A COASTAL RESOURCES MANAGEMENT GUIDE

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THIS REPORT WAS FUNDED, IN PART, BY THE VIRGINIA COUNCIL ON THE ENVIRONMENT'S COASTAL RESOURCES MANAGEMENT PROGRAM THROUGH GRANT #NA90AA-H-CZ796 OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION UNDER THE COASTAL ZONE MANAGEMENT ACT OF 1972 AS AMENDED.

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CRATER PLANNING DISTRICT COMMISSION

SEPTEMBER, 1991

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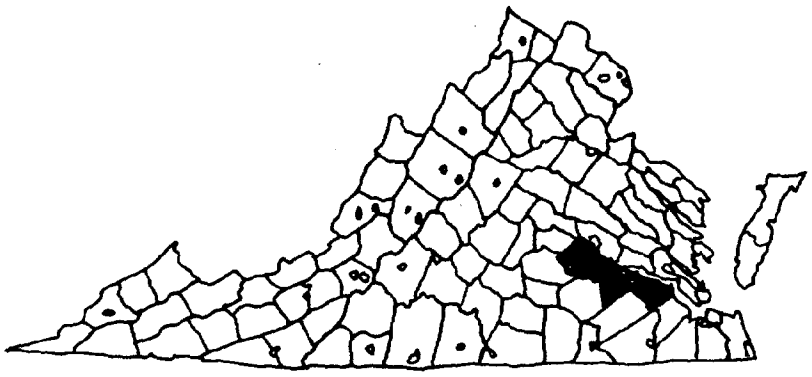
The purpose of this guide is to provide a current overview of those coastal resource management issues that are of most concern to the "tidewater" portion of the Crater Region. Tidewater Virginia is defined in the Code of Virginia to include forty-six cities and counties and forty-three towns which border on tidal waters, such as the James, Chesapeake Bay, and their tributaries such as the Appomattox River. The Crater Region's tidewater communities consist of the cities of Colonial Heights, Hopewell, and Petersburg; the counties of Chesterfield, Prince George and Surry; and the towns of Claremont and Surry.

Crater Region's Tidewater Area



This guide addresses the following coastal resource management issues:

Wetlands
Chesapeake Bay Preservation Act
Public Access
Solid Waste
Water Quality

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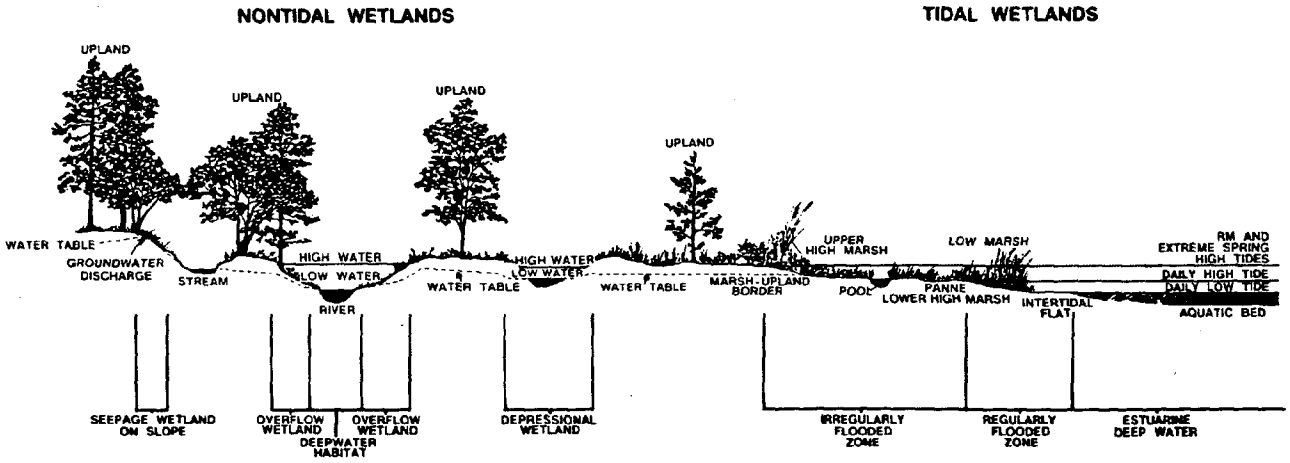
Wetlands

Wetlands are the areas on the landscape where land and water meet. In general, they are lands that are either inundated with surface water or saturated with groundwater long enough during the growing season to make it necessary for the vegetation to adapt to growing in saturated soil conditions. This periodic or permanent wetness is the fundamental factor that makes wetlands different from uplands. While most people picture wetlands as marshy areas with lush aquatic plants, there are actually many more kinds of wetlands.

There are two wetland types within the "tidewater" portion of the Crater Region. First, tidal wetlands, which are dominated by tidal action, being flooded regularly. Tidal wetlands, consisting of vegetated marshes, sandflats and mudflats are most recognizable. The second type of wetlands are nontidal wetlands. Nontidal wetlands are located adjacent to tidal wetlands and farther inland along rivers and streams. Nontidal wetlands can also be found in upland areas of poorly drained soils that are isolated from surface waters, and thus, are more difficult to recognize since they may give no surface evidence of the presence of water.

SCHEMATIC OF WETLANDS TYPES



Wetlands provide many ecological and socio-economic benefits, including water quality improvement, stormwater treatment, food sources, fish and wildlife habitat, shoreline erosion control, flood protection, potable water supplies, economic resources such as timber, and recreation. Wetlands have traditionally been considered unproductive wastelands, which has lead to their elimination by artificial draining or filling. This view has changed significantly as the connection between wetlands, wildlife, water quality, and other ecological and economic values have been evaluated.

Virginia tidal wetlands are regulated via the Virginia Wetlands Act of 1972 (Amended 1982). This act requires that a permit be issued before most types of development can take place in tidal wetlands.

The regulation of nontidal wetlands is much more muddled. Currently, the federal government is attempting to develop a nationwide wetlands policy, however, this task has proven most difficult. The central issue involves the definition of wetlands. The immediate dispute results from the federal government's proposal to revise the federal manual by which wetlands now are identified. Some people feel the proposed revisions are too lenient, while others say the revisions are too restrictive. It is envisioned that this debate will not be resolved for some time, thus the Crater Region's "tidewater" communities will have to wait a little longer to resolve the extent to which nontidal wetlands exist, based upon a revised definition which will include three factors - vegetation, hydrology, and soil content.

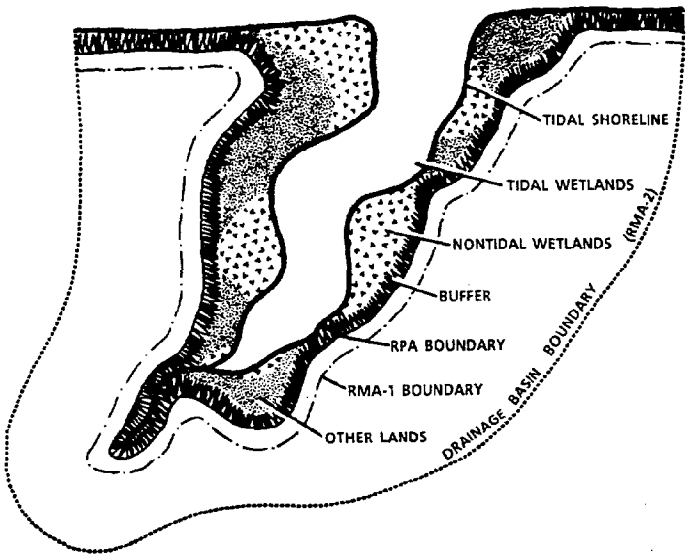
Chesapeake Bay Preservation Act

In 1988, the Virginia General Assembly passed the Chesapeake Bay Preservation Act. This legislation established a nine member board called the Chesapeake Bay Local Assistance Board to implement the Act. The Board has developed regulations governing development affecting many coastal resources. The Chesapeake Bay Preservation Act Program attempts to manage land use in order that the pollutants contained in stormwater runoff from urban and agricultural areas are controlled, thus protecting the water quality of the Chesapeake Bay and its tributaries.

The Regulations call for the designation, by each local government, of Chesapeake Bay Preservation Areas. Chesapeake Bay Preservation Areas are lands "which, if improperly developed, may result in substantial damage to the water quality of the Chesapeake Bay and its tributaries." They include Resource Protection Areas and Resource Management Areas.

A Resource Protection Area (RPA) is land at or near the shoreline which has important value to water quality. These lands may help to protect water quality or be easily damaged by the impacts of development. Local governments must include tidal wetlands, certain nontidal wetlands, tidal shores, and other lands that are especially important to water quality in these areas. An RPA must also include a buffer area, which is 100 feet wide measured from the landward side of these natural features.

HYPOTHETICAL CHESAPEAKE BAY PRESERVATION AREA



A Resource Management Area (RMA) is land which protects the value of the RPA. Improper development in these areas will have an adverse impact on water quality. Floodplains, highly erodible soils, steep slopes, highly permeable soils, other nontidal wetlands and other lands necessary to protect water quality are to be considered by local governments in delineating Resource Management Areas. (Two possible RMA boundaries are shown on the sketch.) A RMA must be designated landward of and contiguous to all RPAs.

In all Chesapeake Bay Preservation Areas, development must meet general performance criteria that are designed to reduce nonpoint source pollution and/or protect sensitive lands from disturbance. These criteria include:

Preserve natural vegetation
Minimize disturbance of land
Minimize impervious cover such as paving
Strictly control soil erosion during land clearing and construction
Control stormwater runoff and its quality
Pump out septic tanks once every five years
Provide a reserve drainfield for septic tanks, which equals the waste treatment capacity of the primary drainfield.
Subject all development to site plan review
Control stormwater quality in agricultural and forestal areas

In a Resource Protection Area, only water dependent uses, such as piers, and redevelopment of existing uses are allowed. Specific performance criteria must be met. The water quality impact of the development must be analyzed. Homes and related structures, such as swimming pools, can not be constructed within an RPA.

In a Resource Management Area, any use which is allowed under the local zoning ordinance will still be permitted. However, all development must meet the general performance criteria.

Each of the Crater Region's "tidewater" communities must develop programs by November 15, 1991, to comply with the regulations. Such programs involve adjustments to existing land use control ordinances (subdivision and zoning ordinances, etc.) and comprehensive plans, as well as other appropriate regulatory mechanisms. Each local program must be structured to protect water quality as well as environmentally sensitive areas.

Below is an outline, by jurisdiction, highlighting how each community will carry out the requirements of the Chesapeake Bay Preservation Act:

<u>City of Colonial Heights</u>

It was anticipated that each local government would have its programs in place by the time this guide was developed. However, due to procedural problems, the Chesapeake Bay Local Assistance Board did not adopt permanent Regulations to implement the Act until months after the targeted date. The Regulations did not become effective until October 1, 1991. Thus, the Crater Region's "tidewater" communities are in the process of finalizing their programs. Once all local programs are approved, they will be summarized and included in the guide, in order that the citizenry can readily determine how each jurisdiction will implement its Chesapeake Bay Program.

Public Access

Over the last decade, demand for public recreational access to the James and Appomattox Rivers has increased. Public access includes water-dependent and water-related facilities which are located along the James and Appomattox Rivers and their tributaries. Marinas, boat launch ramps, beaches, and public water-oriented recreation areas are considered water-dependent facilities. Water-related activities could include picnicking, facilities for education, camping, hiking, hunting, wildlife observation, and other passive recreational uses.

The following presents public access sites to the James and Appomattox Rivers and their tributaries, by jurisdiction, for the "tidewater" portion of the Crater District:

Chesterfield County	Location
- Richmond National Battlefield Park, Fort Darling, Drewry's Bluff	James River
- Dutch Gap Boat Launch	James River
- Henricus Historical Park	James River
- Presquile National Wildlife Refuge	James River
- Point of Rocks Park	Appomattox River/Ashton Creek
Colonial Heights	
- White Bank Park	Swift Creek
- Fort Clifton Park	Appomattox River
Hopewell	
- Hopewell Yacht Club	Appomattox River
- National Park Service, City Point Unit	Appomattox River
Prince George County	
- Appomattox Small Boat Harbor	Appomattox River
- Jordan Point Yacht Haven	James River
- Upper Brandon	James River

Surry County	Location
- Lawnes Creek Ramp	Lawnes Creek
- Hog Island Wildlife Management Area	James River
- Chippokes Plantation State Park	James River
- Claremont Beach	James River
- Grays Creek Marina	Grays Creek

The dredging project currently underway on the Appomattox River will provide boating access to the City of Petersburg in the near future.

Several federal and state inventories have determined the need for efforts to increase public access to the waterfront.

The Commonwealth of Virginia and the "tidewater" communities need to find additional techniques for acquisition and development of access sites.

Solid Waste

One of the most sensitive issues facing the "tidewater" communities of the Crater Region is the location and operation of solid waste management facilities. Citizens are concerned about the impact of solid waste facilities on water quality as it relates to coastal resources.

The Commonwealth of Virginia has mandated that every locality or region develop a comprehensive solid waste management plan. After July 1, 1992, the Commonwealth may withhold permits for local or regional solid waste management facilities, pending Plan approval by the Virginia Department of Waste Management. Each plan is to be updated every five years.

Hierarchy of Solid Waste Management Strategies

Each locality or region must consider, as part of the planning process, the following strategies of waste management (listed in order of priority):

Source Reduction (creating less waste to begin with, through reduced packaging, etc.)

Reuse (using items more than once - for the same or different purposes)

Recycling (processing waste into new or different products)

Resource Recovery (burning waste to create energy)

Incineration (burning waste to reduce its volume)

Landfilling (burying trash in sanitary landfills)

Recycling Goals

Citizens across Virginia have encouraged the Commonwealth to place a strong emphasis on recycling. In response, the Virginia General Assembly has mandated that each locality or region must meet the following recycling goals for the total weight or volume of waste generated:

1991	10 percent
1993	15 percent
1995	25 percent

With the exception of Surry County, all of the "tidewater" communities have joined other local governments in Central Virginia and designated the Crater Planning District Commission and Richmond Regional Planning District Commission as the lead agencies to develop the Regional Solid Waste Management Plan. A Citizen Advisory Committee was created to review and comment on the Plan.

The Central Virginia Waste Management Authority (CVWMA) was designated by the same 13 jurisdictions as the principal entity to implement the Regional Plan, in cooperation with the local governments.

Once endorsed by local governments and adopted by the two PDCs and the CVWMA, the Regional Plan will be sent to the Virginia Department of Waste Management for approval. Prior to adoption by the CVWMA, public hearings will be held in early 1992.

The preferred solid waste management system has been developed for the plan and consists of the following components:

Source Reduction and Reuse
Recycling
Waste Collection and Transfer
Waste Disposal

Surry County is actively involved in the development of a regional solid waste plan with twelve other local governments in the Southern Region of the Crater District, including the towns of Claremont and Dendron. This Regional Plan will meet the same mandates as previously discussed under the Central Virginia effort.

Both Regional Plans will provide major direction to all "tidewater" communities ensuring that sensitive coastal resources are properly protected.

Water Quality

The federal government has had laws and regulations in place for many years aimed at reducing water pollution. After the passage of the Water Pollution Control Act of 1972 and the Clean Water Act of 1977, many communities had to upgrade their wastewater treatment facilities.

Thus, historically, regulatory programs focused on point sources of pollution such as factories and sewage treatment plants because they were easily recognized and regulated. Also, engineering techniques were available to reduce the pollutants in their discharges. In most cases, the conventional pollutants (primarily solids and biodegradable materials) have been controlled from these sources by a discharge - permitting system. In spite of the progress we have made in controlling pollutants in discharges from factories and sewage treatment plants, water quality problems have persisted.

Through continuing studies, we have learned a great deal about the role of nonpoint sources in water quality problems. Studies have shown that stormwater runoff from urban and agricultural areas includes a significant amount of pollutants such as nitrogen, phosphorus, bacteria, heavy metals, pesticides, sediment and other organic material. The amount of these pollutants contributed by stormwater runoff may exceed that which comes from point sources. In some cases, even if we were to eliminate sewage treatment plant and industrial wastewater discharges to our rivers, water quality standards would not be met because of stormwater runoff.

Thus, in 1987, amendments to the federal Clean Water Act were passed by Congress in order to address stormwater runoff pollution problems.

One concept that has been developed to assist in improving water quality is called the Best Management System. This System is defined as a combination of conservation practices or management measures, which when applied will achieve nonpoint source pollution control through reduced transport of sediment, nutrients and chemicals into surface and groundwater. This System is implemented through the use of what is called Best Management Practices (BMPs). BMPs apply to: agriculture (crop production and animal husbandry), residential and industrial development, transportation, mining, forestry, recreation, and waste disposal. BMPs can involve the installation of structural components, such as detention ponds, (structural BMPS), or a change in land use practices, such as conversion to no-till systems or crop sequencing, (non-structural BMPs). Virginia's "Nonpoint Source Management Program" is administered by the Division of Soil and Water Conservation in the Department of Conservation and Recreation.

The intention of BMPs that relate to water quality is to reduce the sediment and contaminant loads in runoff from human activities. This includes runoff into lakes, streams, and rivers, and into aquifers. Traditionally, BMPs have been used most in agricultural extension and forestry work to promote soil conservation, but, increasingly, BMPs are being developed and applied to urban stormwater runoff and othe land uses. Some urban BMPs come under the purview of local erosion and sedimentation control ordinances.

Examples of BMPs include: grass filter strips and no-till methods for crop and pasturelands, animal waste control ponds, integrated pest management to reduce runoff of pesticides, reforestation of erodible land, level spreaders for urban runoff, detention basins, porous asphalt cement, and streambank stabilization.

The local soil and water conversation districts within the "tidewater" portion of the Crater District can offer technical guidance and educational materials in regard to BMPs to interested landowners.

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