

SELF-TAUGHT EDUCATION UNIT

Coastal Resources Management In Virginia

By Pam Mason

Objectives

The purpose of this education module is to introduce the reader to the various environmental programs which influence resource management in Virginia's coastal plain. The emphasis is on programs intended to protect, improve or maintain water quality. Programmatic descriptions cover legislation, jurisdiction, and the administering agency. Upon completion of the unit, the reader should be familiar with various coastal resource management programs including permit programs, programs which regulate land use and programs intended to coordinate coastal environmental issues.

Introduction

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 750,000 acres of nontidal 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 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 Virginia's resources. There will also be increased demand for open spaces for recreation, hunting, commercial fisheries, recreational fishing, boating, swimming and aesthetics. The many conflicting interests will add to the difficult task of effectively allocating, managing and protecting Virginia's natural resources.

In order to deal with the use conflicts and 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 the coastal plain of Virginia. Many of the 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 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, which can 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. With this type of management program, 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 increased pressures for resource exploitation that will result from population growth.

The following programmatic descriptions are not inclusive of all programs which influence natural resources in Virginia's coastal plain. For instance, the entire area of fisheries management, a very broad subject addressed in many other forums, is not included here. 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. Tidewater Counties and Cities.

Wetlands Program

College of William and Mary
School of Marine Science
Virginia Institute of Marine Science
Gloucester Point, Virginia 23062

November 1995



Dr. Carl Hershner, Program Director
Project Coordinator, Maryann Wohlgemuth
Published by: VIMS Publication Center

A publication of the Virginia Department of Environmental Quality's Coastal Resources Management Program pursuant to National Oceanic and Atmospheric Administration Award No. NA470Z0287-01.



This paper is funded in part by a grant/cooperative agreement from the National Oceanic and Atmospheric Administration. The views expressed herein are those of the author and do not necessarily reflect the views of NOAA or any sub-agencies.

Printed on recycled paper.



State and Local 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** (roughly that portion of Virginia which lies east of U.S. Route 95) (Figure 1). The Act applies to tidal wetlands. 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 the localities. If a town within a county or city has not established a wetlands board, the county or city will process permit applications for that town. The Virginia Marine Resources Commission 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. There are 35 local wetlands boards, including two boards established by towns. Of the counties and cities defined as Tidewater Virginia in the Act, 13 do not have a wetlands board.

Originally **tidal wetlands** were defined in the act to be those lands which are:

- 1) contiguous to tidal waters,
- 2) within one and one half times the mean tide range, and
- 3) vegetated with wetlands plants listed in the legislation.

However, this definition required the presence of vegetation and therefore excluded nonvegetated wetlands from the management program. Nonvegetated wetlands were added to the Wetlands Act in 1982.

Nonvegetated wetlands are those lands which are:

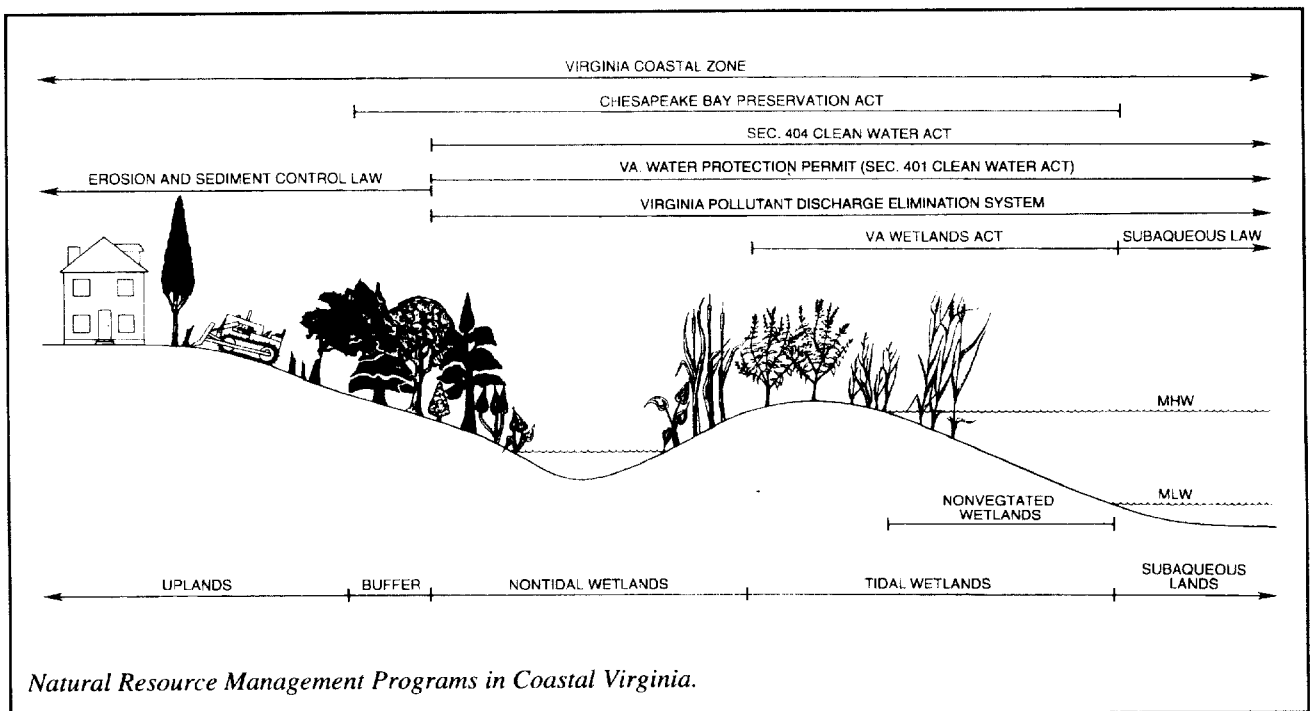
- 1) contiguous to tidal waters, and
- 2) between mean low water and mean high water.

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 the localities. The guidelines provide information on the functions and values of wetland 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 **Virginia Marine Resources Commission** serves as a clearing house for the processing of 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.

Coastal Primary Sand Dune Act

The Coastal Primary Sand Dune Act was passed in 1980 in order to manage the state's sand dune and beach resources (VA Code 28.2-1400). The Act requires a **permit** for the use and development of sand dunes and beaches. Patterned after 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



Natural Resource Management Programs in Coastal Virginia.

and processes applications for localities that have not adopted the model ordinance.

As the ordinance is to be administered by local **wetland boards**, localities must have or establish a wetlands board to administer the act. Only eight localities are authorized by the legislation 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.

Chesapeake Bay Preservation Act

In 1988, Virginia passed the Chesapeake Bay Preservation Act. The jurisdiction of the Act is limited to **Tidewater Virginia**. 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 map sensitive areas. The **Chesapeake Bay Local Assistance Board**, a citizen board, promulgates regulations to implement the Chesapeake Bay Preservation Act. The program is administered by the **Chesapeake Bay Local Assistance Department (CBLAD)** which 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 (Figure 2) are those natural areas most sensitive to disturbance; activities in these areas may lead directly to impacts on water quality. Areas to be designated **RPAs** are specifically defined in the regulations as the following:

- 1) tidal wetlands,
- 2) nontidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams,
- 3) tidal shores,

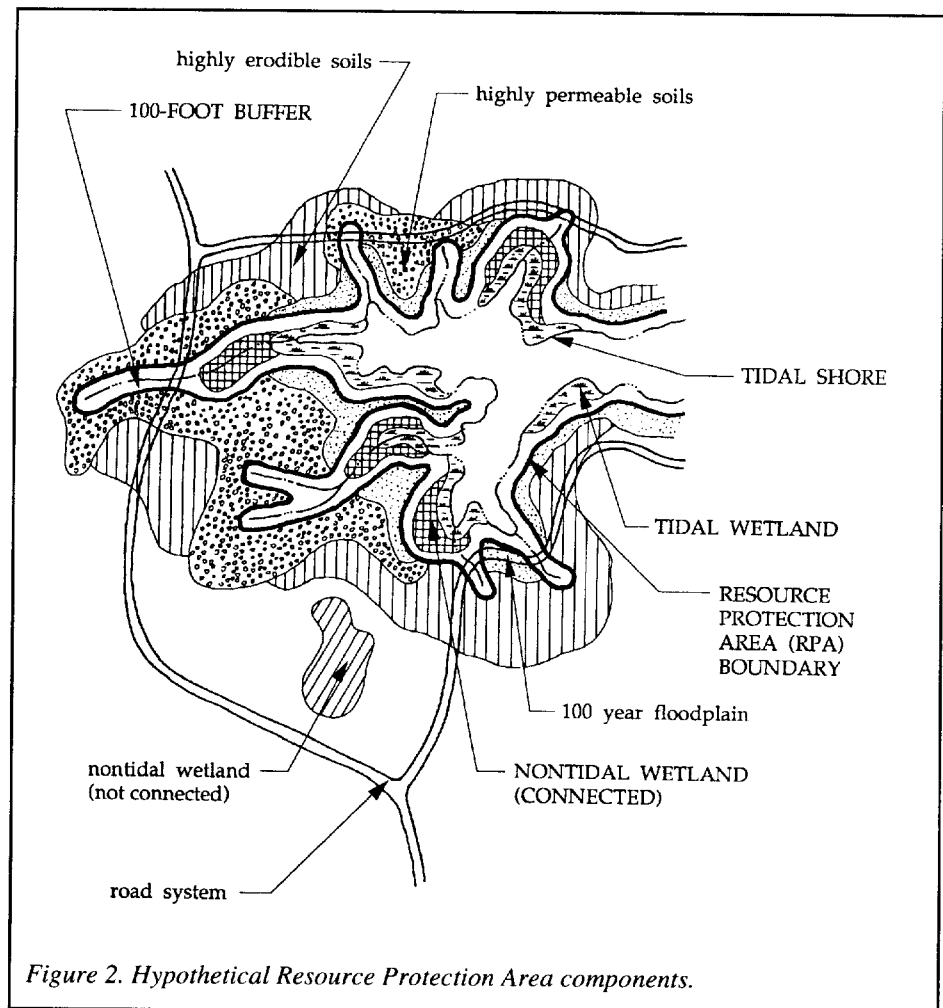


Figure 2. Hypothetical Resource Protection Area components.

- 4) other lands at local discretion, and
- 5) 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:

- 1) nontidal wetlands (other than those specified as RPAs),
- 2) floodplains,
- 3) highly erodible soils,
- 4) highly permeable soils, and
- 5) 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 very 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 CBLAB 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 has produced a handbook 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. Subsequent amendments have provided greater strength to the law, including the recent addition of enabling legislation to allow localities to enforce programs through civil penalties as an alternative to criminal procedures (Article 4 of Chapter 5 of Title 10.1, Code of Virginia). The law requires an approved **erosion and sediment control plan** prior to any land-disturbing activity. The intent is to control erosion, reduce sedimentation and minimize nonpoint source discharges to waterways. Upland areas which have been disturbed are particularly susceptible to erosion and become sources of **nonpoint source water pollution**. Some of the exemptions to the law include; mining, oil and gas exploration and drilling, most agricultural activities, and certain activi-



ties involving minor land disturbance. The **Erosion and Sediment Control 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 each soil and water conservation district (SWCD) in the Commonwealth to have a program consistent with the state program and regulations. Provisions are made in the law for localities to adopt and administer an approved local program. The pur-

view of the Act is statewide: there are 170 local programs in Virginia covering every county, city and town. The SWCDs may be involved in plan review of local programs, and assistance is offered through inspections, public education and advisory programs.

Minimum standards are set forth in the regulations for the effective control of soil erosion, sediment deposition and nonagricultural runoff. The minimum standards for programs adopted by districts or localities address many issues including: permanent soil stabiliza-

tion, vegetative cover, need for sediment basins, work in live watercourses and 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 is the third edition released in 1992 (VA DSWC). 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

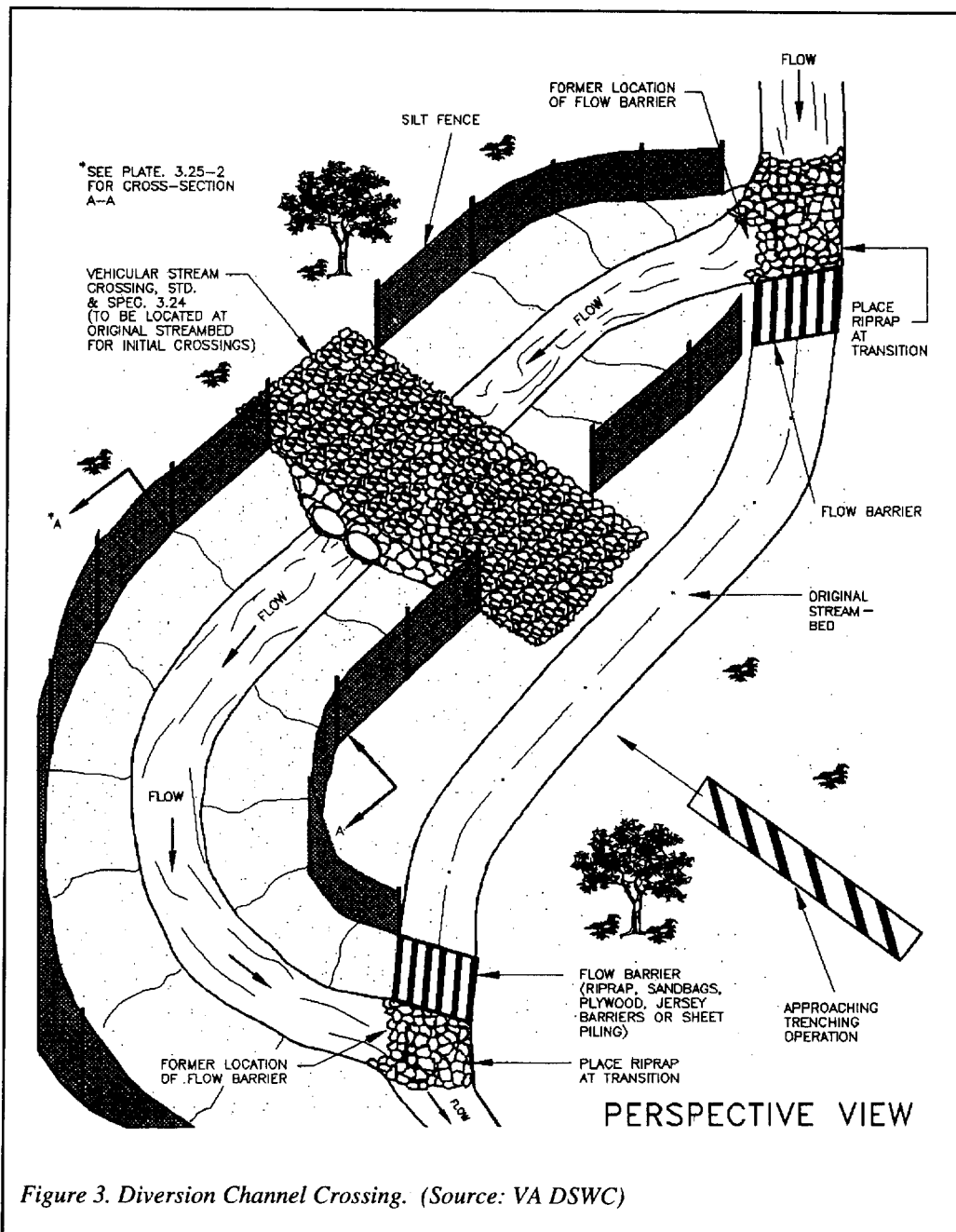


Figure 3. Diversion Channel Crossing. (Source: VA DSWC)

photographs from the field are given for a range of erosion and sediment control devices. See Figure 3 for example of design criteria provided in handbook.

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 a 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 a construction site long enough to allow the sediment to settle out of the water.

State Programs

Subaqueous Law

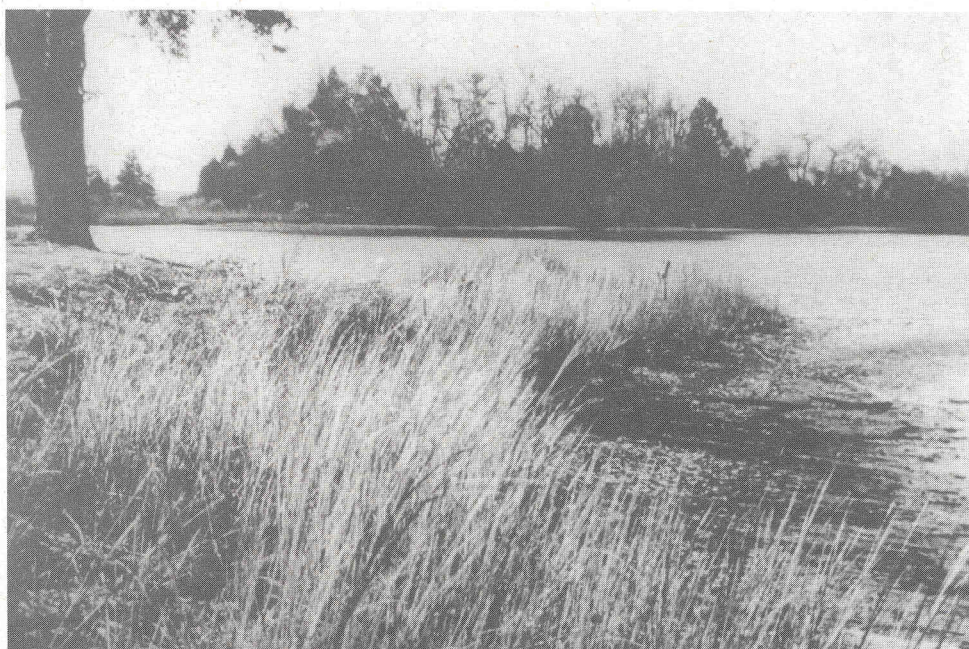
It is unlawful to conduct activities in Virginia waters without statutory authority or a **permit** from the **Marine Resources Commission** (Va Code 28.2-1200). The **Joint Permit Application** is used to apply for a permit under this Act. All of Virginia falls under the jurisdiction of this statute. 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 tidal waters and ordinary high water in nontidal waters. Some subaqueous beds are in private ownership under historical land grants and are therefore exempt from this provision. Also exempt are waterbodies created from upland excavation. However, the Commonwealth retains ownership of the remaining subaqueous beds of bays, rivers, creeks and shores.

Legislation confers statutory authority for the placement of private, noncommercial piers by owners of riparian land. Other activities authorized by the legislation include, but are not limited to; 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 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.

The state program is administered by the **Department of Environmental Quality, Water Division** (formerly the State Water Control Board). The State Water Control Board, composed of Virginia citizens, is responsible for promulgating regulations to implement the program. Virginia Water Protection Permit regulations were adopted by the Board 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.**

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

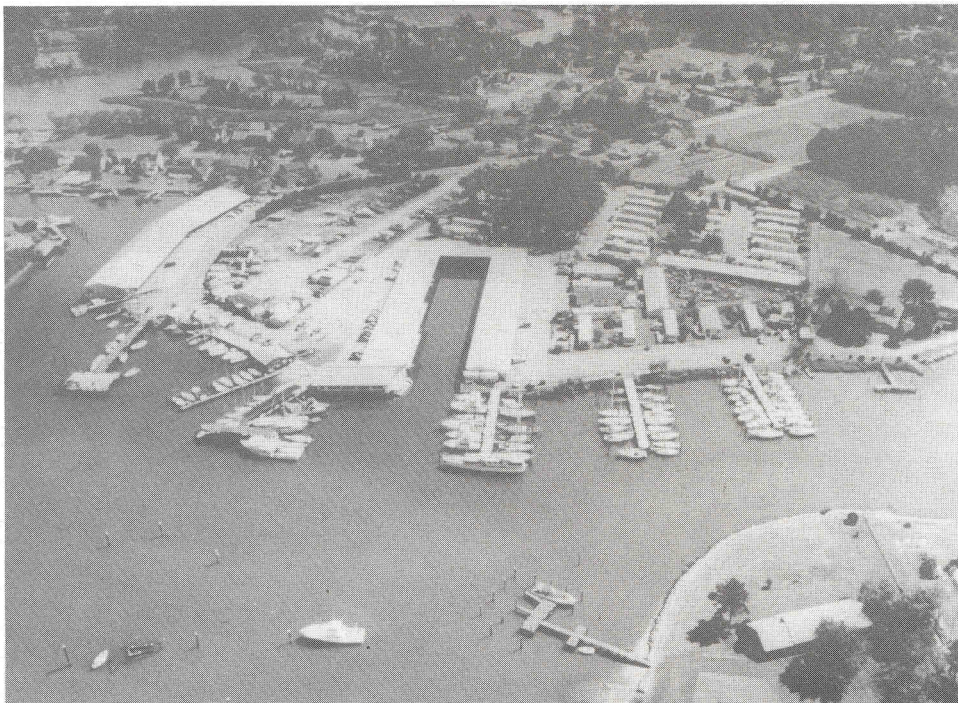
An applicant for the Virginia Water Protection Permit files a **Joint Permit Application.** However, additional information is required on the application in order to process a water protection permit. Information required includes; stream classification according to state water quality standards, drainage area and hydrologic unit code. A functional assessment of the affected surface waters, which includes 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 (VPDES)

The National Pollutant Discharge Elimination System was created under section 402 of the federal Clean Water Act. The U.S. Environmental Protection Agency may delegate the authority to administer the program to individual states. Virginia received authorization to administer the program in 1975. Any **point source** discharge of pollutants to surface waters is subject to regulation under the Virginia Pollutant Discharge Elimination System (VPDES) permit.

A citizens board, the **State Water Control Board**, promulgates regulations for the VPDES program which is administered by the **Department of Environmental Quality, Water Division.** A permit is required for most point source discharges. There are a few exemptions from the VPDES Permit Program for activities such as discharges from vessels, discharges regulated under Section 404 of the CWA, and return flows from irrigated agriculture.

As a condition of delegation of permit authority from EPA, Virginia must adopt and maintain regulations which reflect the most recent federal regulations. The regulations must be at least as stringent as the federal regulations.



Federal Programs

Clean Water Act

The federal resource management program with the greatest impact on water resources is the Clean Water Act of 1972 and subsequent amendments (CWA). Various provisions of the Act provide for financial assistance, water quality standards, monitoring, treatment, reporting and permitting.

As previously stated, Virginia administers section 401 (Water Quality Certification) as the Water Protection Permit and section 402 (National Pollutant Discharge Elimination System) as the Virginia Pollutant Discharge Elimination System.

Other provisions of the CWA are administered at the federal level. 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**. As such, the entire state of Virginia falls under the jurisdiction of this provision of the CWA. 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. Once again, the **Joint Permit Application** is used to seek approval for activities under the provisions of §404.

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 within the Corps Norfolk District and the main office is in Norfolk. There are also several field offices located throughout Tidewater.

MANAGEMENT PROGRAM	PERMIT REQUIRED	ADMINISTERING AGENCY	JURISDICTION
VIRGINIA WETLANDS ACT	YES	VMRC/ LOCAL WETLANDS BOARDS	TIDEWATER VIRGINIA MLW to MHW without vegetation MLW to 1.5x tide range with vegetation
COASTAL PRIMARY SAND DUNE ACT	YES	VMRC/ LOCAL WETLANDS BOARDS	8 TIDEWATER LOCALITIES
CHESAPEAKE BAY PRESERVATION ACT	NO, APPROVED PLAN	CHESAPEAKE BAY LOCAL ASSISTANCE DEPARTMENT/ TIDEWATER LOCALITIES	TIDEWATER VIRGINIA
EROSION AND SEDIMENT CONTROL ACT	NO, APPROVED PLAN	DCR, Division of Soil and Water Conservation/ LOCALITIES	ALL OF VIRGINIA
SUBAQUEOUS LAW	YES	VMRC	ALL OF VIRGINIA, Tidal and Nontidal Waters Channelward of Mean Low Water
VIRGINIA WATER PROTECTION PERMIT (401 CWA)	YES	DEPT. of ENVIRONMENTAL QUALITY, Water Division	ALL OF VIRGINIA, Surface Waters including Wetlands
VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM	YES	DEQ, Water Division	ALL OF VIRGINIA, Point source discharge to Surface Waters
SECTION 404 FEDERAL CLEAN WATER ACT	YES	ARMY CORPS OF ENGINEERS	ALL OF VIRGINIA, Waters of the U. S. including Wetlands
COASTAL ZONE MANAGEMENT ACT	NO, Grant Program	DEPARTMENT OF ENVIRONMENTAL QUALITY	TIDEWATER VIRGINIA
NATIONAL ENVIRONMENTAL POLICY ACT	NO, EIS Review	DEPARTMENT OF ENVIRONMENTAL QUALITY	ALL OF VIRGINIA, EIS Required for Major Actions

Coastal Resources Management Programs in Virginia.

The Corps has nationwide and regional permits for activities which are frequently occurring and have minimal 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.

Section 404(t) requires that federal projects comply with state regulations for the discharge of dredged and fill materials into waters of the United States. 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 in order 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 (NOAA)**. The grant-in-aid provisions of the Act make federal monies 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 proposed federal action if it is found to be inconsistent with the state program.

The Virginia Coastal Resource Management Program (VCRMP) was approved in 1986. The Virginia Program is a network of several resource management activities administered by various state agencies. The wetlands management program is one component of Virginia's program.

The Virginia Program is administered by the **Department of Environmental Quality** (formerly the Virginia Council on the Environment (COE)). Proposals for grant money are submitted to the Department.

Recommended proposals are forwarded to NOAA for final approval. Project proposals should address some aspect of the coastal program. The Department 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, channel work, 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 requires 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 **Department of Environmental Quality** coordinates the review of environmental assessments for projects in Virginia.

Citations

- Colgan, C. S. (ed.) 1990. Valuing coastal zone management. National Coastal Resources Research and Development Institute. NCRI Pub. no. NCRI-T-90-005. 27pp.
- Field, D. W., A. J. Reyer, P. V. Genovese and B. D. Shearer. 1991. Coastal wetlands of the United States. National Ocean Service, NOAA. U.S. Fish and Wildlife Service, Washington D.C., and Slidell, LA. 59pp.
- Hobbs, C. H., D. Owen and L. C. Morgan. 1979. Summary of the shoreline situation reports for Virginia's Tidewater localities. SRAMSOE #209. Virginia Institute of Marine Science, Gloucester Point, Virginia. 31pp.
- The Report of the Year 2020 Panel. 1988. Population growth and development in the Chesapeake Bay watershed to the year 2020. 71pp.
- Tiner, R. W., Jr. 1987. Mid-Atlantic wetlands: a disappearing natural treasure. U.S. Fish and Wildlife Service. Newton Corner, MA. 28pp.
- Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation. 1992. Virginia Erosion and Sediment Control Handbook.