many fish species.

It took 10,000 years for rising sea waters to create the Chesapeake Bay, but has taken only a few centuries for people to change the Chesapeake. In many places, man's activities have caused the Bay's waters to become over-enriched with nutrients and clouded with sediments. The Bay is a vast ecosystem - a unit in which the air, land, living things and water are continuously interacting. Degradation of water quality has an immediate impact on all of the living resources of the Bay, and on humans. Nutrients, vital components of all ecosystems, are also the cause of many of the Bay's problems, and are harmful when present in excess. Too many nutrients cause the excessive growth or bloom of algae which can deplete the oxygen supply from the water. Suspended particles in the Bay's water - whether algae or silt - also block sunlight from beneficial aquatic plants. Sediment clogs fish gills and smothers shellfish.

Declining harvests of seafood and the disappearance of wide meadows of underwater grasses during the 1970's signaled that all was not well with the Bay. Warnings came that nutrients and toxic materials entering the Chesapeake would threaten the Bay's health, as they had threatened the health of the Great Lakes. A six-year, \$27 million study by the Environmental Protection Agency proved these fears well-founded.

In the early 1980s, the Maryland General Assembly recognized that the Chesapeake Bay is a stressed ecosystem and enacted seven initiatives directed at reducing the cumulative impacts of human activity on the Bay. The initiatives focused on point-source pollution control, nonpoint-source pollution control, resource restoration, protection of land resources, resource enhancement, environmental education, and monitoring and research. The Critical Area Law is based on the State's initiative to protection land resources.

## **GENERAL PROGRAM REQUIREMENTS**

The original Charles County Critical Area program, the 1994 revisions, and this subsequent update have been developed to comply with the spirit and the letter of the state's Critical Area regulations. In adopting the Chesapeake Bay Critical Area Law (Natural Resources Article Title 8-1801 through 8-1816), the Maryland General Assembly specifically found that there is a critical and substantial state interest in fostering more sensitive development activity along the shoreline of the Chesapeake Bay so as to minimize damage to water quality and wildlife habitats. The Critical Area was defined by the Act "as a strip of land along the tidal shoreline extending 1,000 feet landward from the water's edge, or from the landward boundary of any adjacent tidal wetland." Maryland's Critical Area Law established the following program goals, from which the Charles County program was developed:

- ' Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or conveyances that have runoff from surrounding lands;
- ' Conserve fish, wildlife and plant habitat; and
- ' Establish land use policies for development in the Chesapeake Bay Critical Area which accommodate growth and also address the fact that, even if pollution is controlled, the number, movement, and activities of persons in that area can create adverse environmental impacts (Natural Resources Article Title 8-1808).

The Critical Area Law required all counties with tidal coastline to adopt and implement a Critical Area Management Program to protect the Chesapeake Bay. The Law also created the Chesapeake Bay Critical Area Commission to prepare guidelines (or "criteria") for the local programs. The Commission was empowered to assure that the local programs are consistent with the criteria or prepare a consistent program that a local government would be required to enforce.

Charles County adopted its original Critical Area Program in 1989. This document is the second update of the program since that time. In the original program, Charles County established its own local objectives for development of a Local Program to implement the Critical Area Criteria. These objectives continue to be valid:

- ' Compliance with the State requirements as established by the Chesapeake Bay Criteria;

- ' Use existing review and enforcement processes whenever possible to implement the Criteria; and
- ' Provide incentives for the continuation of resource utilization activities, such as farming and forestry, by identifying means of compensating landowners for any loss in development potential due to the requirements of the program.

The state's Criteria and the Charles County program will impact future land development patterns in the Critical Area. The backbone of the County's program is the establishment of three overlay zones which focus on allowable development density and different means of controlling nonpoint source pollution. These overlay zones are augmented by agricultural preservation programs, forest clearing and replacement requirements, numerous habitat protection standards and requirements, and a number of other components, the combination of which is designed to protect the water quality of the Chesapeake Bay.

The Criteria requirements, and the recommended procedures to implement them, are described in the following chapters. Together these elements comprise the Charles County Critical Area Program. This document, the *Charles County Chesapeake Bay Critical Area Program*, is a blueprint describing how the county will continue to incorporate the state's Critical Area Criteria into existing planning and environmental management programs.

## **IMPLEMENTATION PLAN**

Under law, Charles County's program must adhere to the general program criteria contained in COMAR 27.01.01, Directives for Local Program Development. These criteria set forth the requirements for determination by the Critical Area Commission that a local Critical Area Program is fully consistent with the Criteria and is implementable and enforceable. The use of various county ordinances, in addition to the use of the program document as a guide, will accomplish these objectives.

The Charles County Critical Area Program will be implemented using the program document and a number of County regulations which direct land use and development in the County. The Zoning, Subdivision, Grading and Sediment Control, and Stormwater Management Ordinances all contain Critical Area provisions that will enable the County to comply with its requirements under the State regulations.

Under this update, both the Zoning Ordinance and the program document have been proposed for amendment. The Subdivision Regulations were recently rewritten and re-adopted in August of 1996 and are not affected by this update. Both the updated Critical Area Program document and the Zoning Ordinance updates have been reviewed by the Critical Area Commission.

The various ordinances which will comprise the implementation vehicle include penalty mechanisms and provisions for recourse by the County should violations occur. In general, the Planning Division within the Department of Planning and Growth Management will be responsible for the administration and enforcement of the Program, although other offices in the Department of Planning and Growth Management and other regulatory agencies also have responsibilities. The level of staffing continues to be contingent on the level of state funding for the program.



## CHAPTER ONE

# EXISTING ENVIRONMENTAL MANAGEMENT PROGRAMS IN CHARLES COUNTY

Many of the detailed guidelines established by the Critical Area Commission are currently being met, or are in the process of being addressed by a combination of local, State, and Federal environmental programs that are not directly associated with the Chesapeake Bay Critical Area Program. Coordination between the various programs continues to be necessary to increase efficiency, avoid duplication of effort, and increase the cooperation and support of those who are most directly affected by the criteria. Therefore, it is essential to have an understanding of the existing environmental management programs. Following is a brief summary of the most applicable County efforts:

### **COMPREHENSIVE PLAN**

The 1990 Charles County Comprehensive Plan, which was updated and re-adopted in June, 1997, is intended to guide development in the County through the year 2020. The plan includes a strong growth management element in accordance with Maryland's planning enabling legislation, Article 66B. In addition, the Comprehensive Plan addresses the seven land use visions established by the State of Maryland in 1992 under the "Economic Growth, Resource Protection and Planning Act." The plan calls for new development to be channeled into designated growth areas which are more appropriate to receive new growth by virtue of their public infrastructure, transportation network and environmental characteristics. Conversely, the Comprehensive Plan also encourages the preservation of rural and environmentally sensitive lands. The general objective of the Charles County Comprehensive Plan is to "preserve the present 'character' of the County and enhance the quality of life for its citizens while maintaining a pace of growth and development which is managed."

### **REGULATORY PROGRAMS**

#### *SUBDIVISION AND DEVELOPMENT REVIEW*

Under the provisions of Article 66B, the Planning Commission is responsible for the approval of all subdivision activity and some site plan activity in the County. The County Zoning Ordinance gives the Planning Commission the authority to review commercial and multi-family project site plans which are located within the planned unit developments. Site plans in the remaining areas of the County are administratively approved by the Director of the Department of Planning and Growth Management. County staff review construction, utility and land

disturbance plans for compliance with applicable ordinances and other regulations. Compliance with Critical Area requirements is incorporated into the subdivision and development review processes.

### ***CHARLES COUNTY ZONING ORDINANCE***

The rules for land use, density and site design are set forth in the Charles County Zoning Ordinance. The Zoning Ordinance includes a section on the Chesapeake Bay Critical Area, as well as numerous other environmental programs. One section complementing the Critical Area program is the Resource Protection Zone, which protects the County's stream valleys.

### ***CHARLES COUNTY SUBDIVISION REGULATIONS***

The Charles County Subdivision Regulations were updated and re-adopted August 1, 1996. The new version of the Subdivision Regulations includes provisions for habitat protection and special provisions for the Critical Area.

### ***THE RESOURCE PROTECTION ZONE - STREAM VALLEY MANAGEMENT***

The Charles County Zoning Ordinance includes requirements for the protection of the many stream valleys in the County. The ordinance requires buffers to the stream valleys that are dependent upon stream order and the extent of associated 100-year flood plains, wetlands and steep slopes. These buffers will help preserve water quality and forest cover and will encourage developers to provide greenways along the stream beds.

### ***CHARLES COUNTY FOREST CONSERVATION ORDINANCE***

The Charles County Forest Conservation Ordinance went into effect on January 1, 1993. It was developed to meet the requirements of Maryland's Forest Conservation Act and applies to all lands outside the Critical Area. Applicants wishing to develop their land must carefully examine the natural features of the property, particularly forest cover, and use this information in determining site design. The goal of the Ordinance is to maintain a certain percentage of forest cover in the County and preserve particularly valuable forest areas. The percentage of forest cover protected varies by the land use.

### ***STORM WATER MANAGEMENT ORDINANCE***

The Charles County Storm water Management Ordinance is designed to encourage sound, long-term storm water management practices in the County in accordance with state regulations. Such practices will help protect the county's streams and wetlands by controlling the quality and quantity of the storm water that flows into them.

## *FLOOD PLAIN MANAGEMENT ORDINANCE*

This ordinance was designed to minimize disturbances in flood ways and 100-year flood plains to protect against injuries and property damage. In providing such protection, the Flood plain Management Ordinance also serves environmental conservation purposes.

## *SOIL CONSERVATION AND SEDIMENT EROSION CONTROL*

The Charles Soil Conservation District is an autonomous organization run by a board of supervisors. The organization is funded by both the County and the State and is charged, under the Annotated Code of Maryland, with the conservation of soil and water in Charles County. The District reviews sediment control plans for the County to ensure the maintenance of water quality during construction projects. The District also prepares Soil Conservation and Water Quality plans for local farmers. These plans are designed to control nonpoint source pollution through the use of Best Management Practices and storm water control structures to improve water quality. An update of the County Soil Survey began in 1999 and will be completed in 2002.

## *PRIORITY FUNDING AREAS PROGRAM - SMART GROWTH ACT*

The Smart Growth Areas Act of 1997 requires the State to target funding for growth-related projects into Priority Funding Areas. To be eligible for funding, each county was required to provide to the Maryland Department of Planning all areas to be designated as Priority Funding Areas.



In January, 1999, the County Commissioners approved the Priority Funding Areas Map, which was then forwarded to the Maryland Department of Planning. The targeted areas include some portions of property located in the Chesapeake Bay Critical Area, including Benedict, Swan Point, Potomac Heights, Pope's Creek/Clifton, Morgantown and Cobb Island/Rock Point.

## **ENVIRONMENTAL MANAGEMENT AND PROTECTION PROGRAMS**

### *AGRICULTURAL PRESERVATION*

The County's agricultural planner works with local farmers and farm organizations to promote the preservation of agricultural land. The County matches farmers with programs and organizations such as the Maryland Agricultural Land Preservation Foundation and the Maryland Environmental Trust to actively encourage the preservation of productive farm land. The County Zoning Ordinance also has provisions for the transfer of development rights from prime agricultural areas to the development districts to further encourage preservation. See the Agricultural Protection Chapter for the acreages protected by each program.

### *RURAL LEGACY PROGRAM - SMART GROWTH ACT*

In 1997, the State of Maryland adopted the Smart Growth Act. Under this act, there is a stipulation titled, "Rural Legacy", which directs funds to Rural Legacy sponsors and local governments for the purchase of conservation easements to enhance natural resource, agricultural, forestry protection and to counteract the effects of sprawl development. Charles County has been approved to participate in the Rural Legacy Program, designating the 65,000 acres of the Zekiah Swamp watershed for preservation. The Rural Legacy Plan targets specific protection areas within the larger Rural Legacy Area, specifically those properties north of Maryland Route 5. However, Charles County intends to seek Rural Legacy Area designation for the entire watershed within Charles County. The Zekiah Swamp is significant to Charles County in that it consists of a large portion of unfragmented forest, provides needed habitat for a diverse list of species, is rich in historical value, and is home to some of the most productive agricultural land in the county.

To date, Charles County has been awarded \$3 million in Rural Legacy funds. The funds are designated for easement acquisition or fee simple purchase of targeted properties north of Maryland Route 5. There are currently several property owners interested in the Rural Legacy Program. As of August 2000, the property owners of 749 acres with significant natural resources are working with the County to have their land protected by Rural Legacy easements.

#### ***ZEKIAH SWAMP MANAGEMENT AND PROTECTION PROGRAMS***

In 1983, the Department of Natural Resources, the Tri-County Council of Southern Maryland, the Soil Conservation Service, and Charles County formed a committee to coordinate research and other activities for the Zekiah Swamp. The Committee developed numerous recommendations for the management of the Swamp, which relate closely to the goals of the Chesapeake Bay Critical Area Program.

The State of Maryland, pursuant to the recommendations of the County, recognized the unique ecological value of the Zekiah Swamp by designating the Swamp an "Area of Critical State Concern." The state has also named the Zekiah Swamp and the Wicomico River a "Wild and Scenic River" under the Maryland Wild and Scenic Rivers Act. A management plan for the Wicomico River and the Zekiah Swamp has been prepared by a group represented by Charles County, St. Mary's County, and a local advisory board and endorsed by the Charles County Commissioners.

#### ***WICOMICO SCENIC RIVER COMMISSION***

The Wicomico Scenic River Commission is a board created by the Commissioners of Charles and St. Mary's Counties to ensure that the natural values of the Wicomico River, a state designated scenic river, are preserved, and that the resources within the watershed, which spans the two counties, are used wisely. Membership is comprised of representatives



from the watershed in both Charles and St. Mary's Counties and are appointed by their respective board of County Commissioners.

### ***PATUXENT RIVER POLICY PLAN***

The Patuxent River Policy Plan is a multi-jurisdictional project, adopted in 1984, in which Charles, Anne Arundel, Howard, Montgomery, Prince George's, Calvert, and St. Mary's Counties participate. The goals of this Plan include improved water quality for the Patuxent River through watershed protection and improved habitat protection. Although only a small portion of Charles County borders the Patuxent River, the County is striving to meet the goals of the Plan. To date, the State Agricultural Preservation Program has used easement acquisition (222 acres) and outright purchase of land at Maxwell Hall using open space money (615 acres). The Charles Soil Conservation District has worked closely with many of the farmers in the watershed to improve their farming practices and develop Soil and Water Quality Management Plans for as many farms as possible in the watershed. The County has also participated in the Patuxent Demonstration Project funded by the Environmental Protection Agency, which concluded in 1996.

An update of the Patuxent River Policy Plan, for 1984-1997 has been prepared by the addendum workgroup of the Patuxent River Commission. This update represents the variety of effects of the many changes that have occurred in the Patuxent River and its watershed since 1984. The update was adopted by the Patuxent River Commission in November 1997. The jurisdictions, which adopted the original Patuxent River Policy Plan, are in the process of adopting the update.

### ***MATTAWOMAN PROTECTION STRATEGY***

The 1997 update of the Comprehensive Plan calls for the County to develop protection strategies for the Mattawoman Creek watershed. The watershed is considered economically valuable, and ecologically important. Its boundaries encompass the majority of the County's Development District. Due to intense land use projected for the Development District, special measures will be necessary to protect this natural resource, while accommodating growth.

The U. S. Army Corps of Engineers(USACE) conducted a Lower Potomac River Basin Reconnaissance Study in 1997 to determine priority watersheds for restoration and protection. The Mattawoman Watershed was one of the eight watersheds in the Basin found to be priority. This has led to a federal, state and county, interagency team, headed by USACE, to determine the most beneficial steps for the County to pursue in protecting the watershed. Computer modelling will be used as the tool for predicting and comparing Best Management Practices. The project began in 2000 and will continue for approximately two years.

## *WATER AND SEWER SERVICE*

Charles County manages a number of public sewage treatment plants. These plants are required to meet water quality standards, set by the State, at the point of discharge so as to minimize impact on the receiving body of water. By proper management of these plants to ensure they meet these standards, the County assures the improvement of water quality and aquatic habitat.

One major goal of the County's Water and Sewerage Plan is to correct problems in areas of existing development where individual septic fields or existing private package treatment plants are failing. In conjunction with the Zoning Ordinance, the Water and Sewerage Plan provides incentives for the correction of failing septic systems.

The County also develops and implements plans for sewage treatment in areas of existing development where individual septic fields or existing private package plants are failing and are creating water quality and other environmental and health problems. The County actively discourages the establishment of privately operated sewage treatment facilities and allows them only if they can meet an extensive list of criteria.

The County has adopted the 1998 update of its Comprehensive Water and Sewer Plan which supports the County's Comprehensive Plan in directing development into predetermined development districts.

## *SOLID WASTE DISPOSAL*

The County has a solid waste management plan, which is currently being updated. The County operates a sanitary landfill to provide proper disposal of solid waste while protecting the environment. In 1994, the old county landfill at Pisgah was closed and a new sanitary landfill was opened in Waldorf.

The County also monitors junkyards and other facilities to protect the environment from pollution from these sources.

## *PARKS AND RECREATION*

The County adopted a 1999 Land Preservation and Recreation Plan, which was an update to the previous plan. The overriding goal of the new plan is to "create a physical and social environment which accommodates the recreational needs and interests of County residents and demonstrates Charles County's commitment to protection of sensitive resource lands." To accomplish this goal, the plan establishes a series of objectives and provides guidance to the County.

## *MARYLAND TRIBUTARY STRATEGIES*

Charles County has been cooperating with the State to develop strategies to reduce pollution in the Chesapeake Bay. As the name implies, the Maryland Tributary Strategies Program focuses on the numerous tributaries to the Bay throughout the state. The goal is to reduce the nutrients entering the Bay by 40%. Two tributaries, the Lower Potomac and the Patuxent River, flow around the edges of Charles County, which make the County's participation important. Possible nutrient reduction options for the County include the implementation of numerous Best Management Practices on farms, improved storm water management throughout the county, and growth management which focuses development and preserves sensitive areas. The Charles County Critical Area Program has been a major factor in the reduction of nonpoint source pollutants to this date.

### *NPDES PROGRAM*

In accordance with the latest amendments to the Clean Water Act, Charles County has obtained a National Pollutant Discharge Elimination System permit for its storm water control systems, effective May 30, 1997 through May 30, 2002. The permit requires the County to look at ways to prevent illicit connections to storm water management systems, and perform water quality monitoring to identify areas of concern. The permit also requires a public education element. To meet the water quality conditions of the permit, the County has contracted with the Smithsonian Environmental Research Center. The Center began monitoring in September 1997 and continued through August 2000. The monitoring consisted of 36 stations countywide, in an effort to associate particular nutrient and sediment levels with various land uses. Many of the monitoring stations were located in the Development District including fifteen in the Mattawoman Creek watershed, two stations in a tributary to the Zekiah and one in the Port Tobacco Creek watershed.

## CHAPTER TWO

# DEVELOPMENT PROGRAM



Charles County has a complex, extensive tidal shoreline approximately 183 miles in length. Over 90 percent of this shoreline is dominated by forests, wetlands, or agricultural fields. The Critical Area in the County, excluding Federal land, comprises 30,424 acres and represents approximately 10% of the total County land area.

Waterfront property is an attractive site for residential, industrial, and recreational development. Historically, the Charles County shoreline has been a popular location for summer communities which have evolved over time into year-round enclaves. Cobb Island is a prominent example. Other existing coastal population centers include the Town of Indian Head, the Village of Port Tobacco, Clifton, and Swan Point on the Potomac shoreline; and Benedict on the Patuxent shoreline.

New shoreline development appears to be concentrated near these existing development centers, particularly in the Indian Head area and along MD Route 210, although the Cobb Neck Peninsula is also popular. The completion of the Route 210 dualization in the 1980s dramatically improved access from this area to the employment centers around Washington, D.C., increasing the market potential for residential development in the area. The County has witnessed a number of development proposals in the 210 corridor, both along the shoreline and inland over the past several years. One of the major proposals consisting of approximately 2000 mixed use units, known as Chapman's Land, was purchased by the State in 1998. This property includes approximately 262 acres of Critical Area land.

The County updated its Comprehensive Plan in 1997. In addition to setting county-wide development policies the Plan designates the Northernmost portions of the County as the Development District. This includes much of the land along the 210 corridor, and along the 301 corridor south to the Billingsley Road cross county connector.

### **DEVELOPMENT CLASSIFICATIONS IN THE CRITICAL AREA**

The Chesapeake Bay Critical Area Criteria recognizes three development classifications in the Chesapeake Bay Critical Area. Implementation of the program resulted in the adoption of these areas as zoning districts in the Charles County Zoning Ordinance:

- ' Intensely Developed Areas (IDA)
- ' Limited Development Areas (LDA)
- ' Resource Conservation Areas (RCA)

Using the mapping rules and procedures contained in Appendix A, which were derived from the Natural Resources Article 27.01.02, these development areas have been delineated based upon the land uses and development in existence on December 1, 1985, and also incorporate Growth Allocation awards and other changes since the adoption of the original program. Of the 30,424 acres in the Critical Area, the predominant classification is RCA, 27,929 acres; followed by LDA with 2,217 acres; and IDA with 278 acres. Under the original program, 27,949 acres were designated as RCA, 2,206 were designated as LDA and 269 were designated as IDA. The nine acre increase of the IDA and reduction of the LDA is due to Growth Allocation awarded to the IDA from the LDA. The 20 acre increase in LDA and reduction in RCA is based on a mapping amendment of the Camp Merrick property.

- ' Intensely Developed Areas are defined generally as those areas of at least 20 adjacent acres where residential, commercial, institutional, and/or industrial development predominate and where relatively little natural habitat occurs.

The only Intensely Developed Areas within the County are Potomac Heights, Mattawoman Woods (Town of Indian Head), the Morgantown Power Generating Plant, and a portion of Cliffton on the Potomac with frontage on U.S. Route 301. Overall, existing IDA covers 278 acres, 0.9 % of the total Critical Area in Charles County.

- ' Limited Development Areas are those areas which are currently developed in low or moderate intensity uses. Portions of these areas contain natural plant and animal habitats, and the quality of run-off has not been substantially altered or impaired in comparison with pre-development conditions.

Limited Development Areas include the Town of Indian Head, Port Tobacco, Cliffton on the Potomac, Swan Point, Cobb Island, and Benedict. In addition, there are a number of smaller enclaves near these development centers. A total of 2,217 acres or 7.2% of the Critical Area is considered LDA.

- ' Resource Conservation Areas are those areas dominated by wetlands, forests, abandoned fields, agriculture, fisheries activities, or aquaculture, and are not densely developed.

Resource Conservation Areas make up the majority (91.7%) of the County Critical Area with 27,929 acres. Tidal wetlands comprise 5,347 acres, or 19% of the total Resource Conservation Area.

## ***GROWTH ALLOCATION***

Based upon the above figure for total Resource Conservation Area of 27,929 acres, subtracting the 5,347 acres of tidal wetlands, and applying the 5% formula contained in the Critical Area Criteria (COMAR 27.01.02), Charles County is permitted to convert a total of 1,129.1

acres of Resource Conservation Areas to Limited or Intensely Developed Areas, or to convert existing Limited Development Areas to Intensely Developed Areas. The County's policies and procedures for the award of Growth Allocation acreage are set forth in the Charles County Zoning Ordinance, and are discussed later in this program.

## **FUTURE EXPANSION OF THE CRITICAL AREA**

Section 8-1807(c) of the Critical Area Law contains a provision which allows additional areas to be included within the Critical Area, if proposed by local jurisdictions and approved by the Critical Area Commission. Although the Zekiah Swamp was at one time a candidate for Critical Area expansion, the designation of the Zekiah as a Wild and Scenic River, and the initiation of the County's Resource Protection Zone (stream valley management) has decreased the need to expand the Critical Area into the Zekiah. There are currently no other candidates for expansion, although the provisions are available if the need arises.

## **GOAL, OBJECTIVES AND POLICIES**

The intent of the Critical Area Law is to minimize development within the Chesapeake Bay Critical Area and to assure that when development occurs, it will be done in a manner to minimize impacts on the environment and be compatible with its physical surroundings. To this end, the management program for development within the Charles County Critical Area is guided by the following goals and objectives:

<b>GOAL:</b>	<b>To direct and manage development within the Critical Area such that water quality and habitat are conserved, and growth is accommodated.</b>
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## **OBJECTIVES**

- # Direct intense development outside the Critical Area. Future intense development activities, when proposed in the Critical Area, shall be directed toward Intensely Developed Areas.
- # Allow additional low intensity development in Limited Development Areas, but subject it to regulations and standards to prevent adverse impacts on habitat and water quality.
- # Limit development in the Resource Conservation Area, which shall be chiefly designated for agriculture, forestry, fisheries activities, and habitat protection.

## **POLICIES**

### ***CHESAPEAKE BAY CRITICAL AREA OVERLAY ZONES***

In order to implement the density and use requirements of the Intensely Developed Area, Limited Development Area, and Resource Conservation Area, Charles County will continue to apply the three Critical Area designations as overlay zones applied to the underlying base zones.

In general, overlay zones are applied over base zoning districts on the underlying lands. Within the overlay zone, regulations may be tailored to address specific land use concerns. Overlay zones are applied only to designated geographic areas. For these reasons, the overlay zoning technique is ideally suited for implementing the guidelines and criteria of the Chesapeake Bay Critical Area Program. Refer to the Charles County Zoning Ordinance for the provisions for the Critical Area overlay zones. These overlay zones are officially designated on the Critical Area maps. All lands within the Critical Area, with the exception of federally owned property, have been designated as either Intense Development Zone (IDZ), Limited Development Zone (LDZ), or Resource Conservation Zone (RCZ).

### ***SEWER EXTENSION POLICY***

Throughout the County, the provision of sewer service is to be used to channel new development into areas identified for higher intensity use in accordance with the Charles County Comprehensive Plan. The County has recently adopted its 1998 Comprehensive Water and Sewer Plan so that the sewer service areas correspond with the development districts designated in the Comprehensive Plan. In addition, both the Comprehensive Plan and the Water and Sewer Plan discourage community sewage treatment facilities and establish rigorous criteria when the use of package treatment plants is warranted.

### ***INTRAFAMILY TRANSFERS***

The Critical Area provisions of the Zoning Ordinance, in accordance with the State Criteria, contain a provision to allow for higher densities in the Resource Conservation Zone when lots are being transferred within the immediate family of the property owner. The County has expanded its definition of immediate family to include stepchildren, stepparents, and legal wards and guardians in addition to fathers, mothers, sons, daughters, grandfathers, grandmothers, grandsons, or granddaughters.

An intra family transfer can be made only from parcels that were of record on March 1, 1986 and where the portion of such parcel in the Critical Area is at least seven acres or more and less than 60 acres in size. A parcel that is seven acres or more and less than 12 acres in size may be subdivided into two lots consistent with the underlying base zone. For example, in the AC zone, each parcel must be at least 3 acres in size.

A parcel that is 12 acres or more and less than 60 acres in size may be subdivided into three lots; again consistent with the underlying base zone. Lots created using the intra family transfer may not be further subdivided, and may not be sold outside the immediate family.

As part of the implementation of the Critical Area Program, the County has established procedures to assure that intra family transfers are bona fide intra family transfers, and not created for the purpose of ultimate commercial sale. The procedures contained in the Critical Area provisions of the Zoning Ordinance provide flexibility to assure that lots created through intra family transfers may be sold if a change in circumstances since the original transfer warrants an exception.

### ***GRANDFATHERING***

The Critical Area Law includes a requirement that local programs contain provisions relating to the grandfathering of development at the time the program is adopted or approved by the Critical Area Commission. Generally, grandfathering refers to provisions which allow certain pre-existing uses to continue even though they may be inconsistent with a new law, and certain new development to occur even though it may be inconsistent with the density requirements of the new law. These provisions are as follows:

- # An individual wishing to build a single house on an already recorded, unimproved lot may do so, even if the lot is less than 20 acres and is located within the Resource Conservation Overlay Zone. When the house is built, steps must be taken to minimize adverse environmental impacts, and the construction must meet other County requirements (setbacks, Health Department, etc.).
- # Subdivision of land which received preliminary or final approval prior to June 1, 1984, is grandfathered. If construction occurs on these lots after the local program is approved, it must comply with the procedures described in the Zoning Ordinance.
- # Subdivision of land is grandfathered if it received preliminary or final approval between June 1, 1984, and December 1, 1985. However, it must comply with the "findings" requirement of the Critical Area Law (Section 8-1813). Subdivision of land approved after December 1, 1985, must conform to the Criteria in COMAR 27.01.02.06, or count against the Growth Allocation allotment.
- # Any land on which development activity had progressed to the point of pouring of foundation footings or the installation of structural members by the time the program is adopted is grandfathered, unless the use has been abandoned for than one year.

- # Existing legal non-conforming land uses may continue. Expansion of such existing uses, must comply with the Charles County Critical Area Program, or will require a variance as described later in this chapter.

#### *PROHIBITED ACTIVITIES IN THE CRITICAL AREA ZONE*

- # Permanent sludge handling, storage and disposal facilities, other than those associated with wastewater treatment facilities are prohibited in the Critical Area zones. However, agricultural or horticultural use of sludge under appropriate approvals when applied by an approved method at approved application rates may be permitted in the Critical Area, except in the 100-foot buffer.
- # New or expanded hazardous waste collection or disposal systems or sanitary landfills are prohibited in the Critical Area zones.
- # New development or redevelopment of non-maritime heavy industry, transportation facilities and utility transmission; except those necessary to serve permitted uses, or where regional or interstate facilities must cross tidal waters; are prohibited in the Intense Development Zones unless it has been demonstrated to all appropriate permitting agencies that there will be a net improvement in water quality to the adjacent body of water.

#### *INCENTIVE PROGRAMS IN THE RESOURCE CONSERVATION ZONE*

Most of the County's Resource Conservation Zone (RCZ) lies over lands that are zoned AC (3-acre minimum lot size), although there are a few areas which have base zones that allow for denser development. In the RCZ, the density, not the lot size, is limited to one dwelling per 20 acres. In calculating the 1 dwelling unit per 20 acres density in the RCZ, the area of privately owned wetlands may be included in the calculation if the density on the upland portion does not exceed 1 dwelling unit per 8 acres.

For example, if a farmer owns 60 acres in the Critical Area that is zoned AC, that land could potentially yield 20 building lots. Once the RCZ is placed on top of the AC zone, the maximum number of dwelling sites in the Critical Area is reduced to three. Calculation of the allowable density will be based upon the property boundaries in existence when the program is adopted and activity on December 1, 1985. Subdivision of such parcels will be monitored by the planning staff.

In order to provide incentives for maintaining the land area necessary to support the protective uses (agriculture, forestry, natural habitat), and to promote the continuation of these uses, the Charles County Critical Area program includes the following mechanisms to encourage clustering and sensitive site design in the Critical Area (See the Zoning Ordinance for the definition of clustering.):

- ' Clustering is allowed and encouraged in the Resource Conservation Zone, as long as the overall permitted density in the Resource Conservation Zone is not increased. Clustering often provides more flexibility by allowing and encouraging smaller lots on environmentally suitable areas of any given site.
- ' For those parcels which lie partially within and partially outside of the Critical Area, clustering of development shall be permitted within the portion outside of the Critical Area, provided that the following conditions are met:
  - # The requirements of the County's cluster provisions are met;
  - # A minimum lot size of one acre shall apply in receiving areas which do not have public sewer and water facilities;
  - # The resulting density of the receiving area shall not exceed twice the density allowed by the underlying zone and the resulting density on the entire parcel shall not exceed the base density allowed by the underlying zone;
  - # The proposed subdivision must meet all other County requirements and standards;
  - # For every lot placed inside the Critical Area, 20 acres shall be removed from the acreage to calculate the allowable number of cluster units.
- ' The County has established a transfer of development rights (TDR) program for designated Agricultural Preservation District properties inside and outside the Critical Area. The chapter discussing the Agricultural Preservation Program offers additional discussion of the County's transfer of development rights program.
- ' The County has established preferential tax assessments for large parcels which participate in the Agricultural Land Preservation Program.
- ' The County will continue to encourage the acquisition of easements by State and private agencies such as Program Open Space and the Maryland Environmental Trust. This process is described in detail in the Natural Areas Protection and Preservation Program chapter.

### ***GROWTH ALLOCATION POLICY***

Charles County began with an initial allocation of 1,130.1 acres of growth (5% of the total initial Resource Conservation Area) that may be used to increase the amount of Intensely Developed and Limited Development Area. Reclassifications of Resource Conservation Areas to

Limited Development Areas to correct erroneous classifications in the original process has decreased the amount of Resource Conservation Area in the County and has correspondingly reduced the amount of Growth Allocation available to the County.

At this time, no subdivisions in the Charles County Critical Area have been approved since December 1, 1985 that have required the use of Growth Allocation acreage. The Town of Indian Head has used 9 acres of the County's Growth Allocation for the Robinson Terminal project, which leaves a total of 1,120.1 acres available. The County has updated its Growth Allocation policies to streamline the process, refine the guidelines and award criteria, and also clarify many discrepancies that have arisen during the implementation of the program.

#### *Guidelines For Growth Allocation Awards*

The following guidelines shall apply to applications to change the boundaries of a Chesapeake Bay Critical Area Overlay Zone:

#### *Location:*

- , The total acreage of Growth Allocation expansion shall not exceed an area equal to 5% of the Resource Conservation Zones that are not federally-owned or are designated tidal wetlands.
- , New Intense Development Zones should be located in Limited Development Zones or adjacent to an existing Intense Development Zone.
- , New Limited Development Zones should be located adjacent to existing Limited Development Zones or Intense Development Zones.

#### *Design:*

- , All new Intense and Limited Development Zones will be located in such a manner as to minimize impacts to habitat protection areas as specified elsewhere in this program, and in an area and manner that optimizes benefit to water quality.
- , All projects which utilize Growth Allocation acreage must provide adequate protection to historic and archeological resources listed on state or local surveys or properties on or eligible for the National Register of Historic Places.
- , When Growth Allocation is permitted in a Resource Conservation Zone not adjacent to an Intense Development Zone or a Limited Development Zone, the applicant must cluster the development and provide for resource enhancement in the design of such development.

- , All habitat protection area issues must be identified and addressed, and preliminary habitat protection plans must be approved by the Planning Division.
- , New Intense and Limited Development Zones should be located at least 300 feet from tidal waters or tidal wetlands if the land was originally designated as a Resource Conservation Zone.

*Overall:*

- , No more than 50% of the total Growth Allocation may be in the Resource Conservation Zone, unless the County is unable to utilize any portion of the Growth Allocation adjacent to existing Intense or Limited Development Zones. If more than 50% of the Growth Allocation is located in the Resource Conservation Zone, then that development must be clustered.
- , Growth expansion proposals must provide a net positive fiscal impact to the County. To this end, commercial and industrial uses are encouraged.
- , 50% of the total Growth Allocation acreage will be reserved for commercial and industrial use.
- , Growth expansion proposals must conform to the local Critical Area Program standards and requirements.
- , The proposed expansion must accommodate the growth needs of the County by being consistent with adopted Comprehensive Plans, Area Master Plans, Water and Sewer Plans, and other adopted growth management policies.
- , The proposed project maximizes the use of permanent conservation easements and minimizes the use of Growth Allocation acreage.

**TABLE 2.1. CURRENT COUNTY GROWTH ALLOCATION ACREAGE**

<b>CATEGORY</b>	<b>ACREAGE</b>
ORIGINAL GROWTH ALLOCATION ACREAGE IN CHARLES COUNTY (INCLUDING INCORPORATED TOWNS)	1,129.1
MINUS: GROWTH ALLOCATION USED BY THE TOWN OF INDIAN HEAD	9.0
REMAINING GROWTH ALLOCATION ACREAGE IN CHARLES COUNTY (INCLUDING INCORPORATED TOWNS)	1,120.1

### *Computing Use Of The Growth Allocation*

Under the original Growth Allocation policies and procedures, the total lot area had to be subtracted from the Growth Allocation requests, with the exception of areas under permanent conservation easement. The State and the County have revised the way Growth Allocation acreage is computed and allow greater flexibility for both the applicant and County Commissioners to determine the amount of Growth Allocation that will be awarded to any given project. The new methods provide two alternatives:

- 1 The total Critical Area portion of the parcel or set of parcels not in tidal wetlands, and not in 300-foot buffers shall be counted against the County's total available Growth Allocation; or
- 2 The applicant may propose a single "development envelope" which includes the entire land area needed for development, and only the acreage of that portion of the envelope will be deducted from the County's Growth Allocation. In order to use this method, at least 20 acres must remain outside the development envelope, not including tidal wetlands. It is preferable that the remaining area be placed under conservation easement.

### *Procedures For Awarding Growth Allocation*

In February 1998, the County amended its procedures for the award of Growth Allocation to be consistent with other development processes in the County. The new process continues to require that the award of Growth Allocation be project-specific, but that the award of Growth Allocation be the first step in the development approval process. In this way, the County will ratify that it feels a higher density form of development is appropriate to a specific area prior to approving such a project. The County shall accept applications for Growth Allocation and site plan, subdivision or planned development zone approval simultaneously. The general procedure for Growth Allocation approval follows, see the Zoning Ordinance for more specific details:

- , Applicants shall request that the County Commissioners designate a Growth Allocation zone to the project site at the earliest development review state to which the projects are subject. The request, submitted in the form of a Growth Allocation plan shall be accompanied by an application for a subdivision plan, site plan or application for a planned development zone.
- , The Planning Commission will review the application after staff has reviewed the project and the applicant has had an opportunity to make revisions. The Planning Commission will hold a public meeting on the application.
- , Once the Planning Commission has made its recommendations to the County Commissioners, the County Commissioners will hold a public hearing for the Growth

Allocation request. The County Commissioners must make specific findings and shall establish conditions of approval.

- , Upon final approval of Growth Allocation, conditions of approval and a development schedule by the County Commissioners and the Critical Area Commission, the conditions of approval and the development schedule shall be formalized in the form of a zoning indenture.
- , The applicant may proceed to the next steps of development approval, once the indenture has been finalized and recorded in the Charles County Land Records. All conditions of approval must be incorporated into the final development plans, performance agreements, deed covenants, etc.

#### *Coordination With The Town Of Indian Head*

Charles County and the Town of Indian Head share the same Growth Allocation acreage, since Indian Head is a town along the Charles County shoreline. In order to ensure an equitable distribution of Growth Allocation between the two jurisdictions, the County and the Town of Indian Head agreed to divide available Growth Allocation acreage according to population percentage. Therefore, if Indian Head has approximately 3.5% of the population, as it did in 1995, then it is entitled to 3.5% of the Growth Allocation acreage. The calculations must be updated regularly, especially when an application for Growth Allocation is submitted.

The County feels strongly that it is in the best interest of the County and the Town of Indian Head to equitably share this valuable resource.

## **DEVELOPMENT REVIEW PROCEDURES**

### ***CRITICAL AREA IDENTIFICATION***

When an application is made for a grading permit, building permit, subdivision, site plan, rezoning, special use permit or special exception, the Planning Division shall make a determination whether or not the proposed action is within the Critical Area.

Critical Area boundaries, unlike standard zoning boundaries, do not generally follow existing physical features, such as roads or streams; nor do they follow property lines. The Critical Area Overlay Zone boundaries have been drafted as closely as possible to the required 1,000 foot distance from mean high tide and tidal wetlands, as determined by the most recent Maryland Tidal Wetland maps (1970). Due to the inherent limitations of the information sources, the exact boundary for parcels which are bisected or very close to the Critical Area boundary line must be established as part of the development review process. Therefore for those parcels which occur within close proximity of the Critical Area boundary, the applicant is encouraged to submit a survey plat which shows the distance of the property to the nearest tidal wetland and mean high water line. This information will be required for the review of significant actions which

are determined to be within the Critical Area, and have the potential to adversely impact water quality or wildlife habitat.

### *CRITICAL AREA REVIEW PROCESS*

All land areas within 1,000 feet of the landward boundary of tidal waters are designated to be in the Chesapeake Bay Critical Area. In order for the Planning Division to make findings and specific recommendations as to compliance of each proposed development, redevelopment, shore erosion control project, rezoning or Growth Allocation request with the Critical Area Program, the following information must be submitted by the applicant in addition to all other required submittal requirements:

- ' An Inventory of Site Features, including:
  - # Existing Topography and Delineation of Slopes 15% or Greater
  - # Location of all Existing and Proposed Structures
  - # Limits of Construction Disturbance
  - # Nearest Mean High Tide Line
  - # Nearest Tidal Wetlands
  - # Critical Area Boundary Line
  - # 100' Buffer, expanded for slopes or sensitive areas
  - # Tributary Streams
  - # Non-Tidal Wetlands
  - # Shore Erosion Rates
  - # Soils
  - # Location of Individual Trees or Forested Areas
  - # Habitat Protection Areas, as defined in Chapter 8
  - # Calculations of existing and proposed Impervious Surfaces
  
- ' Plans for the Preservation of Important Features, including:
  - # Buffer
  - # Non-Tidal Wetlands
  - # Rare/Threatened/Endangered Species Management Areas
  - # Plant and Wildlife Management Areas
  - # Anadromous Fish Spawning Areas
  - # Vegetation Protection Areas
  - # Wildlife Corridors
  - # Steep Slopes
  
- ' Plans for Mitigation of Impacts, including:
  - # Afforestation/Reforestation Proposals
  - # Stormwater Management Concept
  - # Erosion/Sediment Control Concept
  - # Grading Concept
  - # Shore Erosion Protection Proposals

Additional submittal requirements for site plans may be found in Appendix A of the Zoning Ordinance and additional requirements for subdivision may be found in Appendix A of the Subdivision Regulations. The applicant is strongly encouraged to contact the Planning Division for an informal meeting to discuss and clarify the submittal requirements.

Summaries of the requirements for preservation of important natural features and mitigation of adverse impacts are included within the succeeding chapters of this document.

### *INTERAGENCY REVIEW AND COORDINATION*

A technical review committee of local, State, and Federal agencies has been established to review major subdivisions for compliance with applicable regulations. This process includes review of all major development actions in the Critical Area. Interagency review and coordination for the purpose of establishing Critical Area findings will normally be required only for significant actions. All permits normally required by local, State, and Federal agencies are in addition to the required Critical Area findings. Agencies which may be consulted include, but are not limited to, the following:

#### **COUNTY**

- # Department of Planning and Growth Management, Planning Division
- # Department of Planning and Growth Management, Development and Capital Services Division
- # Department of Public Facilities

#### **STATE**

- # Maryland Department of Planning
- # Department of Natural Resources including:
  - Coastal and Watershed Resources Division\*
  - Heritage and Biodiversity Conservation Program
  - Forest, Wildlife and Heritage Administration
  - Critical Area Commission Staff\*
- # Health Department
- # Department of Agriculture

#### **FEDERAL**

- # Soil Conservation Service
- # U. S. Army Corps of Engineers
- # U. S. Fish and Wildlife Service
- # National Marine Fisheries Service

\*Denotes automatic referral on all Critical Area projects.

Upon receipt and evaluation of comments from referral agencies, the Planning Division will prepare a recommended finding regarding compliance with the Critical Area Criteria, and submit it to the applicable approving authority (County Commissioners, Planning Commission or Board of Appeals).

## **APPEALS AND VARIANCES**

The County is required to make provision for the granting of variances to the Critical Area regulations where, owing to special features of a site or other circumstances, implementation and literal enforcement of the County's Critical Area Program would result in unwarranted hardship to an applicant. These variance provisions are to be designed in a manner consistent with the spirit and intent of the state Criteria and the Charles County Critical Area Program. The variance provisions of the Charles County Zoning Ordinance contain specific findings which must be made by the Board of Appeals prior to the granting of a variance to the Critical Area requirements. The Board of Appeals will also hear and consider appeals where it is alleged that there is an error in any order, requirement, decision, or determination made by any officer or body in the administration of the Critical Area Program.



## CHAPTER THREE

### WATER-DEPENDENT FACILITIES

According to the state Critical Area criteria, water-dependent facilities are "those structures or works associated with industrial, maritime, recreational, educational, or fisheries activities that require location at or near the shoreline within the Buffer." Water-dependent facilities often have unique design requirements and also have particular potential for impact on water quality.

There are a number of types of commercial, industrial and recreational uses which require access to the water. Other activities require location at the shoreline because of their dependence on waterways. Many water-dependent facilities provide substantial economic benefit to the County while posing potential threat to the water quality, and therefore require specific regulations to deal with them. This chapter explains how Charles County will regulate such uses to insure compliance with the Criteria.

#### Water-dependent facilities include:

- # Marinas and other commercial maritime structures;
- # Public beaches and other public water-oriented recreation or education areas;
- # New, expanded or redeveloped industrial or port-related uses;
- # Marine research areas;
- # Fisheries facilities; and
- # Community piers and other related non-commercial boat docking.

#### GOAL, OBJECTIVES AND POLICIES

This section summarizes the County's position regarding the development of water-dependent facilities. These statements of policy reflect concern for the resources of the Bay and its water quality while striving to protect the economic well-being of Charles County's water-related industries.

**GOAL:** **To promote the environmentally sensitive development of water-dependent uses in appropriate locations while recognizing the traditional, present, and future importance of the water-related industries in Charles County.**

## OBJECTIVES

- # Recognize and respond to the particular problems of providing suitable boat dockage for waterfront residential development.
- # Limit development activities in the Buffer to those that are water-dependent.
- # Require that water-dependent facilities are located and designed to minimize impact (individual and cumulative) on water quality and fish, wildlife and plant habitats.

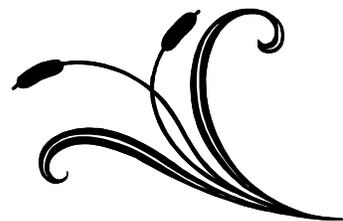
## POLICIES

- # The County will limit development activities in the Buffer to those uses that are water-dependent.
- # The County will require that water-dependent facilities are located and designed to minimize impact (individual and cumulative) on water quality and fish, wildlife and plant habitats.
- # The Planning Division Staff will review all applications for water-dependent facilities utilizing the following general criteria:
  - , Proposed new or expanded facilities in the Buffer must be demonstrably water-dependent.
  - , Except as otherwise provided in this Program, new or expanded water-dependent facilities will not be permitted in the Buffer in Resource Conservation Areas.
  - , The proposed project must be found to meet a recognized private or public need.
  - , The design and location of facilities in a water-dependent use will be such that it minimizes adverse effects on water quality, fish, shellfish, plant, wildlife habitat, natural erosion features and existing development.
- # The County will use performance standards for marina development that include the following requirements:
  - , That all marinas be built as conditional uses with performance-oriented criteria.

- , That all marina projects be subject to detailed site plan review including a review of specific location and dimensional information and of general design considerations focused on mitigating adverse environmental impacts.
- , That marina projects comply with the regulatory requirements of all State and Federal agencies.
- # That sewage pumpout facilities be provided for existing marinas, proposed expansions or new marinas.
- # The County issues a permit in conjunction with state and federal programs for all shoreline structures, including piers. The permit regulates the number of piers and slips according to the density of platted lots and length of shoreline, and provides for any necessary mitigation caused by disturbance to the Buffer. The permit is issued in the form of an approved County Buffer Management Plan. Mooring buoys will continue to be regulated by the State.

## CHAPTER FOUR

# SHORE EROSION PROTECTION



Eroding shorelines create significant problems for all tidewater counties. Sediments can fill navigation lanes, harbors, spawning grounds and shellfish beds. Yet erosion, the removal of material from coasts and shores by the action of the water, is a naturally occurring process. In Charles County and all Bay-system jurisdictions, a net loss of shoreline is the norm.

Though erosion is natural, man's intervention may accelerate or impede the process. When man impedes erosion in an effort to prevent a loss of valuable property, there can be impacts on the Bay's water quality. Hard structures, such as bulkheads, can alter aquatic environments in estuaries, rivers and basins, and may also affect erosion rates on adjacent properties. Non-structural forms of erosion control, such as marsh creation can often benefit water quality and may be less expensive to maintain over the course of time. It is important that shoreline areas be protected, but this must occur with consideration for water quality, benthic organisms, anadromous fish, submerged aquatic vegetation, offsite erosion rates and natural protection features.

The Critical Area criteria stipulate that jurisdictions must map their shorelines within the Critical Area and identify three basic categories of erosion activity:

1. Shoreline areas where no significant shore erosion occurs;
2. Other eroding areas where nonstructural measures would be a practical and effective method of erosion control; and
3. Eroding areas where only structural measures would provide effective and practical erosion control.

Charles County intends to continue its program for shoreline erosion control much in the same vein as it has been since the initial Critical Area Program was initiated in 1989. This section contains specific resource management and implementation recommendations for the Charles County Local Program relating to regulation, plan review and approval processes for environmentally sensitive shore erosion protection. The most significant change to the erosion control element is the initiation of a permit process for all shoreline structures, including erosion control structures. This will significantly help the County meet its goals and prevent unwarranted disturbance to the Buffer.

## GOAL, OBJECTIVES AND POLICIES

**GOAL: To stabilize the shoreline in a manner that prevents sediment from entering the Bay and its tributaries that is also protective of the aquatic resources and wildlife habitat.**

### OBJECTIVES

- # Provide that structural control measures be used only in those areas described in (3) of the erosion criteria listed above, where non-structural control measures would be impractical or ineffective.
- # Provide that where structural erosion control is required, the measure that best provides for conservation of fish and plant habitat, and which is practical and effective shall be used.
- # Provide that non-structural measures be utilized in areas of erosion as described in(2) of the erosion criteria listed above.
- # Provide that structural erosion measures not be encouraged in areas where no significant erosion occurs.
- # Provide that if significant alteration in the characteristics of a shoreline occurs, the measure that best fits the change may be used for sites in that area.

### POLICIES

- # The County will use the following order of preference for evaluating shoreline erosion control measures. This priority system has been adopted by the Maryland Department of the Environment.

First options

1. No action and relocation of threatened structures
2. Beach nourishment and marsh creation
3. Shoreline revetments, breakwaters, groins, and similar structures designed to ensure the establishment and

long-term viability of nonstructural shoreline stabilization projects

4. Shoreline revetments

5. Breakwaters

Last options

6. Groins

7. Bulkheads

Note: Structural shore erosion control projects that employ jetties, groins, breakwaters, or other offshore structures shall be designed to allow natural littoral movement of sand along the shoreline. Projects that induce erosion or undesirable shoaling in adjacent areas are prohibited.

# Implement the following site review standards contained in the Zoning Ordinance and the Subdivision Regulations:

, Require a detailed drawing locating shore erosion abatement techniques to be included with the permit application;

, Require the annual shore erosion rate of the project site be included with the permit application;

, Require the estimated shore erosion rate with existing structures, their condition, and recommended approach be included on the permit application;

, Include Buffer plantings associated with shore erosion control project submittal;

, Require a Buffer Management Plan that insures the replacement of cleared vegetation and the re-establishment or continuance of Buffer function; and

, Require submittal of public improvement plans and specifications for proposed shore erosion work, to include design storm, calculated wave runup, required stone weight, and/or other data as requested.

# County Technical Assistance Program: It will be the role of the Charles County Department of Planning and Growth Management, in coordination with the local Soil Conservation District to provide technical assistance to the waterfront

property owners seeking solutions to shore erosion problems. To achieve this objective the Planning Division will perform the following functions:

- , Serve as a repository for State program information;
- , Initiate demonstration projects for non-structural solutions to shore erosion problems with assistance from the Chesapeake Bay Foundation, Soil Conservation District and local environmental groups. In the past, the County has worked with the Nanjemoy Environmental Education Center to utilize marsh grass to stabilize an eroding area on Nanjemoy Creek;
- , Sponsor workshops for waterfront property owners to become familiar with cost effective vegetative erosion protection measures;
- , Encourage environmental classes at the Charles County Community College and high schools to adopt an area of shore planting as a class project; and
- , Initiate public service projects.

## **INVENTORY OF SHORE EROSION RATES**

The Charles County tidal shoreline is subject to varying rates of erosion. This erosion process is a function of the County's geology and shoreline terrain, the nature of soils adjacent to water areas, and offshore water depth and direction of flow. The degree of erosion is further influenced by shoreline characteristics, as well as wave, tide, and other coastal processes.

The shorelines of Charles County have suffered varying degrees of erosion during historical times. Maps of historical erosion rates have been compiled by the Maryland Geological Survey (MGS) from United States Coast and Geodetic Survey charts dating from the 1840s. The results were most recently plotted on a series of United States Geological Survey topographic quadrangle sheets in a map atlas *Historical Shorelines and Erosion Rates* (MCZMP, 1975).

The dominant erosion rate for each shoreline reach was transferred to a composite map of the entire County at a scale of 1 inch=4000 feet as part of the local program inventory effort. (Please refer to the County's Natural Resources Inventory map for further information.) The erosion rate map shows that points of land generally have the highest erosion rates where they are exposed to long fetches. For example, Windmill Point at the mouth of the Port Tobacco is mapped at a rate of 4-8 feet/year, while many more secluded areas are experiencing little or no erosion or are actually accreting.

Table 4.1 gives the shoreline amounts in each category of erosion rate. Approximately 24 percent of the County's tidal shoreline is in the slight (0-2 feet per year) erosion category.

These areas have a potential for non-structural controls to be practical and effective. Approximately six percent (6%) of the shoreline is experiencing an annual erosion rate of two to four feet. Approximately one half of one percent of the County's shore loses more than four feet per year. The majority of the shoreline is advancing, filled and stabilized or not mapped. Areas off the main stem of the Potomac River and its tributaries where there is little exposure to open water and natural protection is provided by swamp and marshland were not mapped by the Maryland Geologic Survey.

Areas with significant erosion (> 2 feet per year) are found along the Potomac from just above Sandy Point south to Lower Thomas Point. Another notable reach is found from Blossom Point to Windmill Point. The eastern shore of the Port Tobacco River south to Pope's Creek experiences 2-4 feet loss per year. Finally, the southwestern shore of Cobb Island has historically shown a substantial loss.

The categories (slight, low and moderate) used to describe the County's shoreline are adopted from the Maryland Geologic Survey maps for consistency and are not intended to minimize the potentially serious nature of erosion rates of less than two feet per year. Even areas with erosion rates less than two feet per year may have imminent threat of property loss especially if there are high bluffs which are so prevalent in the County.

**TABLE 4.1 AMOUNT OF SHORELINE IN EACH EROSION RATE CATEGORY**

<b>EROSION RATE (FEET PER YEAR)</b>	<b>SHOREFRONT LENGTH (MILES)</b>	<b>% OF STUDY AREA</b>
O-2 Slight	44	24
2-4 Low *	11	6
4-8 Moderate *	1	0.6
>8 High *	0.0	0.0
Accretion, Fill, N/A	127	69.4
<b>TOTALS</b>	<b>183.0</b>	<b>100.0</b>

**\* ANYTHING OVER 2 FEET PER YEAR IS SIGNIFICANT.**

According to the *Historic Shorelines and Erosion Rate Maps*, approximately 31 percent, or 56 miles, of shoreline in the County experiences erosion. However, if structural controls are employed to prevent this erosion into receiving water bodies and protect property, it will take a sizable capital investment, well into the millions. This economic perspective needs to be considered in the design of management strategies for the eroding shorelines.

## **PLANNING AND DESIGN CONSIDERATIONS**

### *NON-STRUCTURAL METHODS*

Pebble or sandy beach areas in the County are often less than twenty feet in width, but serve as the main protective edge for upland areas and bluffs or cliffs along much of the shoreline. This shoreline configuration may often be a very narrow band serving as a transitional zone to the fast land, or land that is not regularly inundated by high water. The removal of sand, improper construction near beach areas, or blocking sources of sand replenishment can severely damage or eliminate beach configurations, and thereby further aggravate erosion processes to which the County shorefront is subject.

Beach erosion problems are usually caused by interference with the littoral drift. Normally, if nothing is built on or next to it, a beach will remain as long as the process of natural replenishment balances the erosion process. It may shift seasonally, yield sand temporarily to storm erosion, slowly recede landward with rising sea levels, or creep seaward with natural shifts in tidal flow which bring more sand. Restraining natural movements with bulkheads or groins can initiate a chain reaction of problems that can be solved only by very expensive solutions.

Other County shoreline areas present different erosion control challenges. The shoreline terrain of Charles County is predominantly composed of mature dissected coastal plain with some steep stream valleys. The shoreline usually has an abrupt escarpment ranging in height from one to sixty feet. Erosion works similarly on both the high bluffs and less dramatic formations. Wave action de-stabilizes the upper portions of the area. A narrow beach is sometimes found in front of the scarp, but in most places where there is active erosion the water laps directly against the face of the bluff. Unprotected bluffs are subject to erosion and undercutting at the base (or toe) of the bank which leads to the collapse of the bank. This often results in a greater erosion rate than sites absent of bluff configurations, illustrating the need for shoreline protection along these escarpments.

The Charles County Soil Conservation District has evaluated many sites along the main stem of the Potomac where bluffs are as high as 50 feet. In its studies, the Soil Conservation District (SCD) has frequently found evidence of subsurface seepage which weakens the faces of the bluffs. Leaking water systems and storm water outfalls have also been identified as contributing factors to erosion along these bluffs. Erosion caused by groundwater activity has complicated efforts to find cost-effective solutions to shore erosion on the Potomac.

Locating proposed structures away from cliffs is a method to protect structures for given lengths of time. Multiplying the rate of shoreline erosion by the number of years of desired protection will equal the number of feet that proposed structures should be located from the top of the cliff or bluff. See "Cliffs" in the chapter titled, "Habitat Protection Program," for County guidance.

Vegetation for erosion control can be broken into two classes: that found on the fastland, and that found below on the beach and in the intertidal zone.

Upland vegetation can be used to protect exposed fast land slopes against erosion by runoff. When a bluff is graded to prevent slope failure, grass and other vegetation can be used to hold the soil in place. There are many approved procedures for slope stabilization.

Below the fastland, along the shoreline and tidal creeks, there are many types of marsh and beach grasses that occur in a variety of Maryland shoreline habitats. These grasses can be used to control erosion. These grasses, including numerous marsh grasses and American beach grass, tend to develop extensive and dense rhizome systems, which help stabilize the soil. The grasses also trap sediments which aid shoreline accretion, and the plants themselves help to disperse harmful wave energy, which further protects the shoreline from erosion.

Where it can be applied successfully, vegetative treatment is an economical and aesthetically attractive method of shore protection, either on its own or in combination with other erosion control measures. The Soil Conservation District has created a table for use in determining the viability of vegetative treatment for shorelines in the mid-Atlantic states. Generally this technique would not be appropriate for the Potomac River shorelines or for locations in the tributary bays where the fetch exceeds five miles. Vegetative treatment may be ideal for the tributary rivers such as the Wicomico, Port Tobacco and tidal creeks, particularly if boat traffic is not exceptionally heavy. The table is printed in the publication *Vegetation for Tidal Shoreline Stabilization in the Mid-Atlantic States* and is available from the Soil Conservation District. This table is also available in the publication *Shore Erosion Control Guidelines for Waterfront Property Owners*, published by the Maryland Department of Natural Resources. The County will work with landowners to determine the viability of vegetative stabilization on their shorelines.

### ***STRUCTURAL METHODS***

Several important recommendations which should be considered in designing or maintaining all shore erosion structures are listed below:

- , Select the proper crest (top) elevation for any vertical structure.
- , Select the proper stone armor weight for revetments.
- , Always include filter cloth in design.
- , Provide a bedding of small stone covered with armor stone at the toe of the bulkheads.
- , Provide erosion control structures along property lines to prevent erosion along the side and behind erosion control structure.
- , Frequent maintenance of many erosion control structures should be performed.

After reviewing the modes of failure of some erosion control structures in the northern Chesapeake Bay, Coastal and Offshore Engineering and Research Inc. (COER) recommended sloping revetments as their preferred strategy for many shoreline situations (DNR, 1982). This method for erosion control offers the following advantages:

- # The materials used to build revetments do not degrade with time.
- # Sloping revetments are unlikely to fail catastrophically. (If design conditions should be exceeded slightly during a storm, inevitably some stones may become dislodged but can be replaced afterwards.)
- # Wave reflection from the sloping revetments is usually low and thus less disturbance and less scour of sediments occurs at the toe of the structure.
- # Rubble generally provides a better habitat for biota than the materials which are used in most other types of shore protection.

#### **COMBINATION METHODS**

Shore erosion may be accomplished by various combinations of methods which complement each other and achieve the desired protection when a single method is not enough. The nature of the erosion and the desired extent of protection suggest which methods should be combined.

#### **MARYLAND SHORE EROSION PROGRAM**

The Shore Erosion Control Program of the Department of Natural Resources (DNR) provides technical and financial assistance to individual property owners and communities with shore erosion problems. The DNR website ([WWW.DNR.State.MD.US/Forests/ProgramApps/Sec](http://WWW.DNR.State.MD.US/Forests/ProgramApps/Sec)) is updated regularly to show the types of financial assistance available.

Property owners experiencing shore erosion problems can contact the Shore Erosion Control Program by telephone or by writing to request a field inspection. The office responds to requests by inspecting the property to determine the seriousness of the erosion problem. Field inspectors then inform property owners whether or not they are eligible for financial or technical assistance, and help them locate engineers or contractors.

All permits and licenses associated with the construction of shore erosion control structures must be obtained by the property owners financing their own projects. For those property owners receiving State financial assistance, the Shore Erosion Control Program acts as the property owner's representative on all permit applications. Permits usually required include:

- # A joint permit from the Maryland Department of the Environment(MDE) and the U.S. Army Corps of Engineers. This permit is obtained through MDE.
- # Soil Conservation District approval. A sediment and erosion control plan must be approved by the Soil Conservation District before any soil disturbance takes place.
- # County Department of Planning and Growth Management permit approval. The County has a permit process for all shoreline development activities, including shoreline erosion control projects and piers. Refer to the Zoning Ordinance for shoreline development permit requirements.

Additional information concerning shoreline protective structures and information about State programs which provide funding may be obtained from the following agencies:

MD Department of Natural Resources  
 Forest Service  
 Shore Erosion Control Program  
 Tawes State Office Building, E-1  
 580 Taylor Avenue  
 Annapolis, MD 21401  
 410-260-8531  
 1-877-620-8DNR

MD Department of the Environment  
 Water Management Administration  
 Regulatory Services  
 2500 Broening Highway  
 Baltimore, MD 21224  
 410-631-3000  
 1-800-633-6101

Charles Soil Conservation District  
 P.O. Box 269  
 101 Catalpa Drive, Suite 106A  
 LaPlata, MD 20646  
 301-934-9590

## **USER REFERENCE MATERIALS**

*Shore Erosion Control Guidelines for Waterfront Property Owners.* Department of Natural Resources, 1993.

*Vegetation for Tidal Shoreline Stabilization in the Mid Atlantic States.* W. Curtis Sharp, Chester R. Belcher and John Oyler U.S. Department of Agriculture Soil Conservation Service.

*Assessment and Management Plan for Shore Erosion Control in Queen Anne's and Talbot Counties, Maryland.* Prepared under the direction of the Coastal Resources Division of the Maryland Department of Natural Resources, 1982.

*All About the Tidal Wetlands Regulations: Shore Erosion Control.* Pamphlet by the Maryland Department of Natural Resources, 1993.



## CHAPTER FIVE

# FOREST AND WOODLAND PROTECTION

Forest lands occupied almost the entire area of Charles County prior to colonization in the late 1600s. These virgin stands were predominantly hardwood and contained many mammoth trees. The original settlers viewed the vast forest cover as a nuisance, and cleared much land for agriculture and development. By the period immediately preceding the Civil War, a large percentage of the forest land had been cleared for agricultural use, but during the first half of the 20th century there was gradual reversion to forest cover as land use patterns and agricultural patterns changed.

Today, approximately 187,751 acres, or 63% of the total County land area, is forested land. Charles County contains the largest percentage of forested land of any Maryland tidewater County and the third largest in the state. Nevertheless, the County has begun to lose forest cover during the past fifteen years. Unlike the clearing which took place 150 years ago, the current pressure is for residential development, not for agriculture. Reversion to forest cover is unlikely, since cleared land has become permanently developed. Although urban development is spreading through much of the County, the western and southern two-thirds, including the majority of the Critical Area, are relatively rural with forested land holdings remaining relatively large. Over 95% of the forests are privately owned by an estimated 3,200 individuals. The County and the state have identified forests as an important resource to conserve and forestry as a preferred land use. Forests provide important functions, including filtration of stormwater pollutants, and habitat for numerous species of plants and animals. Forests also provide shade over streams, which helps to reduce thermal pollution, which is harmful to aquatic fish and plant life.

### GOALS, OBJECTIVES AND POLICIES

#### **GOALS:**

- # **To maintain and increase the forested vegetation in the Critical Area.**
- # **To conserve forests and developed woodlands and provide for expansion of forested areas.**

## OBJECTIVES

- # Manage forests as a protective land use so that maximum values for wildlife, water quality, timber, recreation, and other resources can be maintained, recognizing that, in some cases, these may be mutually exclusive.
- # Assure that the removal of trees associated with development activities shall be minimized, and where appropriate, shall be mitigated.

## POLICIES

Recognizing that forests are protective lands that provide significant water quality and wildlife habitat benefits, the Chesapeake Bay Critical Area Act sets forth a number of requirements that have been incorporated into the County program.

Charles County requires that timber harvesting on one acre or more within the Chesapeake Bay Critical Area be conducted under an approved Timber Harvest Plan, prepared by a registered professional forester. Also, an Erosion and Sediment Control Plan is required for all timber harvests which disturb 5,000 square feet or more and is to be developed according to the state guidelines entitled "Standard Erosion and Sediment Control Plan for Harvest Operations."

The County also imposes limitations on the cutting or clearing of trees for new developments in Limited Development and Resource Conservation Areas as well as requirements for protection and enhancement of forests and woodlands in Intensely Developed Areas. These requirements are set forth in the Critical Area provisions of the Charles County Zoning Ordinance.

To implement the Critical Area requirements and objectives, the County's policies include the following:

- # Continue to include Forestry requirements in the Zoning Ordinance

Within the Critical Area Overlay Zone, commercial timber harvesting on more than 1 acre will require an approved Timber Harvest Plan, and an approved Erosion and Sediment Control Plan. The Timber Harvest Plan approval process is explained in the last section of this chapter. The approved Plans must be filed with the Planning Division prior to harvesting.

All commercial harvesting and homeowner removal of trees must conform with Buffer and habitat protection requirements set out in this program.

# Improve the enforcement of the County Grading and Sediment Control Ordinance.

An approved Sediment and Erosion Control Plan is currently required for all timber harvests which disturb 5,000 square feet or more. Examples of disturbed areas include haul roads, skid trails, and loading areas. Cutting of trees, at or above ground level, while leaving the stump and root mat in place, is exempt from the permit requirement of the Charles County Grading and Sediment Control Ordinance.

The Planning Division will notify the Charles County Forester's Office and the Charles Soil Conservation District of any commercial harvesting operation within the Critical Area which does not have an approved Timber Harvest Plan and Erosion and Sediment Control Plan on file with the Planning Division.

Enforcement of Sediment and Erosion Control Plans is currently the responsibility of the State Water Management Administration Regional Inspector.

# Implement the County's Offset Program

The Critical Area Law requires that all forests and developed woodlands which are cleared or developed are to be replaced on not less than an equal area basis. These requirements are contained within the standards of the Critical Area Overlay Zone of the Zoning Ordinance.

Replacement is to occur on the affected property whenever possible, and the developer must post sufficient bond to cover the costs. For those cases when off-site reforestation is necessary, the County shall use its fee-in-lieu program, in which fees will be collected at the issuance of building permits, in order to establish forests on an equal area basis in designated areas. Remaining fees may be used for the benefit of wildlife habitat, water quality improvement, or environmental education.

The County must accomplish two primary tasks prior to implementing the fee-in-lieu program; develop administrative procedures to track and use collected funds, and delineate areas which would benefit from tree planting.

The Charles County Forester provides assistance in locating State and County owned barren lands for inclusion in a forest receiving bank. The Planning Division will work closely with the Charles County Forester and the Charles County Forestry Board to implement the fee-in-lieu program.

## **EXISTING STATE FORESTRY PROGRAMS FOR THE CRITICAL AREA**

The Maryland Department of Natural Resources administers a forest management assistance program to help private landowners understand forest management and put it to productive use.

The Forest Management Plan is the heart of the assistance program. The plan outlines the long-term schedule of practices needed to reach desired management goals on a given property. The forester preparing the plan considers soils, topography, timber inventory, wildlife habitat, water quality, recreational use and other key information to develop the plan. The plan may recommend a variety of practices such as timber harvesting, site preparation, reforestation, thinning, improvement cutting, road stabilization, or other activities. These plans are available to property owners countywide with tracts of forest larger than 5 acres.

A Timber Harvest plan is required for all forestry activities on one acre or more in the Critical Area. Timber Harvest Plans address the methods by which the harvest will occur and outline mitigation and protection measures for any important habitat on the property. Items of concern include tidal and nontidal wetlands, the location of rare, threatened and endangered species, forest interior dwelling bird habitat, and numerous other site conditions. The Charles County Forest Conservancy District Board reviews these plans for compliance and submits them to the County upon approval.

The State provides a variety of financial incentives to assist landowners with the cost of forest management. For example, direct cost share payments are available for reforestation and timber stand improvement. Preferential property tax assessments to landowners who manage their forests are also available. Anyone interested in these programs should contact the local forester with the Department of Natural Resources to discuss woodland management.

## **IDENTIFICATION AND MAPPING**

A "forest" is defined in the Chesapeake Bay Critical Area Criteria as "a biological community dominated by trees and other woody plants covering a land area of one acre or more." The Criteria also require the designation of "developed woodlands," which are defined as those areas of 1 acre or more in size which predominantly contain trees and natural vegetation and which, also, include residential, commercial or industrial structures and uses. Both forests and developed woodlands are afforded protection in the state law and in the Charles County Program.

The Maryland Department of Natural Resources has identified and mapped the existing forest and woodland resources in Charles County. The Charles Soil Conservation District assisted the County by having the maps enlarged to reproducible tax map overlays at a 1" = 600' scale. The County will enter the most recent forest cover data into its computer system. This data will be used to perform long term monitoring and develop strategies for maintaining and increasing forest cover in the County.

## TIMBER HARVEST PLAN APPROVAL PROCESS

As specified in this chapter, a Timber Harvest Plan will be required for any forestry practice that removes a commercial forest product from one (1) acre or more of contiguous land within the Chesapeake Bay Critical Area.

The Timber Harvest Plan will include the following information:

- # Name, address and phone number of the landowner
  
- # A detailed map showing:
  - , Map scale
  - , Locality or nearby distinguishing landmarks
  - , Stand delineation
  - , Natural and man-made features on the property
  - , Limits of the Critical Area
  - , Habitat Protection Areas on the property
  
- # The landowners management objectives should be explained including proposed land use changes within 3 years.
  
- # A stand description shall be provided for each stand.
  - , Species composition
  - , Stocking level
  - , Site index
  - , Acreage in the Stand
  - , Dominant timber size class
  
- # Stand management recommendations
  - , Identify Habitat Protection Areas with their management and/or protection strategies.
  - , Forestry recommendations for a time span no less than 15 years for each stand and to include the following as applicable:
    - < Pre-commercial practices such as weeding, timber stand improvement, vine control
    - < Thinnings and intermediate harvest
    - < Final harvest and preparatory harvest such as clearcut, shelterwood, deferred rotation, selection, and seed trees
    - < Site preparation methods to be employed and site improvement techniques after the harvest if needed
    - < Regeneration methods to be utilized.

- # Time schedule
- # Standard or Custom Sediment Control Plan is required for any harvest that disturbs 5,000 square feet or more. The plan must be approved before the harvest begins.
- # Preparation by a Registered Professional Forester.
- # Submit the Timber Harvest Plan to the Charles County Forester's Office, which is part of the Maryland Department of Natural Resources (MD DNR) Forest Service.
- # The Plan will be reviewed by the Charles County Forester to insure sound forestry recommendations and to check for consistency with the County Program within which the property is located. Written comments from the MD DNR are sent to the applicant/landowner within 45 days.
- # The Charles County Forester may then approve the Plan under the authority of the County Forestry Board unless any of the following conditions apply:
  - , There is a Habitat Protection Area on the property;
  - , A harvest is to occur within the designated 100 foot Buffer;
  - , The Charles County Forester determines that the Plan as submitted is not consistent with the County Program or forestry practices allowed in the Critical Area. The Charles County Forester will then review the Plan with the Preparer for the appropriate revisions.
- # If the conditions above apply, the Charles County Forester will review the Plan with the County Forestry Board within 5 weeks. Failure of the Board to act within 5 weeks of initial Plan submittal will be deemed conditional approval of the Plan. The applicant and/or his representative may be present during the Board's review of the Plan.
- # If the Plan is not approved, it will be revised taking into consideration the Board's recommendations. The Plan may then be resubmitted for Board consideration within two (2) weeks.
- # Upon approval of the Plan, it will be submitted to the Charles County Planning Division before implementation.

# CHAPTER SIX

## AGRICULTURAL PROTECTION PROGRAM



Charles County's Chesapeake Bay Critical Area contains all or part of approximately 174 farms of crop and pasture, according to 2001 information from the Soil Conservation District. These farms represent almost 17% of all the farms in the County. For the purpose of this program land that meets the Statewide Ag Unit Criteria of 1989 is considered a farm.

Agriculture is described in the Critical Area Act as a preferred and protective land use.

### GOAL, OBJECTIVES AND POLICIES

**GOAL:** **To comply with the Critical Area Act while at the same time providing farmers with an environment in which they can continue to farm without undue economic hardships or restrictions.**

### OBJECTIVES

- # To preserve and protect open space and farmland as a valuable natural resource.
- # To minimize water pollution from nonpoint sources.
- # To conserve natural habitats for future generations of Charles County citizens.
- # To minimize the adverse economic impact of this program on agricultural producers.
- # To provide for improved water and habitat quality for the Chesapeake Bay and its tributaries.

### POLICIES

- # Assure that agricultural lands are identified and that programs are established to maintain, where appropriate, agricultural lands in agricultural use, to the greatest extent possible.

- # Recognize that agriculture is a protective land use that should be properly managed so that it minimizes its contribution to pollutant loadings to the Bay and its tributaries.
  
- # Assure that the creation of new agricultural lands is not accomplished:
  - , By diking, draining, or filling of any class or subclass of non-tidal wetlands;
  - , By clearing of forests or woodlands on soils with a slope greater than 15 percent; or on soils with a "K" value greater than .35 and a slope greater than 5 percent;
  - , If clearing will adversely affect water quality or will destroy plant and wildlife habitat;
  - , By the clearing of existing natural vegetation within the shoreline buffer.
  
- # Assure that the drainage of non-tidal wetlands for the purpose of agriculture be mitigated in accordance with a Soil Conservation and Water Quality Management Plan, approved by the Charles Soil Conservation District, with appropriate state and federal permits.
  
- # Assure that Best Management Practices for the control of nutrients, animal wastes, pesticides, and sediment runoff be used to protect the productivity of the land base and to enhance water quality.
  
- # Assure that animal feeding operations, including retention and storage ponds, feed lot waste storage, and manure storage, minimize the contamination of water bodies and groundwater.
  
- # Assure that agricultural activities permitted within the Critical Area use Best Management Practices in accordance with a Soil Conservation and Water Quality Management Plan approved by the Charles Soil Conservation District.

## **EXISTING AGRICULTURAL PROTECTION PROGRAMS**

### *MARYLAND AGRICULTURAL LAND PRESERVATION FOUNDATION AND PROGRAM*

The Maryland Agricultural Land Preservation Program has been in place in Charles County since 1980. The County employs an agricultural administrator whose job is to enhance and improve the County's participation in this program. An agricultural preservation district is a parcel of land containing a minimum of 100 contiguous acres with a majority of the soils considered to be of high production capability that the owners have agreed not to subdivide for a minimum of 5 years. In 1994, there were 39 agricultural preservation districts in the county as part of this program, covering 6,902 acres. Twelve (12) of these districts, totaling 2,534 acres, were in the Critical Area as of April 1, 1999 the program had grown to include 65 Agricultural Preservation

Districts, covering 9,885 acres in Charles County. Twenty-one (21) of these districts, totaling 3,351 acres, are in the Critical Area. Any farm owner who has enrolled in the District Program is then eligible to sell a development rights easement to the State of Maryland or participate in the County's Transfer of Development Rights Program. If this step is taken, then the land is preserved as agricultural land in perpetuity. Charles County has three farms, which have sold their development rights to the State, totaling 676 acres. Of these farms, two are located within the Critical Area containing 576 acres. Other farmers in the program have opted to use County transferable development rights under the zoning ordinance, or work with the Maryland Environmental Trust. See the Maryland Environmental Trust Section and the Transferable Development Rights Section below for land preserved by these programs.

The Agricultural Preservation Program Administrator and the Agricultural Advisory Board will continue their efforts to enroll farms in the program, giving priority to those farms that are located in the Critical Area. The County Commissioners will work with the Advisory Board to make the Agricultural Preservation Program more acceptable and appealing to landowners. As part of this effort in recent years, the county has amended its agricultural land preservation ordinance to allow for family building lots, and has created property tax credits for participating land owners.

#### ***MARYLAND ENVIRONMENTAL TRUST***

Another organization important in the efforts to preserve prime agricultural lands is the Maryland Environmental Trust (MET). The MET was created in 1967 to conserve, stimulate, and perpetuate the state's natural environment. The Trust's most active program is land conservation through the protection of open areas such as farm and forest land, wildlife habitat, waterfront, unique or rare natural areas, historic sites, and properties with scenic features. The program uses easements and tax incentives to preserve land as open space for extended periods of time, thereby protecting the Bay and its tributaries for future generations. Since 1992 MET has increased its protected land from 40,000 to 60,070 acres in the State.

In 1999, Charles County, has seven tracts of land within the Critical Area totaling over four miles of shoreline, which have been protected by this program. The Charles County Government will continue to promote the Maryland Environmental Trust in the Critical Area and throughout the County to preserve farmland and open spaces, and will work closely with the Trust on land preservation issues.

#### ***IDENTIFICATION AND INVENTORY***

The Critical Area Law requires that all agricultural lands within the Critical Area be identified, inventoried, and mapped. The Planning Division and the Charles Soil Conservation District have compiled a list of all farm owners whose property lies wholly or partially within the Critical Area. The staff will update this list to ensure that it contains the following information:

- # Owner's name and mailing address
- # Tax map and parcel number
- # Total acreage
- # Acreage in critical area
- # Date of most recent Soil Conservation and Water Quality Management Plan and plan update
- # Extent of compliance with the plan

The Planning Division will also develop an overlay for the property tax maps ( 1"= 600' scale) which identifies those agricultural lands within the Critical Area. The files and maps should be updated once a year to reflect changes in ownership and land use. The County proposes to work further with the Charles Soil Conservation District to perform updates on the list and maps, as well as the plans themselves.

### ***SOIL CONSERVATION AND WATER QUALITY MANAGEMENT PLANS***

The Critical Area Law requires that a Soil Conservation and Water Quality Management Plan be developed and implemented for all agricultural lands within the Critical Area. These plans are to be developed and implemented by the landowner with technical assistance provided by the Charles Soil Conservation District. These plans were required to be in place by December 31, 1991, unless there was a valid reason that the plan could not be completed by that date. Where this occurs, implementation of the plan must have been on schedule as of December 31, 1991 and completed on the schedule contained in the plan. Until a landowner or farmer has a valid and fully implemented plan on the property, the landowner must establish and maintain a minimum 25-foot buffer from the edge of mean high tide or tidal marsh.

The County and the Soil Conservation District have had substantial success with the implementation of this requirement. Today, the majority of the farms and farmers in the Critical Area have worked with the District to develop and implement plans.

#### *Enforcement*

Procedures for addressing cases of water pollution caused by agriculture have been developed for the State of Maryland. These procedures are explained in detail in a Maryland State Soil Conservation Committee paper entitled "Procedures for Addressing Cases of Water Pollution Caused by Agriculture" dated June, 1986 (amended September 1986). An updated procedures was adopted in 1999. These procedures were agreed to in a memorandum of understanding among the Maryland Departments of Agriculture, Health and Mental Hygiene, and Natural Resources dated December 29, 1986. A mechanism is in place with trained personnel and a full range of administrative and legal options to insure prompt corrective action. The County Planning Division will coordinate with the above agencies to rectify water pollution problems caused by agriculture.

The County will also examine ways to ensure full compliance with the Soil Conservation Water Quality Management Plans.

### ***TIMBER HARVEST PLANS***

All farms in the Critical Area which harvest timber must conform with the harvesting practices requirements in this program. This will be accomplished by requiring each farm to have a Timber Harvest Plan, prepared by a registered professional forester, and in place before any timber harvest operation of more than 1 acre can begin operation. Forest Management Plans may also be prepared by a Registered Professional Forester and approved by the Department of Natural Resources local Forestry Service to identify long term economic and natural resource management strategies. Refer to the Chapter 5, "Forest and Woodland Protection" of this update, for more information about forest management requirements.

### ***TRANSFERABLE DEVELOPMENT RIGHTS***

Charles County incorporated a Transferable Development Rights (TDR) Program into its Zoning Ordinance. The program is a countywide program, but includes farmland in the Critical Area as sending areas in an effort to encourage long term conservation of prime agricultural and other sensitive lands.

In general, a TDR program provides a landowner the ability to sell development rights from a given property (sending area) to a developer who can in turn develop another property at a higher density than is presently allowed (receiving area). Sending and receiving areas must be carefully identified to ensure well planned and coordinated growth in the County. This process cannot be accomplished correctly unless the entire County, not just the Critical Area, is involved. The program has to be economically attractive to both the seller and the buyer to work as desired. An important prerequisite of success is Countywide acceptance and understanding of the policy.

The County's TDR program currently restricts the sending areas to certified agricultural preservation districts, and the receiving areas to the County's designated Development District in accordance with the Charles County Comprehensive Plan. The program applies Countywide, not just to properties in the Critical Area.

On March 1, 1999, Charles County amended its Zoning Ordinance to further encourage the use of TDR's. This amendment requires that any residential density granted by the County Commissioners greater than the base density of the zone has to be achieved through the transfer of development rights. As of March 1998, 1,183 acres of productive soils have been preserved through the County's Transfer of Development Rights Program.

## *CLUSTER DEVELOPMENT*

The cluster provisions of the Charles County Zoning Ordinance, allow for the creation of smaller lots that are confined to only a portion of the property rather than consuming the entire property as in a traditional subdivision. In Charles County, the cluster provisions require a high percentage of open space, the protection of sensitive environmental areas, and the provision of numerous amenities for future homeowners. The goal is to encourage a superior site design overall. The County provides some incentives in the form of a density award for the use of cluster subdivisions.

Cluster development has proven to be popular under the new Zoning Ordinance, and has been used in the rural areas where much of the Critical Area is located. The primary restriction to further use of cluster development is the inability to site septic fields closer together due to soil limitations. Clustering is encouraged whenever possible in the Critical Area, given its numerous sensitive environmental features, and the County will continue to look for ways to increase the use of clustering on properties that contain the Critical Area.



## CHAPTER SEVEN

# SURFACE MINING

Sand and gravel deposits are by far the most important mineral resource in Charles County and the sand and gravel industry is an important sector in the local economy. According to the Maryland Geological Survey, approximately 26.2 million tons were produced between 1954 and 1984. These deposits began to assume increased importance near the end of the 1970s as urbanization in Anne Arundel and Prince George's Counties made it increasingly difficult for the sand and gravel industries to exploit new deposits in those areas. The industry grew from 2 operators in 1968 to more than 20 in 1994. Between 1994 and August 1999, active mining sites decreased by one to total 30 active or pending pits, 2 gravel wash plants, and 1 asphalt plant in the County.

Maryland Geologic Survey maps indicate that the potential for sand and gravel extraction is widespread throughout the County. Upland deposits, which lie above the 100 foot elevation, are and will continue to be the most important source of sand and gravel in Charles County. Lowland deposits consist of river-bottom sediments and several levels of terraces flanking the Potomac, Port Tobacco, and Wicomico Rivers. These terraces represent various elevations of the rivers and were probably controlled by the sea level at the time of their formation. The sediments which make up the terraces were in part derived from the erosion of the upland deposits.

The gravels in the lowland deposits of the Critical Area tend to be more erratically distributed, smaller in area extent, and of less importance than those in the upland deposits. The higher terraces consist mostly of coarse sand. However, one major operator produces excellent gravel near Goose Bay, and there are a number of smaller producers who are extracting gravel in the Critical Area as an interim step toward the development of aquaculture operations.

### GOAL AND OBJECTIVES

**GOAL:**      **To assure that all available measures are taken to protect the Critical Area from all sources of pollution from surface mining operations, including, but not limited to, sedimentation and siltation, chemical and petrochemical use and spillage, and storage of wastes, dusts, and spoils.**

## **OBJECTIVES**

- # Establish local measures to protect important Critical Area resources such as Buffers, Habitat Protection Areas, and highly erodible soils by prohibiting future sand and gravel operations in these areas.
- # Identify and map undeveloped land in the Critical Area that should be kept in its undeveloped state until the land can be used to provide, or assist in providing, a continuous supply of minerals pursuant to Article 66B, Section 3.05(a)(1)(v), Annotated Code of Maryland, as amended.
- # Assure that mining be conducted in a way to permit site reclamation as rapidly and completely as possible.
- # Coordinate the development of protection measures with the Water Resources Administration of the Maryland Department of the Environment (MDE) and other appropriate agencies.

## **PERMITTING PROCESS**

The permitting of surface mining in Charles County is a two step process, involving discrete responsibilities by the County and MDE. First, applicants are required to obtain a Special Exception from Charles County, which documents local approval of the proposed land use for mining. If the Special Exception is granted, applicants then prepare and submit to Charles County an Erosion and Sediment Control Plan that will be implemented during mining.

Surface mining is regulated in Charles County through the Zoning Ordinance, where it is designated as permitted by Special Exception in the AC, RC, RL, RM, RH, RR, CN, CV, CC, BP, IG, IH, PEP, MX, and PMH zones. Sand and gravel washing, crushing and screening and asphalt plants are allowed with conditions in the IH zone and by special exception in the AC, RC and IG zones.

A request for special exception must be filed with the Board of Zoning Appeals. The planning staff then reviews the request to determine if the proposed use conforms to all requirements of the Zoning Ordinance. As part of the special exception request, the applicant must submit a site plan of the operation, proposed buffers and screening, and any other information in compliance with minimum standards. The Planning staff prepares a recommendation for the Board of Appeals relative to the effects of the proposed special exception on the health, safety and welfare of the neighborhood, adjacent properties, and the general public. The Board of Appeals then either denies the request or approves the request with conditions. In most cases, special exceptions are limited to a period of five years for the extraction and removal of mineral resources. The Board of Appeals' decision may be appealed to the County Commissioners.

Once the Special Exception and approved Erosion and Sediment Control Plan are obtained, the applicant then submits a Surface Mining Permit Application to MDE Minerals, Oils and Gas Division. Mining is not permitted without an active surface mining permit from MDE. MDE reviews the permit application in accordance with State regulations, and circulates the application among various State agencies to ensure an integrated, interagency review of all possible impacts and required permits, including water appropriations, and wetlands and waterways. During this process, the opportunity for public participation is provided through the advertisement of the application, and public meetings, if requested. After this application process, MDE either grants or denies the application.

## **CHARLES COUNTY CRITICAL AREA REQUIREMENTS**

In Charles County, the requirements of the Critical Area Law with respect to surface mining can be effectively accomplished through the existing state and local regulatory framework. The County's planning and zoning process currently addresses the importance of protecting the environment from adverse impacts, and the Comprehensive Plan addresses the importance of utilizing valuable mineral resources throughout the County. In order to address the specific goals of the Chesapeake Bay Criteria, the existing processes include requirements for:

- # Future Master Plans for areas which contain potential mineral extraction sites within the Critical Area will specifically address the goals of the Critical Area Program with respect to surface mining.
- # All future surface mining operations which are proposed for the Critical Area must assure that all available measures are taken to protect the Critical Area from sources of pollution including, but not limited to sedimentation, siltation, chemical and petrochemical use and spillage; and storage and/or disposal of water, dusts, and spoils.
- # Surface mining within the Critical Area shall be prohibited in the following unsuitable areas:
  - , Areas where important natural resources such as threatened and endangered species, areas of scientific value, or Habitat Protection Areas occur;
  - , Areas where "highly erodible" soils (soils with a slope greater than 15 percent; or those soils with a K value greater than .35 and with slopes greater than 5 percent) exist;
  - , Areas where the use of renewable resource lands would result in the substantial loss (that is, 25 years or more) of long range productivity of

forest and agriculture, or would result in a degradation of water quality or a loss of vital habitat, or;

- , The lands within 100 feet of the mean high water line of tidal waters, the edge of perennial streams, or the edge of intermittent streams.
- , Proposed wash plants including ponds, spoil piles, and equipment may not be located within the Critical Area Buffer.
- , The applicant will identify appropriate post-excavation uses for the land such as recreation, habitat restoration, open space use, or development in accordance with the guidelines for development in the Critical Area.

# Upon the expiration and as a condition of renewal of the special exception permit for any existing sand and gravel operations within the Critical Area, the County will review the activity to assure that:

- , To the fullest extent possible, extraction activities are separated by a minimum 100 foot buffer of natural vegetation from the mean high water line of tidal waters or the edges of streams, and tidal wetlands, whichever is further inland.
- , Existing wash ponds are to be reclaimed as soon as possible after cessation of the sand and gravel operation.

## CHAPTER EIGHT

# HABITAT PROTECTION PROGRAM



The Chesapeake Bay Critical Area Law was established to minimize and arrest the decline in the natural resources of the Chesapeake Bay and its tributaries due to the adverse impacts of human activities. The Charles County Program for Habitat Protection Areas is a combination of strategies to protect and conserve fish, plant and wildlife habitats and protect the quality of water resources. Habitats identified for protection include Buffers, cliffs, Threatened and Endangered Species and Species in Need of Conservation, Bald Eagle Habitats, Non-tidal Wetlands, Natural Heritage Areas, Colonial Water Bird Nesting areas, Historic Waterfowl Staging areas, Forest Areas with Forest Interior Dwelling Birds, and Anadromous Fish Propagation waters.

The locations of the Habitat Protection Areas (HPAs) to be protected in this program have been identified and mapped by the County with the assistance of the Maryland Department of Natural Resources. These maps are updated as new HPAs are located or designated by the County, State or federal agencies.

The Secretary of the Maryland Department of Natural Resources may designate new threatened and endangered species as appropriate. If any of these species are located within the Charles County Critical Area, the County will be required to develop protection measures within one year of the designation of the species as threatened or endangered. A local public hearing on the proposed protection measures is required prior to the County adopting any new protection measures.

The establishment of Habitat Protection Areas is not intended to restrict or affect, beyond existing local, state or federal laws and regulations or private restrictions on private land, activities such as non-commercial, passive recreation (for example, hiking and nature photography), educational pursuits, scientific observation, hunting, trapping or fishing. Protection measures within this program permit some development, forestry and agricultural activities in or near these habitats if they are conducted in a manner that conserves the wildlife and plants within the areas.

### **GOAL AND OBJECTIVES**

**GOAL: TO PROTECT AND CONSERVE FISH, PLANT AND WILDLIFE HABITATS AND PROTECT THE QUALITY OF WATER RESOURCES.**

**O  
B  
J**

**OBJECTIVES**

- # To provide for the removal or reduction of sediments, nutrients, and potentially harmful or toxic substances in runoff entering the Bay and its tributaries;
- # To minimize the adverse effects of human activities on wetlands, shorelines, stream banks, tidal waters, and aquatic resources;
- # To maintain an area of transitional habitat between aquatic and upland communities;
- # To maintain the natural environment of streams;
- # To protect riparian wildlife habitat;
- # To protect non-tidal wetlands in the Critical Area of importance to plant, fish, and wildlife, and water quality;
- # To protect those species in need of conservation and threatened and endangered species and their habitats which occur in the Critical Area;
- # To conserve wildlife habitat in the Critical Area;
- # To protect those wildlife habitats which tend to be least abundant or which may become so in the future if current land use trends continue;
- # To protect those wildlife habitat types which are required to support the continued presence of various species;
- # To protect those wildlife habitat types and plant communities which are determined by the County to be of local significance;
- # To protect Natural Heritage Areas;
- # To protect the in-stream and stream bank habitat of anadromous fish propagation

waters;

- # To promote land use policies and practices in the watershed of spawning streams within the Critical Area which will minimize the adverse impacts of development on the water quality of streams;
- # To provide for the unobstructed movement of spawning and larval forms of anadromous fish in streams.

An overview of each habitat protection area in the Critical Area is provided below along with management guidelines to be used to ensure the continued presences of the species and habitat. Additional protection measures may include, but are not limited to, acquisition of the habitat, conservation easements, cooperative agreements with landowners, and special provisions in subdivision or zoning regulations.

## **CRITICAL AREA BUFFER**

### *Overview*

The Critical Area "Buffer" refers to an area that is naturally vegetated or is established in native vegetation, and is managed to protect shorelines, wetlands, and aquatic and terrestrial environments from man-made disturbances. As part of the Charles County Critical Area Program, a primary Buffer has been designated within 100 feet landward of the Mean High Water Line of tidal waters, tributary streams and tidal wetlands. In adjacent sensitive areas, such as hydric soils or highly erodible soils, the Buffer may be expanded to protect streams, wetlands and other aquatic environments from all man-made disturbances. In the case of contiguous slopes of 15 percent or greater, the Buffer shall be expanded four feet for every one percent slope, or to the top of the slope, whichever is greater in extent. Where the Buffer as measured using Resource Protection Zone Standards would exceed the buffer measured using the Critical Area Standards, then Resource Protection Zone Standards shall be used. The Buffer is required to be maintained in native vegetation and in cases where the land use changes, a Buffer area must be established.

There are several areas in the County where the existing pattern of residential, industrial, commercial, institutional or recreational development in the Buffer prevents the Buffer from performing its full function. These areas have been identified as Buffer Exemption Areas (BEA's) on the Critical Area maps and include locations in Port Tobacco Riviera, Benedict, Pope's Creek, Riverside, Clifton, Morgantown, Dolly Boarman Creek, Banks O' Dee, Swan Point, Wicomico Beach, Woodland Point, Rock Point and Cobb Island. Rules and regulations for activities in BEA's are contained in the Zoning Ordinance, with the exception of Swan Point, which has different rules and regulations for its BEA. These can be found in Appendix B. Additional BEA's may be established if the area meets the criteria for a BEA as outlined in the State Critical Area law and a map amendment to the Critical Area Program is approved.

The Buffer is to serve as a protection measure for the Critical Area by:

- # Removing or reducing sediments, nutrients and potentially harmful or toxic substances in runoff;
- # Preventing disturbances from human activities on shorelines, wetlands, stream banks, tidal waters and aquatic resources;
- # Maintaining areas of transitional habitat between aquatic and upland communities;
- # Maintaining the natural environment of streams; and,
- # Protecting riparian wildlife habitat.

#### *Buffer Regulations*

The Charles County Zoning Ordinance regulates activities in the Buffer, establishes criteria for expanding the Buffer, and establishes rules and regulations for Buffer Exemption Areas. In general, no new development activities are permitted within the Buffer. This includes structures, roads, parking areas and other impervious surfaces, mining and related facilities, septic systems, and substantial alteration of existing facilities or structures. Exceptions include activities and structures associated with water-dependent facilities in accordance with regulations set forth in the Zoning Ordinance, agricultural drainage ditches if Best Management Practices are in place, and Buffer Exemption Areas. Any proposed disturbance to the Buffer requires a County approved Buffer Management Plan. The Zoning Ordinance outlines the Buffer Management Plan requirements.

## **CLIFFS**

### *Overview*

Cliffs, or bluffs, along estuarine environments such as the Lower Potomac River in Charles County are subject to natural processes of erosion. Cliffs are significant natural protective features, as well as elements of natural heritage, and provide scenic vistas, paleontological resources, and wildlife habitat. As natural protective features, cliffs help safeguard coastal lands and property from the damage of flooding and erosion. However, this significant public benefit is compromised when land adjacent to cliffs is improperly developed. The geology of the Potomac River shoreline in areas of cliffs, combined with natural erosion processes, result in moderate to severe shoreline erosion and cliff failure, thus endangering structures placed near cliffs. Conventional methods of erosion control, intended to protect such structures, may be of limited effect along shorelines characterized by cliffs, and risk the interruption of natural processes of erosion and the intensification of off-site conditions of erosion. Shoreline

hardening through structural control ultimately results in adverse effects to the natural qualities of, and benefits provided by, the cliffs.

### *Cliff Guidance*

Cliff setbacks are preferred alternatives to conventional erosion control methods. Protection is achieved without compromising the natural processes and qualities associated with cliffs. The Critical Area Program of Maryland requires a minimum Buffer of one hundred (100) feet, consisting of natural plant material along the entire estuary of the Chesapeake Bay and its tributaries. The rate of erosion within the estuary ranges from zero to six feet per year. Therefore, given a rate of erosion of one foot per year, the 100 foot Buffer would result in protection of structures for approximately 100 years. However, in an area subject to a rate of six feet per year, the 100 foot Buffer would provide protection of structures for only a span of less than 17 years. The legislative criteria for the Critical Area defines areas of significant erosion to be areas eroding at a rate of two (2) feet or more per year. In an area subject to a rate of erosion of 2 feet per year, a structure would be constructed no less than one hundred (100) feet from the top edge of a cliff, if the structure were to be protected for 50 years.

## **‘ THREATENED AND ENDANGERED SPECIES AND SPECIES IN NEED OF CONSERVATION**

### *Overview*

Charles County recognizes the importance of protecting and preserving species of plants and animals and their habitats whose continued existence are in question or in peril. The limited distribution of these species makes them extremely vulnerable to local land disturbances that may impair or destroy their habitats. The Charles County Critical Area Program provides for the protection of species and their habitats that are designated as "in need of conservation," "threatened," or "endangered". The goal is to protect these species and their habitats from adverse impacts resulting from human activities.

### *Definitions*

(1) "Endangered Species" refers to any species of fish, wildlife or plant, which has been so designated by the Secretary of the Department of Natural Resources; Designation occurs when the continued existence of these species as viable components of the State's resources is determined to be in jeopardy. This includes any species determined to be an "endangered species" pursuant to the Federal Endangered Species Act.

(2) "Threatened Species" means any species of fish, wildlife or plant designated as such by the Secretary of the Department of Natural Resources, which appears likely, within the foreseeable future, to become endangered. This includes any species determined to be a

"threatened species" pursuant to the Federal Endangered Species Act.

(3) "Species in Need of Conservation" refers to those fish and wildlife whose continued existence as part of the State's resources is in question, and which may be designated by the Secretary of the Department of Natural Resources as in need of conservation pursuant to the requirements of Natural Resources Articles 10-2A-03 and 4-2A-03, Annotated Code of Maryland.

### *General Management Guidelines*

In order to protect endangered species, threatened species and species in need of conservation, their locations within the Critical Area must be identified, and management strategies must be developed and implemented. The object of this Protection Program is to ensure the continued existence of these species within their natural habitats. The Program, however, must be flexible since not only will each species require different management strategies, but each area of occurrence will differ according to local land uses and habitat variations.

Throughout the County, several endangered species habitats have been identified by the Maryland Department of Natural Resources. Among these are Long's Bittercress (*Cardamine longii*) and Sensitive Joint-Vetch (*Aeschynomene virginica*). The Long's Bittercress is on the Federal endangered species list while Sensitive Joint-vetch is on Maryland's list of endangered plants. The Bald Eagle is on the Federal Government's list of Threatened Species and on the Maryland Endangered Species list.

Until a Habitat Protection Plan for a specific site has been prepared, the following interim procedures shall be used:

1. A protection area around each identified site of threatened or endangered species will be designated where disturbances from human activity would be prohibited, unless it could be shown that the disturbances would not cause adverse impacts on the habitats or species being protected.
2. The following protection zones shall be established around each site identified by the Maryland Department of Natural Resources (DNR) according to the species classification:
  - A. For bird and mammal species, the protection zone will be a 1320 (1/4 mile) foot radius;
  - B. For other wildlife species, the protection zone will be a 200 foot radius;
  - C. For fish species, the zone will include all contiguous waters within 2,000 feet and their specified buffers;
  - D. For plants species, the zone shall extend to the protection boundaries established by DNR;

- E. In the case of Natural Heritage Areas, the protection zone shall be set by the boundary of the Natural Heritage Area.

## **BALD EAGLE HABITAT PROTECTION**

### *Overview*

The number of Bald Eagle nest sites found in the Chesapeake Bay Critical Area increases every year as indicated by the latest survey conducted by the Maryland Forest, Park and Wildlife Service. Since 1993 the number of Bald Eagle nesting sites in Charles County grew from 41 to 67 in 1999. To ensure the continued protection of Bald Eagle habitats and nesting sites, a habitat protection plan is implemented countywide. The Bald Eagle Habitat Protection Plan establishes a quarter mile protection area around the nest site. Within this protection area, three protection zones are established around the Bald Eagle nest site. Each zone contains a list of permitted activities and the time of year these activities are allowed to take place. The guidelines established in the Countywide Bald Eagle Habitat Protection Plan shall remain in effect until an activity is proposed on the site. Once a new activity is proposed, a negotiated management plan will be prepared by landowner with assistance from the Planning Division, and the Maryland Department of Natural Resources if the landowner wishes to alter the management guidelines of the countywide Bald Eagle Habitat Protection Plan.

Bald eagle nests are occasionally relocated for various reasons or abandoned due to natural causes. Annual revision of the Bald Eagle nests inventory in the Critical Area will take place to ensure that new and relocated sites are protected and abandoned sites are withdrawn.

The County will encourage voluntary acquisition of habitats of threatened, endangered and species in need of conservation through the purchase of conservation easements by public and private organizations. These habitats have been given a high priority in the determination of candidate areas for natural parks. Refer to Chapter 9 for more information about natural parks identification and acquisition.

For more information concerning the protection of Bald Eagle habitats, contact the Maryland Department of Natural Resources or the Charles County Planning Division.

### *Countywide Bald Eagle Habitat Protection Plan*

The guidelines established in the Bald Eagle Habitat Protection Plan were developed by the National Wildlife Federation and the Maryland Department of Natural Resources. These

guidelines recommend a quarter-mile protection area around the Bald Eagle nest site. Within this quarter-mile protection area, three protection zones are established-Protection Zone 1 (330 feet from the nest), Protection Zone 2 (from 330 to 660 feet from the nest) and Protection Zone 3 (from 660 feet to a quarter mile from the nest site). The following guidelines are established for each zone.

### PROTECTION ZONE 1

Protection Zone 1 is 330 feet from the nest site. The area immediately surrounding the nest site is the most sensitive to development activities and disturbances.

1. Year-Round  
These major habitat changes should be prevented:
  - , Timber cutting of any kind
  - , Land Clearing
  - , Building, Road, or Trail Construction
2. December 15 to June 15  
, People should not be allowed in this zone
3. June 16 to December 15  
Activities should be kept to a minimum but these activities are possible:
  - , Hiking
  - , Fishing
  - , Farming (Plowing, Planting, Harvesting)  
These activities should be restricted:
  - , Hunting
  - , Off-Road Vehicles

### PROTECTION ZONE 2

Protection Zone 2 extends from 330 to 660 feet from the Bald Eagle nest site. During the nesting season (December 15 to June 15) Eagles are still very sensitive to disturbances from activities in this zone.

1. Year-Round  
These major habitat changes should be prevented:
  - , Clear-cutting
  - , Land clearing
  - , Building, Road, or Trail Construction

2. December 15 to June 15  
    , People should not be allowed in this zone
  
3. June 16 to December 14  
    These activities are possible:  
    , Hunting  
    , Fishing  
    , Hiking  
    , Farming
  
4. August 16 to November 14  
    These activities are possible:  
    , Selective thinning of timber stands  
    , Maintenance of timber stands  
    , Maintenance of existing buildings and roads

### PROTECTION ZONE 3

Protection Zone 3 extends from 660 feet to a quarter mile from the nest site.

1. December 15 to June 15  
    These activities should be restricted:  
    , Timber cutting of any kind  
    , Land clearing  
    , Building, Road, or Trail Construction

Other activities in this zone that are within sight of the Eagle on the nest may need to be restricted.

Generally, land uses existing at the time of nest establishment may continue as long as these do not modify additional nesting habitat within the 1/4 mile protection area nor disturb nesting Bald Eagles. For example, pre-existing farming activities which do not require cutting or clearing of woody vegetation within the 1/4 mile protection area generally may continue. A negotiated Bald Eagle Habitat Protection Plan is necessary if the landowner wishes to harvest timber or expand his fields by clearing woody growth inside the 1/4 mile protection area.

#### *Negotiated Bald Eagle Habitat Protection Plan*

Once an activity, such as a subdivision, grading, farming activities, timber cutting, mining or forest clearing are proposed within the quarter mile protection area, a negotiated habitat plan will be required if the landowner wishes to alter the management guidelines of the Countywide Bald Eagle Habitat Protection Plan. The negotiated plan will ensure that the proposed activities will be compatible with the Bald Eagle nest site, ultimately providing protection to the Bald Eagle.

The following process will be used to develop a negotiated agreement between the landowner and the Planning Division:

1. Applicant proposes an activity within the quarter mile radius or vicinity of the Bald Eagle nest site. Applicant verifies the location of the nest site with the Maryland Department of Natural Resources to determine if proposed activity is within the protection zone.
2. If the proposed activity is within the quarter mile radius, a Bald Eagle Management Plan will be negotiated between the landowner, the Planning Division, and the Maryland Department of Natural Resources. The Planning Division will coordinate and schedule an on site meeting with the landowner, Maryland Department of Natural Resources and County staff to discuss the negotiated Habitat Protection Plan.
3. Incorporate the negotiated Habitat Protection Plan into the development proposal.

In cases where the nest site is outside, but any portion of the quarter mile protection area is within the Critical Area, full protection measures shall be given to the site, however, each site will be evaluated individually.

SOURCE: CLINE, KEITH. BALD EAGLES IN THE CHESAPEAKE: A MANAGEMENT GUIDE FOR LANDOWNERS: (WASHINGTON, D.C.: NATIONAL WILDLIFE FEDERATION AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, 1990.)

## **NON-TIDAL WETLANDS**

Non-tidal wetlands, such as swamps, freshwater marshes, bogs and bottomland hardwood forests are valuable natural resources. They provide habitats for plants, fish and wildlife, maintain water quality and productivity by trapping and filtering sediments, nutrients and pollutants, act as groundwater recharge areas, and control flooding and erosion. Due to the numerous benefits provided by non-tidal wetlands, the Chesapeake Bay Critical Area Program requires that these areas be identified and protected from the adverse effects of human disturbances.

Non-tidal wetlands in the Critical Area are regulated by the State of Maryland's Non-tidal Wetlands regulations as contained in the Annotated Code of Maryland. A twenty-five (25) foot buffer is required around all non-tidal wetlands. No disturbance is permitted to the non-tidal wetland or its associated buffer without first obtaining a permit from the Maryland Department of the Environment and the U.S. Army Corps of Engineers.

Figure 8-1

**Bald Eagle Protection Zones**

SOURCE: CLINE, KEITH. BALD EAGLES IN THE CHESAPEAKE: A MANAGEMENT GUIDE FOR LANDOWNERS. (WASHINGTON, D.C.: NATIONAL WILDLIFE FEDERATION AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, 1990.)

## **NATURAL HERITAGE AREAS**

### *Overview*

Natural Heritage Areas are so designated because the community contains one or more threatened or endangered species or wildlife species in need of conservation; is a unique blend of geological, hydrological, climatological or biological features; and is considered to be among the best statewide examples of its kind. These areas have been formally designated as such by the Secretary of the Department of Natural Resources. Since these areas exhibit such distinctive features and sustain vulnerable species, Natural Heritage Areas merit the substantial protection measures provided by the management guidelines for Endangered Species, Threatened Species and Species in Need of Conservation. At this time, four Natural Heritage Areas have been designated in Charles County. These include Allen's Fresh, Chicamuxen Creek, Popes Creek, and Upper Nanjemoy Creek.

### *Management Guidelines*

The following guidelines shall apply for any activity proposed with a Natural Heritage Area:

- A. A protection zone shall be established around specific site area using the management guidelines established in the Threatened and Endangered Species and Species in Need of Conservation section.
- B. The development proposal will be referred to the Maryland Department of Natural Resources to ensure that the activity will maintain the structure of the plant community of the site and ensure that the overall species composition of the plant and animal community will be retained.
- C. A habitat protection plan will be developed in conjunction with the Maryland Department of Natural Resources using the protection zone guidelines. The habitat protection plan will identify a protection zone and management practices to ensure protection and proper management. The protection plan shall be incorporated into the development proposal.

## **COLONIAL WATER BIRD NESTING SITES**

### *Overview*

Colonial water bird nesting sites are areas where water birds, such as herons, egrets, terns and glossy ibis congregate or colonize during the nesting season. These species have

declined dramatically due to human disturbances, particularly during the nesting season, and to habitat loss. The Great Blue Heron is the only colonial waterbird known to nest in Charles County. The relatively few nesting sites within the Critical Area are afforded protection to ensure the continued existence of these species.

### *Management Guidelines*

The management of these site must include preservation of the nesting site, a buffer, and specific measures to avoid disturbances during the nesting season. Any disturbance to the nesting site and its buffer during the nesting season may result in fatality of the young or flight of adults. The nesting season extends from February 15 through July 31.

The following guidelines shall apply at all times of the year, except as stated.

- A. A 0.25 mile protection zone, measured from the outside boundaries of the colony, shall be established around the colony site.
- B. Within the protection zone, no building construction, clearing, grading or road construction may occur any closer than 660 feet from the outer most nest trees in the colony.
- C. Timber Harvest may not occur within 330 feet of the outer most nest trees in the colony. Selective Timber Harvest may take place in the zone between 330 and 660 feet from the outer most trees, but should be limited to the non-nesting season.
- D. Access to the nest and within 330 feet of the outer most nest trees in the colony is prohibited during nest building and incubation periods, which extends from February 15 through July 31.

The Maryland Department of Natural Resources can provide guidance on specific management proposals once an activity has been proposed within the area.

## **HISTORIC WATERFOWL STAGING AND CONCENTRATION AREAS**

### *Overview*

Historic waterfowl staging and concentration areas are located in tidal waters, tributary streams and tidal and non-tidal wetlands where waterfowl nest and rear their young. Waterfowl also derive at least part of their food from aquatic plants and animals, gathered during migration and throughout the winter season. Examples of waterfowl found in Charles County are Common Goldeneye, Canvas Back, Lesser Scalp, Greater Scalp and Bufflehead ducks. Historic areas of concentration, where waterfowl have used them in recent times, shall also be protected. These

areas may not be currently used due to the disappearance of submerged aquatic vegetation beds, but it is assumed that they may be restored and used in the future and should not be usurped by other uses.

*Management Guidelines*

Waterfowl staging and concentration areas are protected by the Critical Area Buffer regulations and the Maryland Department of the Environment Non-Tidal Wetlands regulations and the Tidal Wetland regulations. The following restrictions apply to Water-Dependent Facilities:

- A. New water-dependent facilities must be located to avoid disturbance to waterfowl staging and concentration areas.
- B. If a new facility is so placed, construction shall be restricted, during the following time periods to avoid disturbance of the waterfowl:
  - 1. Diving Ducks: no disturbance from November 15 through March 3
  - 2. Dabbling Ducks and Canada Geese: October 1 through March 31

**FOREST WITH FOREST INTERIOR DWELLING BIRD SPECIES**

*Overview*

There are nineteen species of Forest interior dwelling birds in Maryland that are afforded protection in the Critical Area. A list of birds recognized as forest interior dwelling birds is provided in Table 1. Many of the forest interior dwelling birds are neotropical migrants. To breed successfully, many of these birds need large forest tracts. Forest interior dwelling birds tend to be found on forested tracts of 50 acres or more which have at least 10 acres of "interior" habitat (forest > 300 feet from the nearest forest edge), riparian forest areas that are approximately 300 feet wide, or in forested corridors connecting large forest areas. However, forest interior dwelling birds may also be found on smaller forest tracts if the forest area has high habitat value. The greatest threat to forest interior dwelling birds is increased fragmentation of forest and increased forest edge areas.

TABLE I. Forest Interior Dwelling Birds of Coastal Maryland

Common Name	<i>Scientific Name</i>
Red-shouldered hawk*	<i>Buteo lineatus</i>
Broad-winged hawk*	<i>Buteo platypterus</i>
Barred Owl*	<i>Strix varia</i>
Whip-poor-will	<i>Caprimulgus vociferus</i>
Hairy Woodpecker	<i>Picoides villosus</i>

Pileated Woodpecker	<i>Dryocopus pileatus</i>
Acadian Flycatcher	<i>Empidonax vireescens</i>
Brown Creeper*	<i>Certhia americana</i>
Veery	<i>Catharus fuscenscens</i>
Wood Thrush	<i>Hylocichla mustelina</i>
Yellow-throated Vireo	<i>Vireo flavifrons</i>
Red-eyed Vireo	<i>Vireo olivaceus</i>
Northern Parula	<i>Parula americana</i>
Black-throated Green Warbler*	<i>Dendroica virens waynei</i>
Cerulean Warbler*	<i>Dendroica cerulea</i>
Black-and-White Warbler	<i>Mniotilta varia</i>
American Redstart*	<i>Setophaga ruticilla</i>
Prothonotary Warbler	<i>Protonotaria citrea</i>
Worm-eating Warbler*	<i>Helmitheros vermivorus</i>
Swainson's Warbler*	<i>Limnothlypis swainsonii</i>
Ovenbird	<i>Seiurus aurocapillus</i>
Louisiana Waterthrush	<i>Seiurus motacilla</i>
Kentucky Warbler*	<i>Oporornis formosus</i>
Hooded Warbler*	<i>Wilsonia citrina</i>
Scarlet Tanager	<i>Piranga olivacea</i>

\*species **especially** sensitive to disturbance

Note: As this list is amended by the Maryland Department of Natural Resources, the program document will be amended to reflect these changes.

### *Management Guidelines*

Potential FID habitat in the Critical Area includes forest tracts of 50 acres or more which have at least 10 acres of "interior" habitat (forest >300 feet from the nearest forest edge), are riparian forest areas of at least 300 feet in depth, are forested corridors connecting large tracts of forest areas, or are areas identified as possible FID habitat on the Critical Area Natural Resource Inventory Maps. To determine the presence of FID habitat, a FID survey is to be conducted for those areas identified as potential FID habitat.

The presence of forest interior dwelling birds on a site is determined by a FID survey conducted by a qualified professional. The Maryland Department of Natural Resources certifies individuals who are qualified to perform FID surveys. Surveys shall be performed according to the methods contained in [A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area](#), adopted by the Chesapeake Bay Critical Area Commission in June 2000. A FID survey not conducted by a qualified individual will not be accepted by the Planning Division.

It is not the intent of these guidelines, however, to totally prohibit development, timber harvesting, tree clearing or other activities from occurring in these areas. Rather, these guidelines are intended to ensure that appropriate management guidelines are incorporated into the design of a project. The following management guidelines shall apply to habitat areas

containing Forest Interior Dwelling Bird Species:

- A. Minimize forest alterations during the breeding seasons, such as from off-road vehicles, extensive public use or logging;
- B. Minimize forest fragmentation and isolation by focusing development or other disturbances to the periphery of the area (i.e., roads, utility line corridors, structures);
- C. If forest interior breeding birds considered sensitive to fragmentation (e.g. barred owl, worm-eating warbler) are present, manage forest conditions appropriately for those species.
- D. The forest canopy should not be removed in excess of 70% crown closure with selective cutting or TSI practices;
- E. Retain standing dead trees that serve as bird nesting and feeding habitat;
- F. Clearcuts should be planned in a pattern that minimizes edge. Circular or square cuts have the least amount of edge produces.
- G. Discourage the creation of small clearings and the disproportionate expansion of forest edge habitat;
- H. Provide that if a forest area is temporarily cleared, it be permitted or encouraged to return to native forest vegetation. The replacement or conversion of hardwood or mixed forests to pines should be discouraged;
- I. Adopt timber harvesting techniques that maintain or improve habitat for forest interior dwelling species;
- J. Maintain, to the degree possible, all forested corridors between riparian areas and upland forests so that these areas can continue to serve as passageways between habitat areas;
- K. Selective harvesting in highly diverse forest or riparian woodlands should be encouraged in lieu of clearcutting. Small patch cutting, less than 5 acres, may be practiced in moderation;
- L. Retain or encourage snags 10 inches d.b.h. or greater. Cluster snags where possible. Snags which protrude above a closed forest canopy should be removed.

- M. Clearcutting operations should leave several uncut hardwood trees 3 inches (7 cm) d.b.h. or greater per acre. Cluster these small trees where possible.
- N. Minimize right-of-way corridors and road through a forest areas to reduce edge creations.
- O. Daylighting of logging roads in forest interiors should be discouraged.
- P. Rotation length of even-aged stands should be increased to 100 years or more.
- Q. Retain dead and downed woody debris on the forest floor.

Projects should be designed to minimize fragmented forest areas and to provide management measures that will conserve the habitat value. Additional assistance may be obtained from the Maryland Department of Natural Resources. For further information on FID habitats, please refer to the following documents: Bushman, Ellen S. and Glenn D. Therres Habitat Management Guidelines for Forest Interior Dwelling Birds of Coastal Maryland, Maryland Department of Natural Resources, Forest, Park & Wildlife Service Wildlife Technical Publication 88-1, A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area, adopted by the Chesapeake Bay Critical Area Commission in June 2000 and The FIDS/Forestry Task Force, Chesapeake Bay Critical Area Timber Harvest Plan Guidelines, Chesapeake Bay Critical Area Commission, 1999.

Sources:

Bushman, Ellen S. and Glenn D. Therres, Habitat Management Guidelines for Forest Interior Dwelling birds of Coastal Maryland, Maryland Department of Natural Resources, Forest, Park & Wildlife Service, Wildlife Technical Publication 88-1, March 1988.

A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area, Chesapeake Bay Critical Area Commission, June 2000.

## ANADROMOUS FISH PROPAGATION WATERS

### *Overview*

Anadromous fish are species that live in marine environments and migrate to freshwater to spawn. Many species, such as striped bass, yellow perch, white perch, shad and river herring, have substantial economic benefit for commercial and recreational fisheries. There has been, however, a dramatic decline in these species in the Chesapeake Bay System due, in part, to deteriorating water quality. The adverse effects of reduced water quality impact the early life stages of the fish living in the freshwater tributaries. Eggs and juvenile fish are very sensitive stages, and are extremely vulnerable to poor water quality and habitat destruction. Within areas of anadromous fish propagation, the objectives are:

- # To protect in-stream and stream bank habitat of anadromous fish propagation waters.
- # To promote land use policies and practices in the watershed of spawning streams to minimize the adverse impacts of development on the water quality of the stream.
- # To provide for the unobstructed movement of spawning and larval forms of anadromous fish in stream.

### *Management Guidelines*

These streams shall have buffer areas and specific management goals established. Within the Critical Area, tributary streams have a minimum 100 foot buffer, which can be expanded according to the criteria in the Zoning Ordinance and non-tidal wetlands have a 25 foot buffer. There are two types of activities that impact upon anadromous fish propagation areas, in stream activities and watershed activities. Both of these areas are to be addressed in the habitat protection plan for these areas.

Identification of anadromous fish spawning streams in Charles County has been made through field surveys conducted by the Maryland Department of Natural Resources. All tributary streams have been surveyed, and designated spawning streams have been inventoried in the Charles County Critical Area Program. These areas are shown on the Natural Resources Map that are part of the Charles County Critical Area Program.

To avoid adverse impacts of any activities occurring within the watershed of anadromous fish propagation streams, adhering to the following policies will ensure proper management of the watershed:

- A. Land disturbing activities, such as Development activities and other nonagricultural activities, will be minimized. The Planning Division, with assistance from appropriate State agencies, will consider the individual and cumulative adverse effects of each project on stream water quality. If an activity will adversely impact the stream habitat, the proposed activity may be prohibited or restricted in order to minimize or avoid such effects.
- B. Any new activity in these watersheds must obtain and implement either an approved Sediment and Erosion Control Plan or a Soil Conservation and Water Quality Plan, whichever is appropriate for the activity.
- C. To protect and maintain water quality, adequate buffers must be maintained or installed around the proposed activity.

- D. Proposed development activities, excluding agricultural activities, in anadromous fish spawning watersheds should ensure the maintenance and improvement, if possible, of the streams' water quality. During the implementation of an activity, the applicant may be required to monitor water quality. Water quality testing will be conducted by a qualified consultant. If water quality or stream habitats deteriorate due to adverse impacts of the activity, the applicant may be required to rectify the cause of the impacts.

To protect streams and streambank areas, the following measures are applicable to any activity proposed within an anadromous fish propagation area:

- A. The installation or introduction of concrete riprap or other artificial surfaces onto the bottom of natural streams shall be prohibited, unless the project proponent demonstrates that water quality and fisheries habitat can be improved by such structures. This requirement maintains the natural condition for fish passage to and from spawning areas, but does not prevent the installation of measures to control streambank erosion.
- B. Channelization or other physical alterations which may change the course or circulation of a stream and interfere with the movement of fish shall be prohibited.
- C. The construction or placement of dams or other structures that would interfere with or prevent the movement of spawning or juvenile fish is prohibited. If practicable, existing barriers will be removed.
- D. Construction, repair or maintenance activities should not occur within streams or the stream buffer between March 1 and June 15. This restriction protects the spawning periods of the various anadromous species that may be found in these waters. This restriction may be modified upon advice of the Maryland Department of Natural Resources and documentation submitted by the applicant that changing the time period will not adversely affect the area.
- E. If a vegetative buffer does not exist along the stream banks, a vegetative buffer should be established.
- F. Minimize any disturbance to the forest canopy along the stream banks. The forest canopy helps to maintain lower water temperature and provides food for juvenile fish.

#### **ADDITIONAL IMPORTANT PLANT AND WILDLIFE HABITAT AREAS**

If additional plant and wildlife habitat areas are designated in the future, local public hearings as appropriate, shall be held to consider comments on the areas and protection

measures proposed. Protection measures for threatened, endangered species and Species in Need of Conservation will be adopted within 12 months of the Maryland Department of Natural Resources Secretary's designation.

As other areas are designated as Habitat Protection Areas by county, state and federal agencies, any proposed activity within these areas shall be required to provide a management plan.

## **PLANT AND WILDLIFE HABITATS OF LOCAL SIGNIFICANCE**

These are areas that the County may choose to protect, having been determined to be of local significance. The County has not designated any plant and wildlife habitats of local significance.

## **HABITAT PROTECTION PLANS**

This chapter has identified Threatened and Endangered Species and Species in Need of Conservation, Bald Eagle habitats, Natural Heritage Areas, Colonial Water bird Nesting Areas, Historic Waterfowl Staging Areas, Forest Areas with Forest Interior Dwelling Birds, and Anadromous Fish Propagation Waters as areas requiring the development and implementation of Habitat Protection Plans. Once a need has been identified for the development of a Habitat Protection Plan, the following process shall be used to develop and implement a Habitat Protection Plan:

- A. The applicant will propose a Habitat Protection Plan for the designated area. The Habitat Protection Plan will delineate the boundaries of the Habitat Protection Area, propose management guidelines in accordance with the guidelines listed in this chapter, contain a detailed plan of the proposed activity, and an analysis of possible adverse impacts associated with the proposed activity.
- B. The Planning Division, in consultation with appropriate local, state and/or federal agencies will review the proposed protection measures to determine if protection measures are adequate for the species or habitat area.
- C. Revisions to the habitat protection plan may be necessary to incorporate the comments of the reviewing agencies.
- D. Once all the requirements and comments have been adequately addressed, the Director of Planning may approve the Habitat Protection Plan.
- E. The Habitat Protection Plan shall be incorporated into the proposed development proposal. No preliminary subdivision plan, final plat, site plan, or Development Services permit may be approved until the Habitat Protection Plan has been approved and incorporated into the development proposal.

- F. An appeal of an administrative decision shall be in accordance with the provisions of Section 417 of the Charles County Zoning Ordinance.



## CHAPTER NINE

# NATURAL AREAS PROTECTION AND PRESERVATION

The preservation of significant natural areas for public benefit and the enhancement of public access to the water are important components in both the Charles County Comprehensive Plan and in the state's Critical Area regulations and criteria. One method of accomplishing the goals set forth concerning both of these issues is through the establishment of natural parks, which are "areas of natural habitat that provide opportunities for those recreational activities that are compatible with the maintenance of natural conditions." Under the state program, Charles County is required to identify areas within its portion of the Critical Area where natural parks might be established. The natural park concept was developed to create a public awareness of the amenities and fragile ecology of the Chesapeake Bay. There are several areas within Charles County that are currently functioning as natural parks like those conceived by the State's Chesapeake Bay Critical Area Program, and several more areas that might qualify for development as natural parks. These areas, such as Smallwood and Chapel Point state parks, include state wildlife management and game lands, state forests and parks, and lands in quasi-public or non-profit foundation ownership.

The benefit of establishing natural parks is aptly stated in the following quote from the *Guide to the Chesapeake Bay Critical Area Criteria* (1986):

"A significant problem associated with the long-term recovery of the Bay ecosystem is the fact that many impacts to the Bay originate in the upland areas beyond the Critical Area.

It is difficult for the people contributing to these impacts to perceive that they are the source of some of the Bay's problems because they are usually separated by distance and time from the location of the impact.

Visits to Natural Parks can be opportunities for people to acquire a personal understanding of the processes and potential benefits of coastal habitat and Bay resources. These experiences can improve the quality of the Bay's resources by instilling a realistic attitude toward the natural environment and therefore, can influence the actions of park visitors who live throughout the Bay's watershed - particularly the way they treat soil and water resources. For some of the Bay's problems, education is the only answer...."

This philosophy is the basis for the County's efforts toward establishing additional natural parks in the Critical Area. This effort will also achieve general recreational objectives such as providing accessibility to a variety of healthful environments.

In addition to providing recreational and educational opportunities, natural parks are significant land resources because they satisfy the major goals of the Critical Area Law. Since natural parks are areas that have experienced minimal direct disturbance by man, they provide excellent habitat for plant and wildlife species in addition to significantly reducing adverse water quality impacts normally associated with development. The protected status of natural parks provides for the continued survival of the species that thrive within them and the continued protection of water quality.

The following sections discuss various recommendations for criteria to be used in establishing natural parks, the guidelines for managing natural parks, and the measures to implement the Natural Parks Program. The recommendations address the opportunities that exist for establishing Natural Parks from privately and publicly owned land.

This Chapter includes the development of a siting process for identifying candidate areas for establishing natural parks as well as an approach to evaluating land development and use proposals for sites possessing attributes of natural parks. The Chapter will also include recommended sites and guidelines for managing those sites.

## GOAL AND OBJECTIVES

<b>GOAL:</b>	<b>Heightened interaction between people and their natural environments such that the interaction does not destroy the fragile components of the natural habitats.</b>
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## OBJECTIVES

- # Identify areas within the Critical Area where natural parks could be established and consider conserving these areas through acquisitions, easements, designation, or other appropriate means.
- # Identify sites which are examples of coastal ecosystems with its geological and biological resources intact.

- # Consider that all natural terrain has a finite capacity to tolerate human disturbances in the development of a natural park.
- # Evaluate existing publicly-held lands for potential designation as natural parks.
- # Encourage the preservation of privately owned, high quality sites through the donation of easements or the use of other tax incentive programs.
- # Screen land development and use proposals to identify high quality sites, and to flag potential impacts to those sites.
- # Develop better methods in the development process to ensure that worthy sites are designated as natural parks once they have been identified.
- # Increase public access to the Bay and its tidal tributaries.
- # Encourage State acquisition of parcels along the Zekiah Swamp, Allen's Fresh and the Mattawoman Creek to provide protection and public access to these valuable natural habitats.
- # Acquire priority stream valleys within the Critical Area.

## **EXISTING PROGRAMS RELATING TO THE DEVELOPMENT OF NATURAL PARKS**

### ***CHARLES COUNTY PARKS PROGRAM***

The Parks Program follows objectives set forth in the County's *1999 Land Preservation and Recreation Plan*. The Charles County Department of Public Facilities has had extensive experience managing natural areas such as Gilbert Run Park and is charged with the development of future County-owned parks under this Program.

### ***PROGRAM OPEN SPACE***

Program Open Space is aimed at providing public recreation and open spaces in Maryland. The program allocates matching funds to local governments for land acquisition and facilities development.

### ***WILDLIFE MANAGEMENT PROGRAM - U.S. FISH AND WILDLIFE SERVICE***

The U.S. Fish and Wildlife Service funds state grants for wildlife management and is the regulatory agency for federal wildlife regulations.

### ***FOREST AND PARK MANAGEMENT PROGRAM***

The Department of Natural Resources administers and manages State parks. Management includes law enforcement, facility maintenance, and conducting interpretive programs.

### ***CHARLES COUNTY FORESTERS***

The Department of Natural Resources has foresters on staff assigned to help with forest planning and management within the Chesapeake Bay Critical Area. These foresters work closely with the County.

### ***MARYLAND ACRES FOR WILDLIFE PROGRAM***

The Maryland Acres for Wildlife Program is a joint effort between citizens and the Department of Natural Resources to create, retain, and restore wildlife habitat throughout the state.

### ***RECREATIONAL AND LEISURE SERVICES***

The Department of Natural Resources provides technical assistance to other State agencies, counties, municipalities, corporations, and organizations in the planning, development, and assessment of leisure activities and recreation programs.

### ***INVENTORY AND ANALYSIS***

This phase in developing a natural parks element of the County's Critical Area Program includes the identification of candidate sites through a screening process which employs an inventory of existing facilities and resources in the County and site evaluation criteria related to the stated objectives of this element. A variety of factors have been identified and/or mapped including existing natural park areas to determine those areas along the shore with the necessary characteristics for future park designation. The overlay mapping technique employed for screening these areas produced potential sites for further consideration in earlier studies. The County feels that it is important to perform an in-depth inventory and analysis of potential park lands.

### ***SCREENING PROCESS***

Charles County has developed two sets of criteria that could be used to delineate and evaluate areas suitable for establishment as natural parks. The first is an inclusive set of screening criteria to identify all sites that could be established as natural parks based on ecological features such as vegetative land cover and wildlife habitats as well as consideration for existing programs and administrative feasibility. If the site in question does not meet these criteria, then the site should not be established as a natural park.

The second set of criteria consider characteristics of natural areas similar to those applied in the Maryland Department of Natural Resource's Upland Natural Areas Study. These criteria identify other characteristics that can be used to evaluate the quality of the ecosystem in question, and to give practical consideration to whether other requirements of the Critical Area Criteria can be satisfied if the site is designated as a natural park. The characteristics identified by these criteria are features of natural parks that should be addressed in the management plan of proposed natural parks. The criteria are useful for the following purposes:

- # To evaluate existing publicly-held lands for potential designation as natural parks;
- # To encourage the preservation of privately owned, high quality sites through the donation of easements or other tax incentive programs;
- # To screen land development and use proposals to identify high quality sites, and to flag potential impacts to those sites; and
- # To coordinate with other efforts to preserve natural areas of particular value (i.e. Mattawoman Creek and Zekiah Swamp).

The boundaries for natural parks shall be based on biological necessity rather than administrative convenience. The easement program and the development review process respond to this criterion in practical terms although only a portion of an ecosystem may receive formal protection through public ownership or protective easements. In these cases the adjacent portions of the ecosystem will remain largely undisturbed due to the designation of Resource Conservation Areas.

## **CRITERIA FOR DELINEATING POTENTIAL NATURAL PARKS**

The criteria presented below are "Screening Criteria" and "Evaluation Criteria". The screening criteria comprise the first level of criteria to be applied in identifying potential natural parks; evaluation criteria identify characteristics of potential natural parks that should be considered for protection in a management plan.

### ***SCREENING CRITERIA***

Five screening criteria are recommended:

- # The site contains an example(s) of a Charles County coastal ecosystem with its resources intact, or it includes an ecosystem(s) which is unique to Charles County. These ecosystems include upland natural areas, habitats of threatened or endangered species, plant and wildlife habitats specified in COMAR 14.15.09.04, anadromous fish propagation waters, non-tidal wetlands, and areas identified by the Smithsonian Institute's Center for Natural Areas.
- # The site or habitat is virtually undisturbed (at least 95%), and the undisturbed area is at least five acres in size.

- # The site possesses characteristics such that the opportunity for recreational and educational activities exists, yet human activities will not cause irreparable and irreversible physical and/or ecological damage that results in the loss of rare or unique natural features and/or rare or endangered species of plant or wildlife and/or their habitats.
- # The site possesses natural curiosities such as the rarest, oldest, largest, or most exceptional example of a plant or wildlife species or community, or a rare or unusual geologic formation or archeological site.
- # A park administration agency has been identified and approved for management of the site.

### *EVALUATION CRITERIA*

It is recommended that these criteria be used to identify other characteristics and features that are desirable in a natural park. The characteristics upon which the site selection should be based are as follows:

- # Scenic value
- # Natural diversity
- # Size (i.e., sites greater than 5 acres undisturbed)
- # Historical or cultural significance
- # Archaeological potential
- # Contiguous land uses
- # Ability to function as a buffer to channelize urban or suburban development
- # Ability to satisfy the objectives or policies of other Critical Area Program elements. Examples are:
  - , Sites that are located within or contain areas identified as colonial water bird nesting sites, historic waterfowl staging or concentration areas, habitats of threatened and endangered species or species in need of conservation, habitats of interior dwelling birds, anadromous fish watersheds, and wetlands.
  - , Sites that are located within or partially within the Buffer.
- # Ability to provide a reasonable geographic distribution of park areas. This criterion should consider distance to other natural parks already designated and uniqueness of the ecosystem on the site.
- # Costs to manage the site (if public management is proposed) are not prohibitive. Management costs include preserving natural features, protecting ecological interests, ensuring natural integrity, stimulating public awareness and sensitivity for nature, and providing opportunities for educational and recreational experiences.

- # Ability to sustain public access or use while assuring the maintenance of biological diversity.

## ***FINDINGS***

Previous studies identified potential areas suitable for Natural Parks using the above stated criteria. The previous study showed that almost 10,000 acres have a strong potential for the establishment of natural parks. Prominent areas in terms of acreage as well as significance are: Mattawoman Creek (southeast of Indian Head); Chicamuxen Creek; Nanjemoy Creek (headwaters); and, Allens Fresh (including a portion of the Zekiah Run Swamp). Significant areas on Swan Point Neck have a good potential as natural areas which should be considered in view of the planned development. Further updates should be undertaken as funding allows.

## **RECOMMENDED IMPLEMENTATION STRATEGY FOR ESTABLISHING AND MANAGING NATURAL PARKS**

### ***ROLES AND RESPONSIBILITIES***

This section describes roles and responsibilities for implementing a program to establish and manage Natural Park. Charles County believes that it will take a coordinated effort to effectively implement the goals and objectives identified in this Chapter. Generally, the County's role will be to provide the inventory of potential candidate areas, coordinate State initiatives, to guide private efforts and to develop sites on a limited basis. The County has historically deferred to the State for the developing and managing large scale natural areas. The County recommends that organizations such as the Maryland Environmental Trust or other private, non-profit land trusts, such as the Conservancy for Charles County, take a lead in working with property owners and others to implement this Program. The roles and functions are more specifically broken down as follows:

- # The State of Maryland should:
  - , Review and certify the inventory identifying potential Natural Parks,
  - , Review and certify plans outlining the management, protection, and use of Natural Parks
  - , Include Natural Parks in lands acquired under the State's Open Space Program.
  
- # The Critical Area Commission should:
  - , Review and certify plans for proposed natural parks received as part of applications from land trusts or homeowners
  - , Review natural characteristics of publicly owned lands, review management plans, and certify proposed Natural Parks on state lands.
  
- # Charles County will:

- , Provide development incentives for protection of sensitive, Natural Park-like areas in lands that are proposed for development,
  - , Provide tax advantages to persons donating conservation easements,
  - , Direct land trusts and other organizations that are involved in establishing Natural Parks to property owners who are interested in donating conservation easements or selling property with potential Natural Park characteristics, and
  - , Evaluate development proposals and suggest alternative site plans, as needed, to adequately preserve potential Natural Parks.
  - , Use the development process to ensure that areas identified as potential natural parks are designated and named as such and receive the proper management.
  - , Consider candidate sites for Natural Parks within the current acquisition objective.
- # Private, non-profit land trusts could:
- , Establish a program to encourage the acquisition and development of Natural Parks,
  - , Inventory and evaluate land for potential designation as Natural Parks,
  - , Develop management plans for lands that are proposed for Natural Park designation,
  - , Develop educational programs with local environmental or educational groups and encourage them to participate in the planning and development of Natural Parks,
  - , Coordinate with the Charles County Forester to obtain information regarding species and community identification and significance, and
  - , Seek technical assistance from the Department of Natural Resources, Forest, Park and Wildlife Division, to establish and conduct interpretive programs at the parks.

### *EVALUATION OF PUBLICLY HELD LANDS*

The Critical Area Commission should review the natural characteristics of publicly owned lands to determine if they meet the screening criteria for natural parks. The result will be an inventory of potential natural parks in public ownership. Creation of such an inventory satisfies the minimum requirements of the Critical Area Criteria as listed in the screening criteria. After potential natural parks have been identified, a management plan for the area should be prepared by the public agency with responsibility for the land. The Critical Area Commission and the State of Maryland should review management plans for areas qualifying as Natural Parks and should certify those with acceptable management plans. Publicly-owned lands possessing a strong potential as natural parks have been identified on the "Suitability" Map. Some such areas include Teagues Point, Chicamuxen Creek, Mattawoman Creek, Popes Creek and Neale Sound.

These areas will be given serious consideration in a review for possible designation as natural parks.

### ***PRESERVATION OF PRIVATELY OWNED, HIGH QUALITY SITES BY EASEMENTS***

Private organizations such as land trusts can use the objectives and policies for natural parks to encourage donation of land or of easements on private lands that have natural park characteristics. For example, under the Maryland property tax credit law, landowners donating easements to the Maryland Environmental Trust (MET) receive credit against their state and local property taxes. These easements have been on farms, forests, wildlife habitat, shoreline and other natural areas, and historic sites. See Chapter Six for information on the acreage protected by MET in Maryland.

The first step in protecting privately-owned sites is for high quality sites with the potential for designation as Natural Parks to be inventoried and identified. Many of the sites that should be preserved and protected have been or are being identified by the Smithsonian Institute's Center for Natural Areas (See Table 10.1), The Nature Conservancy, The Maryland Heritage Program and/or The Maryland Department of Natural Resource's Upland Natural Areas Study. Several of these areas are located within the Critical Area of Charles County. (A natural area is defined as an area of land or water where examples of the natural environment are preserved, where natural ecosystem processes operate relatively undisturbed, and where biological communities and their interaction can be studied). After potential sites have been identified, donations of easements should be encouraged to ensure their preservation. All applications for natural parks that involve a donation of an easement to the Trust would have to satisfy the screening criteria.

Upland natural areas in Charles County, which tend to be those remaining acres where ecological diversity is the greatest, are areas where preservation interest and passive park use may be the most enriching.

#### *Screening Land Development and Use Proposals*

Screening and evaluation criteria will be applied when an application for a new development, a harvesting operation, or any other type of activity involving a disturbance within the Critical Area, is submitted to the County. A careful review of the site will be conducted using the screening criteria to ensure that areas in Charles County that possess characteristics of natural parks, and that require protection for their preservation, are not disturbed inadvertently. The evaluation criteria could also be used to highlight features whose protection should be addressed in the management plan.

### **TABLE 10.1 NATURAL AREAS IDENTIFIED BY THE SMITHSONIAN INSTITUTION**

NAME	SIZE (HECTARES)	TYPE
Zekiah Swamp	05385.3	Swamp, Swamp Forest, hardwoods, beaver, Mink, osprey, one of the largest natural swamps remaining in Maryland
Nanjemoy Creek	01010.0	Marsh, Freshwater
Wards Run	00071.9*	Marsh, Tidal and Freshwater*
Cedar Point Neck	02020.0	Marsh, Tidal
Lloyd Creek	00016.2	Marsh, Tidal
Perry Branch	00076.8	Marsh, Tidal
Maryland Neck	01018.3	Marsh, Upland Mature Hardwoods
Mattawoman Creek	01559.4	Swamp Forest
Chicamuxen Creek	00270.7	Marsh, Freshwater
Swan Point Neck	00602.0	Marsh, Tidal
Upper Piccowaxen Creek	00097.0	Marsh, Tidal
Dolly Boarmans Creek	00084.8	Marsh, Tidal
Marsh Island	00012.1	Marsh, Freshwater
Popes Creek	00097.0	Marsh, Tidal
Thorn Gut Marsh	00072.7	Marsh, Freshwater
Popes Creek Geologic	00016.1	Vertical Bluff, excellent exposure of Geologic Layers
Chapel Point	00028.3	Upland Hardwood Forest

Source: *Compendium of Natural Features Information, Volume I*. Compiled by: Maryland Department of State Planning, Smithsonian Institution Center for Natural Areas, 1975

\*Information by staff from *Non-tidal Wetlands Inventory Maps*.

The administration of this approach to preserving potential natural park areas will involve the cooperation of the developer, the County, and a third party that could be a property owner(s) or land trust. For land development proposals, the review process for natural park characteristics can readily take place in the subdivision process in Limited Development and Resource Conservation Areas. The applicant will collect the information required to certify that the site meets the requirements of a natural park and has a management plan that will protect the site. These information requirements are integral to the application of the resource protection

standards contained in the Critical Area Overlay Zone to be adopted by the County. Bonus density incentives could be offered to encourage developers to prepare site plans that accommodate the protection of potential natural parks where limited public access opportunities exist. Natural Parks designated need not be areas open to the general public. They may be set aside for the exclusive use of the residents of a community. The County will review the subdivision or site plans to determine eligibility and to evaluate whether the area suitable for designation as a natural park has been adequately preserved and protected by the site plan. Section 44 of the Charles County Subdivision Regulations generally provides for the preservation of such natural features and amenities as are characteristic of natural parks. The County will work with developers to propose alternative design and mitigation measures, when appropriate or to determine if limited public access would provide public education benefits equal to any bonus densities granted.

### ***RECOMMENDATIONS FOR MANAGING NATURAL PARKS***

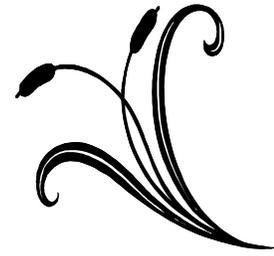
In establishing natural parks, maximizing visitation should not be a priority; rather, a park should be a place with significant, well cared for features that provide an unforgettable experience. This section presents recommended management approaches that could be considered by the individual or organization developing the management plan for a natural park. These management approaches outline ways of creating opportunities for educational and visitor activities, without destroying fragile components of natural parks. Recommended approaches are:

- # Define visitation capacity limits for each park; develop measures so that the capacity limit is not exceeded. Measures that can be used so that capacity limits are not exceeded include: user fees; limits on the number, size, or visibility of access routes into the park; limiting the size of parking areas; and control of publicity. All of these measures could be used in conjunction with a monitoring of park conditions so that park-specific visitor limits can be established by practical experience.
- # Limits on attendance and/or activities such as hiking, camping, and boating when resources or wildlife are susceptible to public disturbance; or close the park entirely during the breeding season.
- # Limits on park use during times when ground cover is sensitive, i.e., times after a heavy rain, a flood, or at the beginning of spring when vegetation is just recovering from winter dormancy.
- # Limit structures that may be built within a natural park to lessen the impact to sensitive resources. Structures should be limited to: trails, observation blinds, catwalks, rain shelters, rest stops, instructional pavilions, maintenance offices,

and maintenance equipment storage sheds. Structures should be sited to minimize habitat disturbances.

## CHAPTER TEN

# INVENTORY, MAPPING, AND DATABASE



A principal element of the Charles County Chesapeake Bay Critical Area Program is the inventory and mapping of resources within the Critical Area. The Critical Area Commission directed that the mapping should be at a scale relevant to our jurisdiction and of sufficient detail to assess the potential impacts of proposed activities on the quality and quantity of water resources and wildlife and plant habitats.

In the original program, the inventory and mapping process in the original Critical Area Program was begun by compiling a list of the individual resources and existing sources of information to establish a foundation for the data base and find gaps in coverage. Missing data were gathered prior to the development of program sections, or, established as a necessary step in program development. Several types of reproducible maps were created for the Critical Area Program by staff of the Planning Division, with assistance from the Maryland Department of Natural Resources, the Charles Soil Conservation District, and a consultant, Redmond, Johnston, and Associates, in association with Greenspring Environmental Design. Natural Resources information in the Chesapeake Bay Critical Area was updated during the 1994 program update and placed on a single "Natural Resources Inventory Map". This map is intended for general reference purposes only. In 1995, the County overlaid the Natural Resources Inventory Map on the County, large scale base maps. These maps are more site specific.

The Tri-County Council of Southern Maryland prepared the original computerized map and parcel data base file which is the base for the Critical Area Program maps and has been updated by staff in the Planning Division. The maps remain largely the same as the original set, although a number of errors have been corrected. Unmatching lines have been matched and some Buffer Exemption Areas have been added where it is clear that existing development qualifies for the designation. One change is the removal of the duplicate shoreline that corresponds with the Department of Natural Resources Tidal Wetlands Aerial Maps (1970). Previously, both the DNR shoreline and the shoreline from the County base maps were shown, making it difficult to read and interpret the maps. In place of the shoreline, the following note has been placed on each map:

As per law, the Critical Area boundary, was determined using the shoreline established by the 1970 Maryland Tidal Wetlands maps. The shoreline shown on this map is consistent with the shoreline on the Maryland Tidal Wetlands maps. The 1970 Maryland Tidal Wetlands maps are to be used for further guidance.

# APPENDICES

## APPENDIX A

# CHARLES COUNTY CRITICAL AREA PROGRAM

December 15, 1986 (Revised 3/2/87, 7/21/87)

In conjunction with interim administration procedures for review of development, the Critical Area Boundary is mapped on the 1" = 600" Intensely Developed Areas (IDA), Limited Development Areas (LDA), and Resource Conservation Areas (RCA), using the following standards and procedures. Citation in brackets indicate the specific standards given either in the Natural Resource Article of the Annotated Code, or in the Critical Area Commission's final regulations as promulgated in the Code of Maryland Regulation (COMAR).

### **A. General Approach**

1. All Federally-owned land (i.e., U. S. Naval Surface Warfare Center and Blossom Point Proving Grounds) is excluded from the Program (COMAR 14.15.02.03{1}).
2. State owned land is included in the mapping, although it would not ordinarily be subject to County regulation.
3. The inland boundary of the Critical Area (the 1000' line highlighted in blue on the maps) is the line delineated for the County by the Maryland Department of Natural Resources (DNR). The DNR maps, however, were incomplete at seven locations: Marshall Hall, Indian Head, U.S. Naval Explosive Ordnance Disposal Facility, Goose Bay/Moss Point, Lower Thomas Point, a small area north and south of Popes Creek, and adjacent to the Morgantown Generating Plant.

For these areas the staff has completed the line using available shoreline and wetlands information.

4. The base map used for compiling the detailed information on existing use of land are the 1" = 600' tax assessment maps. The majority of these base maps have been updated through 1982. The County is in the process of updating the base maps through September of 1986.
5. The land use mapping was compiled by a complete field inspection, driving every road in the County, supplemented by use of available (1983) aerial photography for delineating the location, size and configuration of large-area uses and/or partially developed properties. The field work was done in the summer of 1983.
6. For the purpose of developing preliminary "draft" Critical Area Maps, the 1983 land use

information, along with existing water and sewer lines from the current County maps, was utilized to delineate the Charles County Critical Area into Resource Conservation Areas, Limited Development Areas and Intensely Developed Areas.

The County utilized 1" = 600' aerial photographs (Fall 1985) from the Department of State Planning, and 1" = 600' overlays of forestry and open space (primarily agricultural) from the Charles County Soil Conservation Office to update the preliminary draft maps. The forestry and open space maps were originally developed by the regional office of the Maryland Forest, Parks, and Wildlife from the 1981 infrared photographs (the same as used by the Department of State Planning in their land use maps). The overlays were enlarged to 1" = 1320', by the SCS, through a contractor. These overlays contain 14 classification which were utilized for Critical Area delineation, including residential area (housing density of more than one dwelling unit per five acres), riparian areas, tidal marshes, and bottomland hardwoods.

7. The preliminary draft interim Critical Area Maps were verified and updated utilizing the aerial photographs, and agricultural and forestry maps, at 1" = 600' scale.
8. The outlines of LDA's and IDA's are based on the actual extent of developed uses (e.g. building, parking areas, etc.). A threshold size of approximately 20 acres was used to differentiate undeveloped areas which are within are mostly surrounded by developed land, and vice-versa; i.e. undeveloped land surrounded by land which qualifies as an IDA or LDA was classified as IDA or LDA unless it totals more than 20 contiguous acres.
9. The 20 acre threshold was not used for local parks and other dedicated open space, which were classified RCA regardless of their size.
10. By the use of aerial photos to confirm the actual extent of development, the outlines of the developed areas may approximately coincide with property lines, but property lines will be explicitly considered only in producing the draft Critical Area Designation Maps in accordance with part B.6 below.
11. Because the State regulations require the classification to be based on the actual use of the land (COMAR 14.15.02.02.E, 14.15.02.02.A, 14.15.02.14.A, 14.05.02.07C), the current Charles County Zoning Classification were not considered in making the Critical Area classification.
12. Major transportation corridors (roads, railroads) were used as boundaries and are not separately classified; The classification of the abutting territory will be carried to the center of the corridor.

**B. Mapping of "Intensely Developed Areas" (IDA) and "Limited Development Areas" (LDA)**

1. As defined in the State regulation (COMAR 14.15.02.03A) and:
  - A. Intensely Developed Areas are those areas where residential, commercial,

institutional, and/or industrial developed land uses predominate, and where relatively little natural habitat occurs. These areas shall have at least one of the following features:

- (1) Housing density equal to or greater than four dwelling units per acre;
- (2) Industrial, institutional, or commercial uses are concentrated in the area, or;
- (3) Public sewer and water collection and distribution systems are currently serving the area and housing density is greater than three dwelling units per acre.

B. In addition, these features shall be concentrated in an area of at least 20 adjacent acres, or that entire upland portion of the Critical Area within the boundary of a municipality, whichever is less.

2. As defined in the State Regulation (COMAR 14.15.02.04.A):

A. Limited Development Areas are those areas which are currently developed in low or moderate intensity uses. They also contain areas of natural plant and animal habitats, and the quality of runoff from these areas has not been substantially affected or impaired. These areas shall have at least one of the following features:

- (1) Housing density ranging from one dwelling unit per 5 acres up to four dwelling units per acre;
- (2) Areas not dominated by agriculture, wetland, forest, barren land, surface water, or open space;
- (3) Areas meeting the conditions of Regulation B.I.A., but not B.I.B. above (i.e. density meets IDA requirements but area is less than 20 acres);
- (4) Areas having public sewer or public water, or both.

3. The mere presence of water and sewer lines is pertinent to IDA classification only in conjunction with existing residential development (at more than 3 units/acre density) (COMAR 14.15.02.03.A{3}). Water and or sewer lines are a factor for IDA classification of non-residential uses (COMAR 14.15.02.03.A{2}). Housing density is not a factor for LDA classification when water and sewer lines are present (COMAR 14.15.02.04.1{4}).

Therefore, when water and sewer lines are present the area was initially classified as LDA and then evaluated for IDA classification according to the land use.

4. Territory which meets the IDA land use and/or density standards must also comprise at least 20 contiguous acres (COMAR 14.15.02.03). Development which meets the other standards but straddles the 1000 foot line was mapped as IDA even if the portion within the Critical Area is less than 20 acres.
5. School building immediately adjoining an IDA or LDA were included within the IDA or LDA territory. The remaining open portions of school properties (including athletic fields) were classified as RCA if they were larger than 20 acres, otherwise they were classified IDA or LDA.
6. Because of the geographic ambiguity of the term “the area” served by public water and/or sewer, (COMAR 14.15.02.03.A{3}), the IDA’s and LDA’s were conservatively mapped to include the territory which indisputably meets the existing use and/or density standards; or is designated water and/or sewer service area on the adopted Charles County Water and Sewer Plan priority maps. For work ability in administering the interim review procedures, property lines, roads, etc., are used as the IDA and LDA boundaries except that individual properties (or adjoining properties) may be divided by the IDA or LDA line in situation were contiguous undeveloped territory meets the 20 acre threshold or encompasses significant environmental resources.
7. In accordance with the standard that the “prevailing character” of an area governs classification and future development of Limited Development Areas (COMAR 14.15.02.04.B{3}{b}), the character of existing development also is a consideration in delineating the LDA’s. Therefore, if the character of a development (lot sizes, unit types, etc.) Differs on opposite sides of a road or other appropriate boundary, the density will be calculated separately on each side.

**C. Mapping of Resource Conservation Areas (RCA)**

1. RCA’s were mapped according to State of Maryland Regulations (COMAR 14.15.02.02.A);
  - A. Resource Conservation Areas are those areas characterized by nature-dominated environments (that is, wetlands, forest, abandoned fields) and resource utilization activities (that is, agriculture, forestry, fisheries activities, or aquaculture. These areas shall have at least one of the following:
    - (1) Density in less than one dwelling unit per 5 acres, or;
    - (2) Dominant land use is in agriculture, wetland, forest, barren land, surface water, or open space.
2. Existing marinas and other industrial and commercial facilities which support resource utilization activities were classified as RCA (COMAR 14.15.02.02.C.{5}).

## APPENDIX B

# SWAN POINT ALTERNATIVE FOR BUFFER EXEMPTION AREAS

The following information applies to sections of Swan Point with waterfront lots which were created prior to 1985. The conditions apply to the clearing and development of lots directly on the water. Waterfront lots and other lots platted after 1985 are subject to the Zoning Indenture recorded for this property in November, 1986, and the provisions of the applicable Zoning Ordinance under which they were recorded.

### I. Background - Purpose of Buffer Exemption Areas

Chesapeake Bay Critical Area regulations require the establishment of a 100-foot buffer landward from the mean high water line of tidal waters, tributary streams, and tidal wetlands. These regulations also provide that counties may exempt certain portions of the Critical Area from the Buffer requirements where it can be sufficiently demonstrated that the existing pattern of residential, industrial, commercial or recreational development prevents the buffer from fulfilling its function. These are called Buffer Exemption Areas (BEAs). BEAs allow reasonable expansion of existing structures or new development to occur within the Buffer without the property owner having to obtain a variance. Swan Point (in the grandfathered section only) is designated as a BEA due to the number, density and size of platted, grandfathered, waterfront lots within the Critical Area.

### II. Requirements for Buffer Exemption Areas

In BEAs, the Charles County Critical Area Program requires that while reasonable development may occur within the Buffer, the applicant must demonstrate that the distance between the new development and the mean high water line has been maximized. Additionally, within BEAs, expansion or redevelopment of existing structures may not occur any closer to the water than the existing structure. Accessory structures (pools, sheds, gazebos, etc.) may not be located waterward of the primary structure. Attached decks and porches are considered to be part of the principle structure. New development in BEAs must minimize the extent to which impervious surfaces extend toward open water or wetlands taking into consideration existing County yard setback requirements of the underlying zones and other such factors. BEAs are also subject to impervious surface limitations as described the Charles County Critical Area program.

Impacts to the Buffer within BEAs are offset through mitigation requirements including 1) the extent of the lot or parcel shoreward of the new development or redevelopment must remain, or shall be established and maintained, in native vegetation; and 2) native vegetation of an area twice the extent of the impervious surface created in the BEA shall be planted on the site or on a Buffer Exemption Offset location as may be approved by the County.

### III. Setback Alternatives for BEA portion of Swan Point

To clarify the regulations and to provide consistency to property owners in the existing, platted, BEA portion of Swan Point, new waterfront development shall be subject to the following setback requirements based upon the depth of each individual lot. Front yard set backs are 30 feet from the edge of the property line, as recorded on the subdivision plats. Rear yard set backs from the water are determined by average depth of the lot. Where depth on one side of the property differs from the depth on the other side, an average of the two distances will determine rear yard set backs (from mean high water or the edge of the bulkhead if one exists). Rear yard setbacks shall be set according to lot depth below:

- A. Lots with an average depth of up to 150 feet will have a strict disturbance setback of 50 feet.
- B. Lots with an average depth of 150 to 180 feet will have a strict disturbance setback of 60 feet.
- C. Lots with an average depth of 180 to 210 feet will have a strict disturbance setback of 70 feet.
- D. Lots with an average depth over 210 feet are subject to the usual 100 foot Buffer.

### IV. Mitigation

Swan Point property owners must comply with a two-phased mitigation requirement for any development within the BEA. First, the extent of the lot shoreward of the new development shall be required to remain, or to be established and maintained, in woody vegetation. Second, native vegetation of an area twice the impervious surface created in the 100-foot Buffer shall be planted on the site. There are three recommended preapproved planting schemes (see attached illustrations) or the property owner may submit their own plan based upon "Landscaping Requirements in the Critical Area -- Helpful Hints for Meeting Charles County's Requirements." Plantings for Buffer establishment and 2:1 planting for impervious surface encroachment into the 100 foot Buffer may both be located within the required buffer establishment area. 2:1 impervious surface planting may count towards total required Buffer establishment area if planted within the required Buffer establishment area between the house and the water. When 2:1 planting requirements are greater than the Buffer establishment area, the remainder of the plantings may be done beside the house if still within the 100-foot Buffer or used to further enhance the Buffer establishment area.

Examples:

**Lot Type "A" (50 foot BEA setback/ strict limit of disturbance) on a 100-foot wide lot**

**Buffer Establishment -**

50 feet (required Buffer) x 100 feet (width of lot) = 5000 sq. ft. of woody vegetation (to be planted between the structure and the water)

8 large trees @ 400 sq. ft. credit	=	3200 sq ft
10 small trees @ 100 sq. ft. credit	=	1000 sq ft
10 large shrubs @ 36 sq. ft. credit	=	360 sq ft
20 small shrubs @ 16 sq. ft. credit	=	320 sq ft
120 ground cover @ 1 sq. ft. credit	=	<u>120 sq ft</u>
TOTAL		5000 sq ft

**Impervious Surface 2:1 Mitigation -**

2700 sq. ft. of impervious surface within the 100 foot Buffer x 2 = 5400 sq. ft. of woody vegetation to be established on the site.

(Please refer to the attached illustrations)

**Lot Type "B" (60 foot BEA setback/ strict limit of disturbance) on a 100-foot wide lot**

**Buffer Establishment -**

60 feet (required Buffer) x 100 feet (width of lot) - 6000 sq. ft. of woody vegetation (to be planted between the structure and the water).

10 large trees @ 400 sq. ft. credit	=	4000 sq ft
12 small trees @ 100 sq. ft. credit	=	1200 sq ft
12 large shrubs @ 36 sq. ft. credit	=	432 sq ft
20 small shrubs @ 16 sq. ft. credit	=	320 sq ft
48 ground cover @ 1 sq. ft. credit	=	<u>48 sq ft</u>
TOTAL		6000 sq ft

**Impervious Surface 2:1 Mitigation -**

1500 sq. ft. of impervious surface within the 100 foot buffer x 2 = 3000 sq. ft. of woody vegetation to be established on the site.

(Please refer to the attached illustrations)

**Lot Type "C" (70 foot BEA setback/ strict limit of disturbance) on a 100-foot wide lot**

**Buffer Establishment -**

70 feet (required buffer) x 100 feet (width of lot) = 7000 sq. ft. of woody vegetation (to be planted between the structure and the water).

12 large trees @ 400 sq. ft. credit	=	4800 sq ft
14 small trees @ 100 sq. ft. credit	=	1400 sq ft
12 large shrubs @ 36 sq. ft. credit	=	432 sq ft
20 small shrubs @ 16 sq. ft. credit	=	320 sq ft
48 ground cover @ 1 sq. ft. credit	=	<u>48 sq ft</u>
TOTAL		7000 sq ft

**Impervious Surface 2:1 Mitigation -**

1600 sq. ft. of impervious surface within the 100 foot buffer x 2 = 3200 sq. ft. of woody vegetation to be established on the site.

(Please refer to the attached illustrations)

V. Financial Guarantees

As per the *Charles County Zoning Ordinance*, the owner must provide a bond or other financial guarantee that all plants will be installed and cared for appropriately for two full growing seasons. Plants will be inspected at the time of planting, at a one year interval (a courtesy inspection to identify any potential problems), and at the end of two years. Dead or diseased plants are to be replaced, and must survive for two growing seasons before the County can release bonds, in accordance with County-wide planting and reforestation policies.

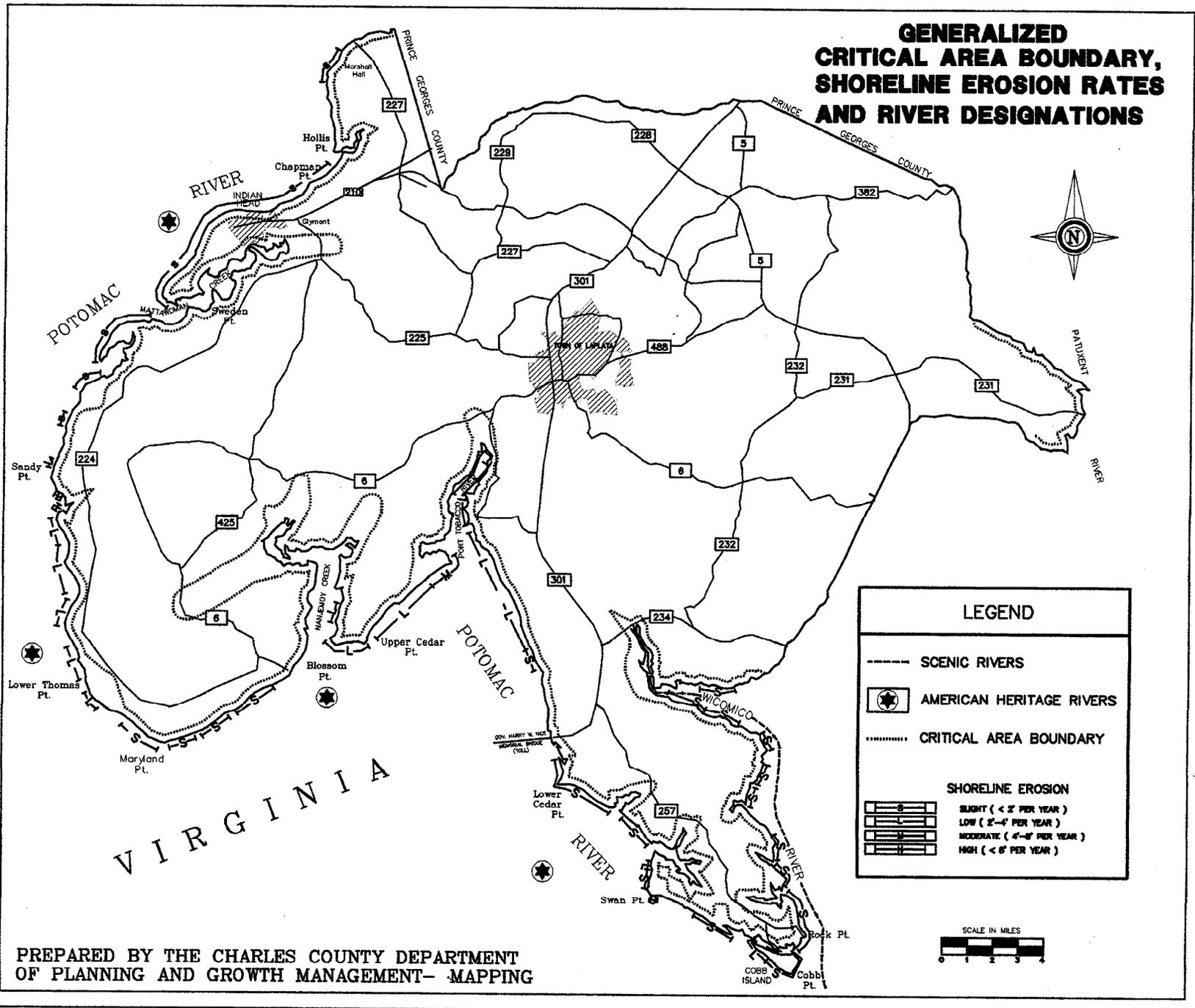
VI. Impervious Surface Limits

All properties in the Critical Area are subject to current restrictions on impervious surfaces on any given property. For all lots less than 1/2 acre in size in Buffer Exemption Areas, impervious surface shall not exceed 25%; for all other lots, impervious surface shall not exceed 15% impervious surface. It is recommended that all applicants show the dimensions of all man-made impervious and semi-pervious surfaces on a lot, and that all calculations also be shown. This will help speed the County's review process, particularly if the amount of impervious surface is nearing the legal limits.

VII. Variances

These requirements are meant to clarify the regulations and to provide consistency to property owners in the existing, platted, BEA portion of Swan Point. If a property owner wishes to develop outside of these conditions (i.e., closer to the water than the BEA setback allowed), he or she may seek a variance from County regulations under Article XIX, Section 416 of the *Charles County Zoning Ordinance*.

# GENERALIZED CRITICAL AREA BOUNDARY, SHORELINE EROSION RATES AND RIVER DESIGNATIONS

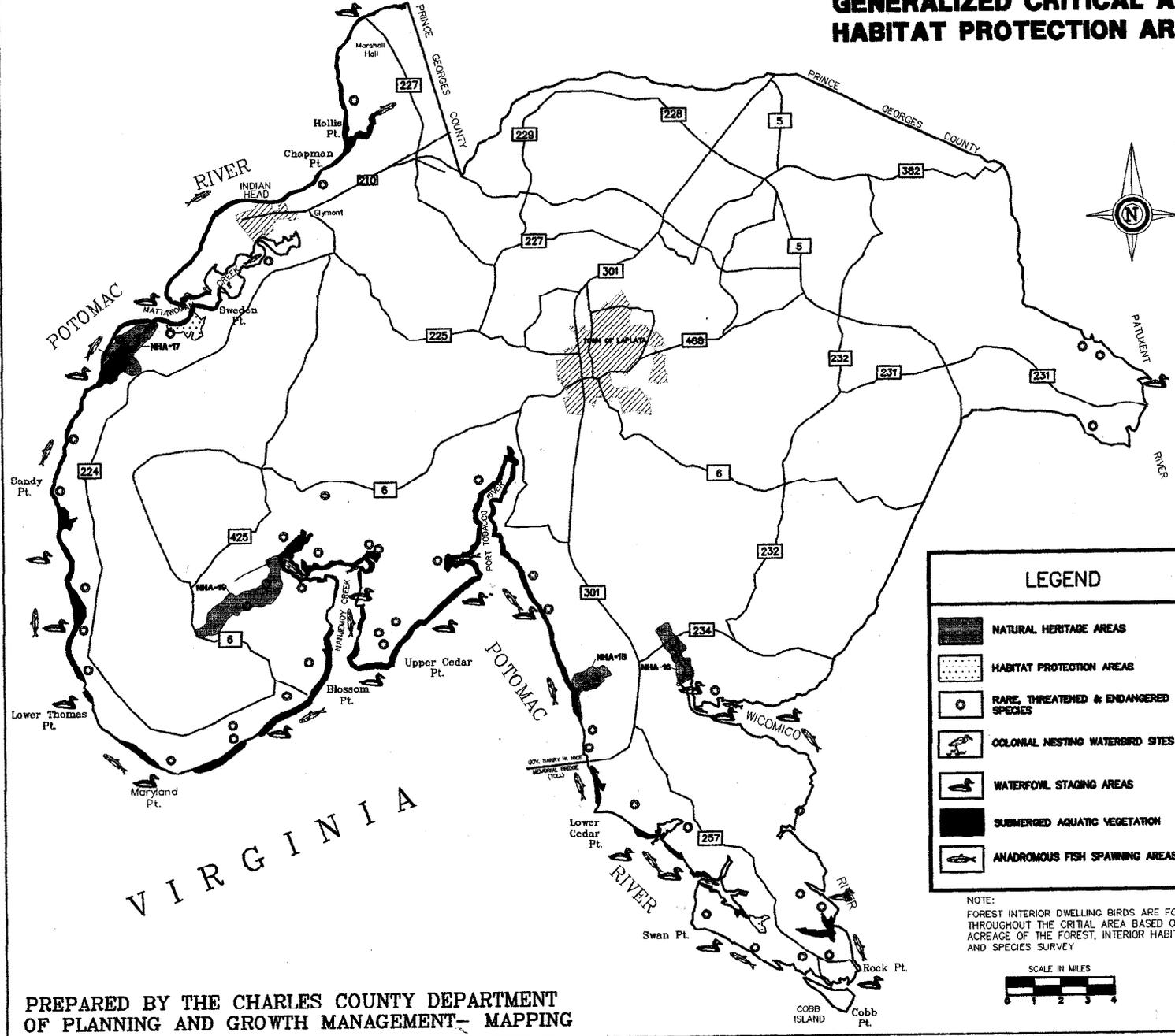


LEGEND	
	SCENIC RIVERS
	AMERICAN HERITAGE RIVERS
	CRITICAL AREA BOUNDARY
SHORELINE EROSION	
	SLIGHT (< 2' PER YEAR)
	LOW (2'-4' PER YEAR)
	MODERATE (4'-8' PER YEAR)
	HIGH (> 8' PER YEAR)



PREPARED BY THE CHARLES COUNTY DEPARTMENT  
OF PLANNING AND GROWTH MANAGEMENT- MAPPING

# GENERALIZED CRITICAL AREA HABITAT PROTECTION AREAS



**LEGEND**

- NATURAL HERITAGE AREAS
- HABITAT PROTECTION AREAS
- RARE, THREATENED & ENDANGERED SPECIES
- COLONIAL NESTING WATERBIRD SITES
- WATERFOWL STAGING AREAS
- SUBMERGED AQUATIC VEGETATION
- ANADROMOUS FISH SPAWNING AREAS

NOTE:  
 FOREST INTERIOR DWELLING BIRDS ARE FOUND THROUGHOUT THE CRITICAL AREA BASED ON ACREAGE OF THE FOREST, INTERIOR HABITAT, AND SPECIES SURVEY



PREPARED BY THE CHARLES COUNTY DEPARTMENT OF PLANNING AND GROWTH MANAGEMENT - MAPPING

VIRGINIA