

HENRICO COUNTY ENVIRONMENTAL PROGRAM MANUAL

1.1 INTRODUCTION

Development projects in the County are subject to various locally implemented environmental programs as required by the following state and federal laws and regulations:

1. the Erosion and Sediment Control Law (§ 10.1-560 et seq. of the State Code) and the Erosion and Sediment Control Regulations (VR 625-02-00),
2. the Chesapeake Bay Preservation Act (§ 10.1-2100 et seq. of the State Code) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC10-20 et seq.),
3. the Virginia Stormwater Management Law (§ 10.1-603 et seq. of the State Code) and the Virginia Stormwater Management Regulations (4VAC3-20 et seq.), and
4. the National Pollutant Discharge Elimination System (NPDES) and Virginia Pollutant Discharge Elimination System (VPDES) developed under the authority of § 402(p) of the Clean Water Act.

Although these programs are required by separate laws and regulations, there are components of the programs that overlap when implemented at the local level. For example, the CBPA Regulations require that stormwater quality be addressed within CBPAs. However, the same water quality criteria are also applied County-wide as a requirement of the County's VPDES program. In order to provide assistance in complying with these programs, the *Henrico County Environmental Program Manual* (the Manual) has been developed by the Department of Public Works. Although efforts were made to divide the Manual into chapters based on the various environmental programs, there are several chapters that describe only certain components of various programs. These program components are separated due to the overlapping nature of the programs.

The structure of the Manual follows a chapter-by-chapter discussion of the following topics:

1.2 CHAPTER 2 - STREAM ASSESSMENT / WATERSHED MANAGEMENT PROGRAM

Chapter 2 of the Manual explains the County's newest environmental program – the Stream Assessment / Watershed Management Program. Compliance with the provisions of this chapter is required by § 10-35(a)(14)a of the Code of the County of Henrico.

The Stream Assessment / Watershed Management Program satisfies the stormwater quality component of the CBPA Regulations and was developed in response to concerns about the number of small best management practices (BMPs) being constructed throughout the County, and the impact that stormwater quality requirements have on redevelopment activities. Instead of relying solely on BMPs such as detention basins, sand filters and ponds to meet the stormwater quality requirements of development projects, the Stream Assessment / Watershed Management Program employs other practices such as stream restoration, stream obstruction removal and stream buffer restoration in addition to on-site BMPs.

The Stream Assessment / Watershed Management Program also provides for monetary contributions to an Environmental Fund depending on the area in which the project is located and the existing and proposed impervious coverage of the project. Contributions to the Environmental Fund are authorized by § 15.2-2243 of the Code of Virginia which was amended at the County's request during the 2000 General Assembly Session (Senate Bill No. 876). The contribution is based on a project's pollutant removal requirement. Contributions to the Environmental Fund will be used to conduct water quality improvement projects in either the James River or Chickahominy River watershed, depending on where the contributing project is located. The Chesapeake Bay Local Assistance Department has determined that this approach provides the level of stormwater quality treatment required by the CBPA Regulations.

1.3 CHAPTER 3 - STORMWATER POLLUTANT REMOVAL

Chapter 3 of the Manual provides the procedures and calculations that must be used to demonstrate compliance with the stormwater pollutant removal controls required by § 10-35(a)(14)b of the Code of the County of Henrico. These controls are required by the CBPA Regulations and the VPDES program.

The County uses the Simple Method to calculate a project's required pollutant removal requirement. The keystone pollutant is phosphorus and the average watershed condition is 16%. The derivation of the Simple Method can be found in Appendix A of *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*, published by the Metropolitan Washington Council of Governments.

Included in this Chapter is a discussion of the five development scenarios and all necessary worksheets. In addition, general BMP design criteria and location guidelines are provided. Prior to the development of this Manual, the stormwater quality calculations and best management practice design criteria were governed by the County's Stormwater Quality Guidelines dated June 1, 1997 and revised May 1998. The content of the Stormwater Quality Guidelines has been included in the Manual and therefore, the Stormwater Quality Guidelines document is no longer valid.

1.4 CHAPTER 4 - STORMWATER QUANTITY CONTROLS

Chapter 4 of the Manual provides the requirements that must be met to address the County's quantity related controls for stormwater runoff. Specifically, these controls are the 50/10 stormwater detention and the adequate outfall channel requirements. Compliance with the provisions of this chapter is required by § 10-35(a)(14)a of the Code of the County of Henrico.

1.5 CHAPTER 5 - EROSION AND SEDIMENT CONTROL PROGRAM

Chapter 5 of the Manual identifies provisions required for land disturbing activities greater than or equal to 2,500 square feet to demonstrate compliance with § 10-31 et seq. of the Code of the County of Henrico. These requirements are a result of the ESC Law and Regulations.

In general, a land disturbing activity is defined as "any clearing, grading, excavating, transporting or filling of land". Clearing is also defined and means "any activity which removes vegetation, including removal of trees, root mat or topsoil." As specified by state law, some activities such as home gardens, individual home landscaping, and bona fide agricultural and forestry operations are exempt from the Erosion and Sediment Control program.

1.6 CHAPTER 6 - CHESAPEAKE BAY PRESERVATION AREA PROGRAM

Chapter 6 of the Manual identifies some of the provisions required of development projects to demonstrate compliance with the requirements concerning CBPAs found in § 10-31 et seq. and § 24-106.3 et seq. of the Code of the County of Henrico. Other provisions necessary to demonstrate compliance with these sections may be required by other chapters of the Manual or by other Departments. These requirements are a result of the CBPA Act and Regulations.

Virginia's CBPA Regulations require local governments to implement ordinances designed to protect and restore water quality within the locality in order to improve the water quality of the Chesapeake Bay. The County of Henrico regulates these environments through development restrictions in these sensitive environments. CBPAs include Resource Protection Areas and Resource Management Areas.

1.7 CHAPTER 7 - WATERS OF THE UNITED STATES

Chapter 7 of the Manual identifies some of the provisions required for development projects

to demonstrate compliance with the requirements concerning wetlands found in § 10-31 et seq. and § 24-106.3 et seq. of the Code of the County of Henrico. Other provisions necessary to demonstrate compliance with these sections may be required by other chapters of the Manual or by other Departments. These requirements are a result of the CBPA Act and Regulations.

Waters of the United States (streams and wetlands) within Henrico County are regulated by several agencies: the U. S. Army Corps of Engineers, the Virginia Marine Resources Commission, and the Virginia Department of Environmental Quality. While the County does not administer its own surface water protection program, evidence of all appropriate permits from these agencies must be provided to the County prior to approval of plans. In addition, the County has developed several policies designed to minimize unauthorized impacts while providing adequate usable land for development.

1.8 CHAPTER 8 - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Chapter 8 of the Manual identifies some of the provisions required of development projects to demonstrate compliance with requirements concerning stormwater discharges found in § 10-215 et seq. of the Code of the County of Henrico. Other provisions necessary to demonstrate compliance with these sections may be required by other chapters of the Manual or by other Departments. These requirements are a result of the County's VPDES permit.

In accordance with Section 402 (p) of the Clean Water Act, the County and other localities with a population of greater than 100,000 must operate under a VPDES permit that regulates inputs to the municipal separate storm sewer system. In accordance with their approved permit, each locality must reduce stormwater pollution to the maximum extent practicable, including stormwater pollution from residential, commercial and industrial areas. The County's permit also addresses illicit discharges to the municipal storm sewer system and stormwater discharges from construction sites.

1.9 CHAPTER 9 - MINIMUM DESIGN STANDARDS

Chapter 9 provides the specific design details and supporting calculation worksheets that must be satisfied for the BMPs and other measures required by the County's environmental programs.

1.10 CHAPTER 10 – EXCEPTIONS / WAIVERS

Chapter 10 includes a general discussion of the process and conditions for exceptions and waivers for the various environmental programs.

1.11 CHAPTER 11 - FREQUENTLY ASKED QUESTIONS

Chapter 11 includes the answers to the frequently asked questions concerning the various environmental programs and policies. Of the Chapters included in the Manual, this Chapter is likely to be the most frequently updated. The intent is to distribute supplements to this Chapter as policies are developed, particularly concerning the Watershed Program.

1.12 APPENDIX

This section of the Manual includes a collection of sample letters, reference material, assessment protocols, etc. that are referenced throughout the Manual.

1.13 ACRONYMS AND GLOSSARY

This section of the Manual includes a listing of acronyms and terms and their meanings that are used throughout the Manual.