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Natural Resources Management In Coastal Virginia

Pam Mason

The relatively flat land, east of U.S. Route 95 and influenced by the Chesapeake Bay and its tributaries constitutes Virginia's coastal plain. Within its coastal area, Virginia has approximately 5,000 miles of tidal shoreline along the Atlantic Ocean, the Chesapeake Bay and tributaries (Hobbs, et. al., 1979). There are about 350,000 acres of coastal tidal wetlands and 385,000 acres of nontidal coastal wetlands in Virginia (Field, et. al., 1991). An estimated 63,000 acres (6%) of Virginia's wetlands were lost between 1956 and 1977 (Tiner, 1987).

Over one half of all Virginians live in the coastal plain which makes up a little under a third of the state's landmass (Colgan, 1990). Virginia's population is projected to increase 32% by the year 2020 (2020 Report). The increased demand for housing, roads, schools, drinking water, and sanitation facilities along with a suite of other infrastructure needs will place a heavy burden on resources. There will also be increased demand for open spaces for recreation, hunting, commercial fisheries, recreational fishing, boating, swimming and aesthetics. Conflicting interests will add to the difficult task of effectively allocating, managing and protecting natural resources.

In order to deal with these conflicting interests, there are existing management programs and agency activities at the local, state, regional and federal level which influence the use of natural resources in Virginia's coastal plain. Many management programs are directed toward the fundamental desire to improve or maintain water quality for natural habitat preservation, human exploitation, consumption, and recreation. There are also programs to manage direct (point source) inputs into the waters, to control indirect sediment and stormwater inputs (non-point source), and to protect the natural functions of systems, such as wetlands, to help improve water quality.

Many of the management programs in Virginia are administered at more than one level of government. Several state programs have a local component created through enabling state legislation. The state generates regulations and provides guidance and oversight. Similarly, there are federal programs with state components, such as the Clean Water Act. In Virginia these diverse management activities are loosely networked into a coastal management program. It remains to be seen if the programs in place will be able to adequately deal with the in-

creased pressures for resource exploitation that will result from population growth.

The following descriptions are representative, but not all inclusive, of the programs which influence natural resources in Virginia's coastal plain. Included are descriptions of some of the environmental management programs which seek to improve, maintain or more effectively manage water quality in Virginia's coastal plain (Figure 1).

State Programs

Virginia Wetlands Act

The Commonwealth of Virginia adopted the Virginia Wetlands Act in 1972 (VA Code Sec. 28.2-1300). The purview of the Act is confined to a geographic area defined in the text as Tidewater Virginia and only applies to tidal wetlands (Figure 2). Back Bay and Northland River were added by Amendment in 1974. The Act requires a permit for activities in tidal wetlands. Certain activities are specifically excluded from the permit requirement including; noncommercial piers, fences, and catwalks, cultivation of shellfish, agriculture, forestry, normal road maintenance and outdoor recreation. The Act provides for the establishment of local

wetlands boards by counties, cities or towns within tidewater and includes a model wetland ordinance for adoption by these localities. If a town within a county or city does not establish a wetlands board, the county or city will process permit applications for that town. The Virginia Marine Resources Commission (VMRC) has oversight at the state level and hears appeals of decisions made at the local level. The Commission also serves as the local wetlands board for localities which have not established their own. Currently there are 35 local wetlands boards. Greater than 90% of the tidal wetlands are managed by local boards appointed by the elected governing body.

Originally wetlands were defined in the Act as those lands contiguous to tidal waters within one and one half times the mean tide range and vegetated with the wetlands plants listed in the legislation. However, the vegetation requirement excluded nonvegetated wetland resources and these wetlands were added by definition in 1982. The Wetlands Guidelines, prepared by the Virginia Institute of Marine Science and the Marine Resources Commission, were developed in order to implement the legislation and assist localities. The guidelines provide information on the functions and values of wetlands community types and assign the types to ranked groups. The Guidelines contain a section on evaluating alterations of wetlands which includes specific criteria and the environmental rationale.

The VMRC serves as a clearing house for processing applications for activities affecting wetlands and waters in Virginia. A single application (referred to as a joint permit application) may be submitted to the VMRC for distribution to the proper local, state and federal permitting and reviewing agencies.

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Produced by VIMS Publications Center

Commonwealth's Declared Policy:
"to preserve the wetlands and to prevent
their despoliation and destruction . . ."

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Coastal Primary Sand Dune Act

The Coastal Primary Sand Dune Act was passed in 1980 in order to manage the states sand dune and beach resources (VA Code 28.2-

1400). The Act requires a permit for the use and development of the most seaward line of sand dunes. Similar to the wetlands act, the sand dune act includes a model ordinance which may be adopted by localities and the Marine Resources Commission provides oversight, hears appeals and processes applications for localities that have not adopted the model ordinance.

The localities must have or establish a wetlands board to administer the act. As specified in the act, only eight localities have dunes and are authorized to adopt the model ordinance; the Counties of Accomack, Lancaster, Mathews, Northampton and Northumberland and the Cities of Hampton, Norfolk and Virginia Beach. The County of Accomack and the City of Hampton have not adopted the model ordinance.

The Marine Resources Commission has issued Coast Primary Sand Dune Beaches Guidelines. The Guidelines provide a characterization and

description of sand dunes and beaches, including a discussion of the vegetation common to Virginia's shoreline. There are also general guidelines and considerations for alterations to coastal primary sand dunes and beaches. In addition, a Barrier Island Policy has been promulgated to address the particular concerns of barrier island development.

Subaqueous Law

It is unlawful to conduct activities in Virginia waters without statutory authority or a permit from the Marine Resources Commission (Va Code 28.2-1200). Some subaqueous beds are in private ownership under historical grants; however, the Commonwealth retains ownership of the remaining subaqueous beds of bays, rivers, creeks and shores. Since Virginia law provides for private land ownership to the mean low-water mark, state jurisdiction under this provision is channelward of mean low water. In nontidal waters, jurisdiction is channelward of ordinary high water.

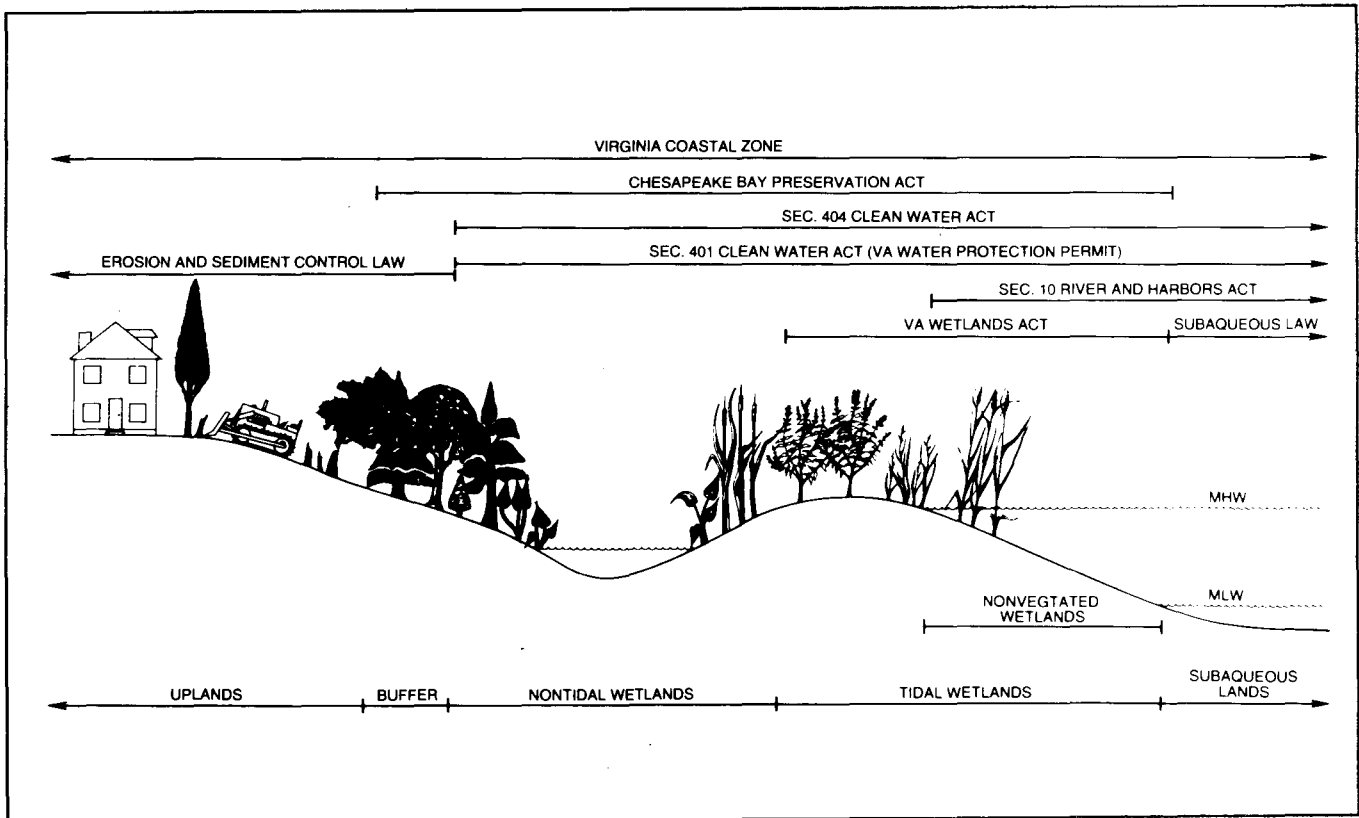


Figure 1. Natural Resource Management Programs in Coastal Virginia.

Legislation confers statutory authority for the placement of private, noncommercial piers by owners of riparian land. Also authorized are: construction activities associated with authorized dams; congressionally approved navigation or flood control projects; port facilities owned or leased by the state.

Virginia Water Protection Permit

The federal Clean Water Act (CWA) of 1972, with subsequent amendments, includes a provision in section 401 of the act for states to administer a certification program in conjunction with the Army Corps of Engineers section 404 permit review process. In Virginia this pro-

gram is administered by the Department of Environmental Quality Water Division (formerly the State Water Control Board). In 1989, the Virginia General Assembly passed legislation creating the Virginia Water Protection Permit (VA Code Sec. 62.1-44.15:). The issuance of the Permit constitutes the certification required under section 401 of the CWA.

Before a permit may be issued a determination that the activity is consistent with the provisions of the CWA and protects instream beneficial uses must be made. Beneficial uses are defined as navigation, waste assimilation, fish and wildlife resources and habitat, recreation, cultural, and aesthetic values.

The Department of Environmental Quality Water Division adopted regulations to implement the Water Protection Permit program in 1992 (VR 680-15-02). Regulations require a permit be issued for activities which result in discharge to surface waters. Surface waters are waters subject to the ebb and flow of the tide and waters used in interstate commerce including wetlands. Exemptions from permit requirements are specified in the regulations and include activities such as; placement of navigation aids, fish and wildlife harvesting devices, noncommercial mooring buoys, survey activities, and normal farming and silviculture.

The regulations require additional information beyond that of the joint permit application in order to process a water protection permit. Information required includes; stream classification according to state water quality standards, drain-

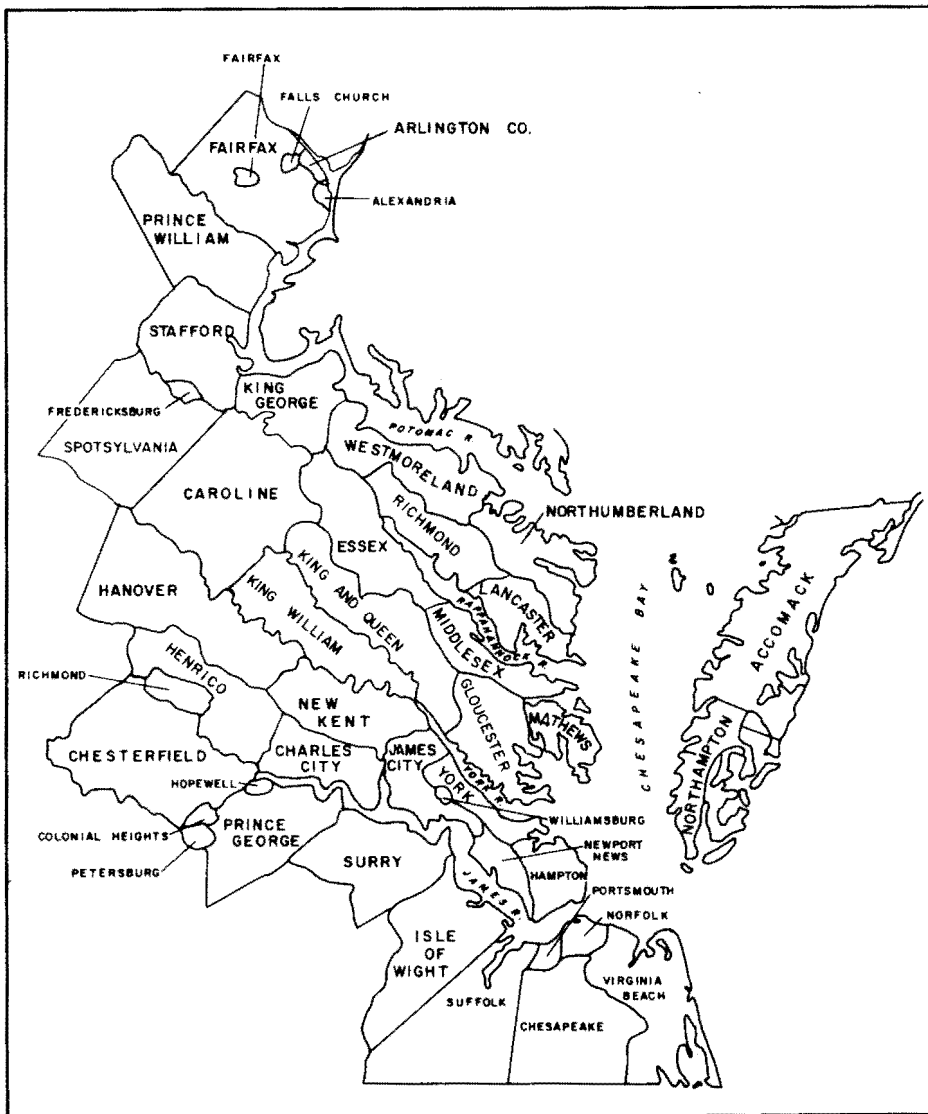


Figure 2. Tidewater Counties and Cities.

age area and hydrologic unit code. A functional assessment of the affected surface waters including an assessment of impacts to existing instream beneficial uses and proposed beneficial uses of the impacted waters is also required.

Virginia Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System is Section 402 of the federal Clean Water Act. The U.S. Environmental Protection Agency delegated authority to administer the program to Virginia in 1975. The Virginia Pollutant Discharge Elimination System (VPDES) is administered by the Department of Environmental Quality Water Division. Any point source discharge into surface waters is subject to regulation under a VPDES permit.

Under VPDES, Virginia must adopt and maintain regulations which reflect the most recent NPDES regulations and are at least as stringent. New proposed regulations are intended to address changes to the federal regulations. The regulations delineate when a permit is required, list which activities are exempt, establish the information requirements for permit application and lists conditions applicable to all permits and special category permits.

Chesapeake Bay Preservation Act

In 1988, Virginia passed the Chesapeake Bay Preservation Act. The Act empowered localities to consider water quality issues when making land use decisions. Further, the Act required all Tidewater localities to develop and adopt local programs and delineate certain sensitive areas. The program is administered by the Chesapeake Bay Local Assistance Board (CBLAB). The Board has the responsibility of assessing the consistency of proposed local programs with state regulations. The regulations define the components of the Chesapeake Bay Preservation Areas including, Resource Protection Area (RPA) and Resource Management

Area (RMA) and provide guidelines on the determination of these areas and the management tools applicable to regulating land use in the RPAs and RMAs.

The Resource Protection Areas are those natural areas most sensitive to disturbance; activities in these areas may lead directly to impacts on water quality. The RPA designation includes: tidal wetlands, nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores, other lands at local discretion, and a buffer area not less than 100 feet in width landward of all other components of RPAs and along both sides of any tributary stream. There is greater latitude given the localities in the designation of RMAs. However, the regulations suggest the consideration of designating the following: nontidal wetlands (other than those specified as RPAs), floodplains, highly erodible soils, highly permeable soils, other lands at local discretion.

The buffer area requirements are aimed at the reduction of runoff, erosion prevention and the filtration of pollutants from nonpoint source runoff. In order to maintain the functions of the buffer, activities within the buffer are limited. Native vegetation may only be removed if replaced with vegetation equally effective in maintaining the erosion protection and runoff control of the buffer. Vegetation may be removed as part of a shoreline erosion control project which includes establishment of appropriate vegetation to protect or stabilize the shoreline.

The regulations promulgated by CBLAD also include performance criteria for land use and development. The performance criteria address such issues as: land clearing, erosion and sediment control, septic systems, stormwater management and best management practices (BMP). CBLAD provided a handbook to localities to assist in the interpretation and application of the performance standards.

Erosion and Sediment Control Act

The Commonwealth adopted the Erosion and Sediment Control Law in 1973. The Soil and Water Conservation Board is responsible for promulgating regulations for the state program administered by the Department of Conservation and Recreation, Division of Soil and Water Conservation.

The law requires an approved erosion and sediment control plan prior to any land-disturbing activity. Under new provisions added to the law in 1993, the plan must be reviewed by a certified plan reviewer. Program administrators, plan reviewers and inspectors are certified by the Board. Exemptions are given for mining, oil and gas exploration and drilling, most agricultural activities, and certain activities involving minor land disturbance.

The law requires each soil and water conservation district (SWCD) in the Commonwealth to have a program consistent with the state program and regulations. The SWCDs may be involved in plan review of local programs, and assistance is offered through inspections, public education and advisory programs. Provisions are made in the law for localities to adopt and administer an approved local program. There are 170 local programs in Virginia covering every county, city and town. Under 1993 amendments, if the Board revokes its approval of a local program, the SWCD will assume administration of a program for the locality. If the Board revokes its approval of a district program, the Board will administer a program.

Amendments to the law in 1988 provided for the promulgation of new regulations in 1990. Minimum standards for local programs listed in the new regulations address many issues including permanent soil stabilization, vegetative cover, need for sediment basins, work in live watercourses along with sediment deposition, erosion and damage downstream due to increases in runoff volume and velocity (Virginia Regulations 625-02-00 Section 1.5).

A guidance handbook provides localities the information necessary to develop programs consistent with state regulations. The most recent handbook was revised in 1992 to address the new regulations. The handbook includes general criteria which are minimum state requirements for controlling erosion and sedimentation from land disturbing activities.

Design criteria and construction specifications with photographs from the field provide a range of erosion and sediment control devices. Generally, activities covered under this program are easily observed at a development site, a road project, or housing construction. For example, the gravel construction entrance is an effort to retain the soil on the job site and not allow it to become runoff from paved road surfaces. Likewise, silt fences and straw bales are employed to control the amount of soil which is washed off the site. On a bigger scale, projects may include sediment detention ponds designed to contain the runoff from the site and allow the sediment to settle out of the water.

Federal Programs

Clean Water Act (Section 404)

The federal resource management program with the greatest impact on water resources is the Clean Water Act of 1972 and subsequent amendments (CWA). Specifically, Section 404 of the CWA requires a permit be issued for any dredge or fill activity in waters of the United States including wetlands. The Army Corps of Engineers (Corps) administers the permit program. The responsibility for the administration of Section 404 was given to the Corps due to their existing jurisdiction over navigable waters under Section 10 of the River and Harbors Act of 1899.

The Fish and Wildlife Coordination Act requires federal agencies to emphasize environmental considerations in project review and to coordinate with federal environmental agencies, other federal agencies and state agencies

during project review. The Fish and Wildlife Service, the National Marine Fisheries Service and the Environmental Protection Agency (EPA) provide comments on Section 404 permit applications. The EPA also has veto authority over Corps project approval. Many other state and federal resource protection laws are incorporated into the review process including; the Marine Protection Research and Sanctuaries Act, the Endangered Species Act and laws dealing with historic resources.

Virginia is located entirely within the Corps' Norfolk District. There are also several field offices located throughout the state.

The Corps has nationwide and regional permits for activities which are frequently occurring and have minimal direct or cumulative environmental impact. The Corps and the applicant can realize a savings of time and expense because these permits require less stringent review than individual permits. Some of the permits require notification of the Corps prior to the activity, others do not require prenotification.

Federal projects are not exempt from Section 404 permit review. Section 404(t) requires that federal projects comply with state regulations for the discharge of dredged and fill materials into U.S. waters. There is a partial exemption for projects individually authorized by Congress.

Coastal Zone Management Act

The federal Coastal Zone Management Act was passed in 1972 to provide assistance and encouragement to coastal states in the effective protection and careful development of the coastal zone. The Act established a grant-in-aid program currently administered by the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration. The grant-in-aid provisions of the Act make federal moneys available to states with federally approved coastal programs.

Section 301 of the Act is a provision known as the consistency clause. The intent of the provision is to ensure that federal activities, Outer Continental Shelf Plans and federal assistance to states and local governments are consistent with the state's federally approved coastal resources management program. Under the consistency clause, a state may prevent a federal proposed action if it is found to be inconsistent with the state program.

The Virginia Coastal Resource Management Program was approved in 1986. The Program is a network of several resource management activities administered by various state agencies. All regulatory programs of the Commonwealth are components of Virginia's program.

The Department of Environmental Quality (DEQ), Division of Public and Intergovernmental Affairs, formerly Council on the Environment, administers the grant program. Proposals for grant money are submitted to the DEQ. Recommended proposals are forwarded to NOAA for final approval. Project proposals should address some aspect of the coastal program. The DEQ is the lead agency for reviewing and responding to all federal consistency determinations. Some of the many categories of federal activities subject to review under Virginia's coastal program are dredging, navigation projects, dams, location and acquisition of defense and coast guard installations and acquisition and master plans of national parks and seashores.

National Environmental Policy Act

Congress passed the National Environmental Policy Act (NEPA) in 1969. The Act established a general federal policy for the responsibility of each generation as trustee of the environment for succeeding generations. Specifically, the Act requires that an environmental impact statement (EIS) be prepared as part of the review and approval process by federal government agencies of major actions which significantly affect the quality of human life.

The primary purpose of an EIS is to serve as an action-forcing device to insure evaluation of the impacts of proposed projects and facilitate public review. Activities which would require an EIS include flood control projects, dredging and land sales.

An environmental assessment may be prepared prior to initiating an EIS. The assessment is used to make a determination if the preparation of an EIS is required. An EIS is not prepared when the review of an environmental assessment results in the finding of no significant impact.

Implementing regulations require the cooperation of federal agencies in the NEPA process. The regulations also encourage the reduction of duplication through cooperation with state and local agencies including early efforts of joint planning, joint hearings and joint environmental assessments. The DEQ coordinates the review of environmental assessments for projects in Virginia.

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