Town of Windsor, Virginia Stormwater Management Program

PEP09-05

October 2009

HAMPTON ROADS PLANNING DISTRICT COMMISSION

CHESAPEAKE
AMAR DWARKANATH
WILLIAM E. HARRELL
CLIFTON E. HAYES, JR
* ALAN P. KRASNOFF
ELLA P. WARD

FRANKLIN
* JUNE FLEMING
ROSA M. LAWRENCE

GLOUCESTER COUNTY
* BRENDA G. GARTON
GREGORY WOODARD

HAMPTON
ROSS A. KEARNEY
JAMES B. OLIVER
* MOLLY JOSEPH WARD

ISLE OF WIGHT COUNTY
W. DOUGLAS CASKEY
* STAN D. CLARK

JAMES CITY COUNTY
* BRUCE C. GOODSON
SANFORD B. WANNER
.

NEWPORT NEWS
* JOE S. FRANK
VACANT
SHARON P. SCOTT

NORFOLK
ANTHONY L. BURFOOT
* PAUL D. FRAIM
DR. THERESA W. WHIBLEY
REGINA V.K. WILLIAMS
BARCLAY C. WINN

POQUOSON
* J. RANDALL WHEELER
GORDON C. HELSEL, JR.

PORTSMOUTH
KENNETH L. CHANDLER
* DOUGLAS L. SMITH

SOUTHAMPTON COUNTY
ANITA T. FELTS
* MICHAEL W. JOHNSON

SUFFOLK
* SELENA CUFFEE-GLENN
LINDA T. JOHNSON

SURRY COUNTY
* TYRONE W. FRANKLIN
JOHN M. SEWARD

VIRGINIA BEACH
HARRY E. DIEZEL
ROBERT DYER
BARBARA M. HENLEY
LOUIS R. JONES
* WILLIAM D. SESSOMS
JAMES K. SPORE
JOHN E. UHRIN

WILLIAMSBURG
JACKSON C. TUTTLE, II
* JEANNE ZEIDLER

YORK COUNTY
* JAMES O. McREYNOLDS
THOMAS G. SHEPPERD, JR.

*EXECUTIVE COMMITTEE MEMBER

PROJECT STAFF

DWIGHT L. FARMER	EXECUTIVE DIRECTOR/SECRETARY
JOHN M. CARLOCK	DEPUTY EXECUTIVE DIRECTOR
ERIC J. WALBERG	PHYSICAL AND ENVIRONMENTAL PLANNING ADMINISTRATOR
CLAIRE JONES	PHYSICAL AND ENVIRONMENTAL PLANNER
LAURA M. WHEELING	PHYSICAL AND ENVIRONMENTAL PLANNER
FRANCES D. HUGHEY	ADMINISTRATIVE ASSISTANT
ROBERT C. JACOBS	GENERAL SERVICES MANAGER
MICHAEL R. LONG	ASSISTANT GENERAL SERVICES MANAGER
BRIAN MILLER	COMMUNICATIONS DESIGNER
CHRISTOPHER W. VAIGNEUR	REPROGRAPHIC COORDINATOR

THE TOWN OF WINDSOR
STORMWATER MANAGEMENT PROGRAM

Adopted by the Windsor Town Council
X X, 2009

Preparation of this Plan was included in the
Hampton Roads Planning District Commission
Unified Planning Work Program for
FY 2007-2008, approved by the Commission at its
Executive Committee Meeting of March 21, 2007.

Prepared by the staff of the
Hampton Roads Planning District Commission

October 2009

REPORT DOCUMENTATION

TITLE:
Town of Windsor
Stormwater Management Program

REPORT DATE
October 2009

GRANT/SPONSORING AGENCY
Town of Windsor

AUTHORS:
Laura M. Wheeling
Claire Jones, AICP

ORGANIZATION NAME,
ADDRESS AND TELEPHONE
Hampton Roads Planning
District Commission
723 Woodlake Drive
Chesapeake, Virginia 23320
(757) 420-8300
http://www.hrpdc.org

ABSTRACT

This document describes the detailed Stormwater Management Program for the Town of Windsor, which is based on the six minimum control measures of the Phase II stormwater regulations. These measures when implemented in concert over the next several years are expected to result in decreases in the amount of stormwater pollution entering local creeks and streams in and around the Town.

In addition to the Stormwater Management Program components, presented in Part I, this document also describes applicable stormwater regulations, compares town policies to state regulations, proposes recommendation on how town programs can be improved, and describes a process for coordinating stormwater management between the Town of Windsor and Isle of Wight County.

ACKNOWLEDGMENTS

The staff of the Hampton Roads Planning District Commission wishes to acknowledge the cooperation and assistance extended by the officials and staff of the Town of Windsor.

Preparation of this Plan was included in the Hampton Roads Planning District Commission Unified Planning Work Program for FY 2007-2008, approved by the Commission at its Executive Committee Meeting of March 21, 2007.

TABLE OF CONTENTS

PART I: INTRODUCTION
Content and Purpose 3
What is Stormwater? 4
Town Overview 5
Current Water Quality Improvement Activities 7
Water Quality Impairments 8

PART II: STORMWATER MANAGEMENT PROGRAM
Stormwater Program Goals 11
Stormwater Program Components 11
1. Public Education & Outreach 13
2. Public Involvement / Participation 15
3. Illicit Discharge Detection & Elimination 16
4. Construction Site Stormwater Runoff Control 19
5. Post-Construction Stormwater Management in New Development & Redevelopment 22
6. Pollution Prevention / Good Housekeeping 25

PART III: STORMWATER MANAGEMENT PLAN FRAMEWORK
MS4 Program Plan 28
MS4 Program Plan Draft Outline 29

PART IV: REGULATION SUMMARIES
Stormwater & Related Regulations 34
Potential Changes to Stormwater Regulations 36

PART V: COMPARISON OF TOWN POLICIES TO STATE REGULATIONS & PROPOSED RECOMMENDATIONS
Chesapeake Bay Preservation Act 42
Erosion & Sediment Control 44
Stormwater Management 45

PART VI: INSTITUTIONAL PROCESS FOR STORMWATER MANAGEMENT
Background 49
Consensus Points 50

PART I: INTRODUCTION

Content and Purpose

This Stormwater Management Program has been prepared for the Town of Windsor by the Hampton Roads Planning District Commission (HRPDC) to provide the means to effectively address, to the maximum extent practicable, some of the common pollutants found in stormwater. The comprehensive program includes pollution reduction activities for citizens, businesses, construction sites, and municipal operations. The program also includes participation in a regional public education effort and targeted pollution reduction strategies. By addressing the pollutants and limiting the sources of such pollutants through the implementation of structural and nonstructural Best Management Practices (BMPs), the Town hopes to improve the water quality of its creeks and streams and protect the natural beauty and defining characteristics of its landscape.

The Town of Windsor is not currently required by regulations to adopt a stormwater management program. Yet, the Town will be subject to regulation when the Virginia Department of Conservation and Recreation (DCR) adopts the revised Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities to local governments. Windsor will be required to accept administration of this VSMP general permit program because of its status as a Chesapeake Bay Preservation Act locality. Prior to delegation, the Town will need to adopt a stormwater management ordinance and include inspection, monitoring, and enforcement procedures in its stormwater program. Delegation of the VSMP general permit program is expected to occur within the next two to three years. (Further information about the delegation of the VSMP general permit for construction activities can be found in Part IV.)

The Town of Windsor may also be subject to additional regulation if it grows to a level that requires the acquisition of a Municipal Separate Storm Sewer System (MS4) permit from DCR. MS4 stormwater permits are required when a locality owning a municipal separate storm sewer system is part of an urbanized area as determined by the latest decennial census. Urban areas are defined as those consisting of a central place(s) and adjacent territory with a general population density of at least 1,000 people per square mile of land area that together have a minimum residential population of at least 50,000 people. Localities falling into the regulated category are required to apply for and obtain a MS4 permit and adhere to the Phase II stormwater regulations, first promulgated by the U.S. Environmental Protection Agency in 1999 and currently administered in Virginia by DCR through the VSMP regulations. Even if the Town does not qualify as an urbanized area in the next decennial census in 2010, DCR's Board of Soil and Water Conservation has the authority to require a municipality to obtain a Phase II permit if the Board determines that a locality's stormwater system is a significant contributor of pollutants to state waters.

In order to protect water quality and to prepare for potential regulation and any new stormwater requirements that may be imposed, the Town of Windsor has embarked on the development of a stormwater management program, which is modeled after the Phase II program requirements so

that it corresponds with and is generally consistent with the Isle of Wight County Stormwater Management Program. Isle of Wight County is currently a regulated Phase II MS4.

What is Stormwater?

Stormwater is the flow of water that results from precipitation, which occurs immediately following rainfall or as a result of snowmelt. When a rainfall event occurs, several things can happen to the precipitation. Some of the precipitation infiltrates into the soil surface, some is taken up by plants, and some is evaporated into the atmosphere. The rest of the precipitation that runs off land and impervious surfaces such as driveways, sidewalks, rooftops, and paved streets is known as stormwater runoff.

Stormwater runoff accumulates pollutants as it travels across the land. A variety of pollutants have been identified, historically, in stormwater discharges. Some of these pollutants include suspended solids, sediment, bacteria, nutrients, pesticides, herbicides, toxics, floatables, oil, grease, heavy metals, synthetic organics, petroleum hydrocarbons, and oxygen-demanding substances. The adverse impacts of these pollutants in stormwater discharges include closed beaches, closed shellfish areas, toxic contamination causing fish consumption bans, fish kills, beach and shoreline litter, siltation of marinas and shipping channels, habitat/wetland degradation, and stream bank

erosion.

Sources of pollutants in stormwater runoff could include urban streets, lawns, driveways, parking lots, gas stations, bus depots, golf courses, construction sites, marinas, trash, sand/salt, commercial and industrial areas, agricultural and forestry activities, direct rainfall/air deposition, and a variety of other activities such as landfills, recycling facilities, and transportation facilities.

Town Overview

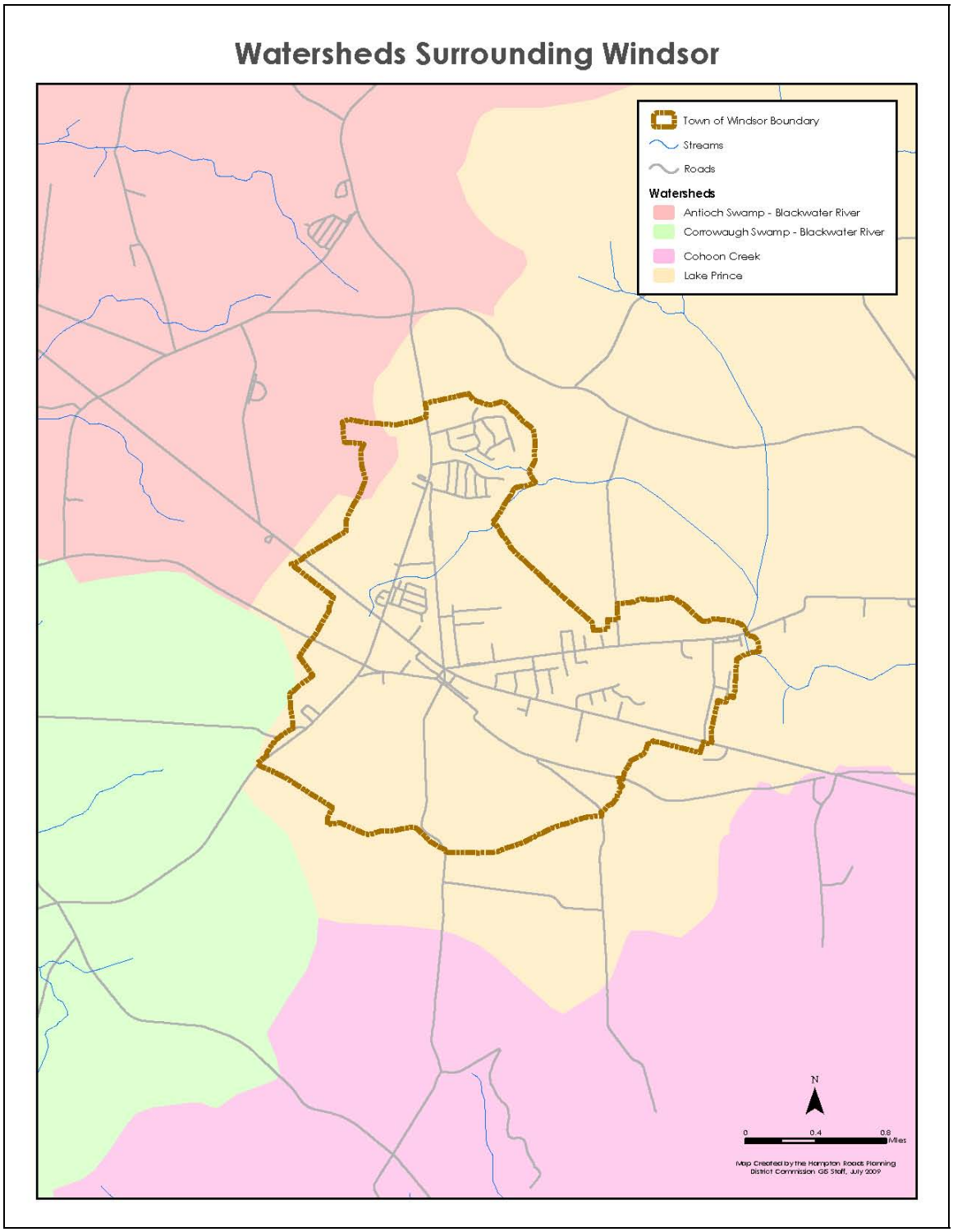
The Town of Windsor is located in the south central portion of Isle of Wight County at the intersection of U.S. Routes 460 and 258. In July 2001, a boundary adjustment with Isle of Wight County resulted in the annexation of significant commercial and residential areas into the Town's corporate limits. This boundary adjustment quadrupled the land area of the Town from 653 acres to 2,578 acres (4 square miles). In 2000, the Town of Windsor had a population of 916 before annexation. After annexation in 2001, the population of the Town was estimated to be 2,281. By 2007, the U.S. Census Bureau estimated the Town's population to be 2,479, an increase of approximately 9% since 2001.

The Town of Windsor is primarily located within the Lake Prince-Carbell Swamp-Ennis Pond watershed. Ennis Pond is a multi-branched freshwater swamp with no definable channel. The major branches of Ennis Pond bisect the Town of Windsor to the north and south. Carbell Swamp consists of several freshwater branches and is located to the northeast of Windsor. Both Carbell Swamp and Ennis Pond flow into Lake Prince, which is located five miles east of the Town and is a drinking water reservoir owned and operated by the City of Norfolk. Lake Prince also receives water from the Lake Gaston Pipeline. The lake drains to the Nansemond River, located in the City of Suffolk.

The northwestern tip of the Town of Windsor is a part of the Blackwater River-Antioch Swamp watershed. The Blackwater River, located to the west of the Town of Windsor, follows the western border of Isle of Wight County and is a drinking water supply source for the City of Norfolk. Antioch Swamp is a tributary of the Blackwater River.

The Lake Prince-Carbell Swamp-Ennis Pond watershed is a part of the Lower James River drainage basin, which ultimately flows into the Chesapeake Bay. The Blackwater River-Antioch Swamp watershed is a part of the Chowan drainage basin and flows southward into the Chowan River in North Carolina. Map 1 on page 6 provides an illustration of the watershed boundaries in and around the Town of Windsor. The watershed boundaries have been delineated as a part of the National Watershed Boundary Dataset (NWBD), which became the official hydrologic unit system of Virginia in July 2006.

Map 1: Watershed Boundaries Surrounding the Town of Windsor



Current Water Quality Improvement Activities

For many years, the Town of Windsor has been committed to improving water quality within its corporate limits. This commitment has been addressed primarily through the implementation of practices designed to meet the requirements of the Chesapeake Bay Preservation Act and Regulations (CBPA), the Virginia Erosion and Sediment Control Law and Regulations, and the Virginia Stormwater Management Law and Regulations.

The Town of Windsor's Chesapeake Bay Preservation Overlay District (Chapter 57 of the Town Code) aids in the protection of the Chesapeake Bay and its tributaries by requiring the use of effective conservation planning and pollution prevention practices when developing environmentally sensitive areas. This is achieved primarily by the retention and protection of 100-foot riparian buffers around waterbodies that drain to the Bay. The entire Bay watershed in the Town has been designated a Chesapeake Bay Preservation Area.

Chapter 57 of the Town Code also includes provisions that require any land disturbing activity exceeding 2,500 square feet, including construction of all single-family houses, to comply with the requirements of the Isle of Wight County Erosion and Sediment Control Ordinance. The ordinance requires developers to convey runoff to adequate channels and to prevent an increase of runoff from their regulated activities. In addition, the required erosion and sedimentation minimum control measures prevent soil movement and loss and help to reduce and eliminate damage to off-site receiving channels, property, and natural resources. For any development within the Town, the zoning ordinance requires stormwater runoff to be controlled by the use of best management practices consistent with the water quality protection provisions of the Virginia Stormwater Management Regulations.

Recently, the Town has improved water quality through the construction of a central sewer system. A vacuum wastewater system was developed and completed for the Town in the 1990s, with Isle of Wight County and the Hampton Roads Sanitation District (HRSD) jointly providing service. Prior to the central sewer system, sewage disposal was handled mostly by individual septic tanks or by four package plants that served the Town's two schools, the Windsor Court Apartments, and the Twin Ponds Mobile Home Park. Most septic systems have now been abandoned as local customers connected to the sewer collection system. In the past, there has been some concern that septic leachate and surface water runoff was impacting the Lake Prince drinking water reservoir which lies five miles east of Windsor. The recent availability of centralized sewer service in the Windsor area has helped alleviate some of these concerns. The Town helps to ensure that pollution from septic systems in residential subdivision is minimized by requiring the public sewer service to be extended to all lots within a new subdivision. In addition, the Land Development Chapter of the Town Code states that the Town Council can only approve new subdivisions where

sanitary sewer is or will be provided. Until all residences are connected to public sewer, Town staff will continue to enforce the 5-year pump-out schedule required by the Chesapeake Bay Preservation Act and local ordinance.

To address stormwater runoff that impacts local water quality, Windsor operates and maintains a municipal storm drainage system that consists of open drainage ditches, curb and gutter, intermittent sections of pipe, and several structural best management practices (BMPs). These structural BMPs have water quality features incorporated into them and are designed to be integral to neighborhood, commercial, and office designs, emphasizing both water quality and runoff quantity control principles as well as minimizing the impacts on sensitive environmental areas.

Chapter 92 of the Town Code helps prevent pollution from entering area streams, ponds, creeks, and lakes by prohibiting littering within the Town. In addition, the Town offers regular curbside trash collection as well as a twice yearly cleanup day that allows residents to dispose of large items and yard waste that might otherwise be dumped in streams. Recyclables are collected at the Windsor Transfer Station located on U.S. 460, along with appliances, used motor oil, and yard debris. Household hazardous waste may be disposed of free of charge at the Isle of Wight Transfer Station in Smithfield on a monthly basis.

Although much has been done to improve water quality within the Town, additional improvements are still needed. The Stormwater Management Program, outlined in Part II, provides the Town with an assortment of ideas, tools and resources to prevent pollution and improve water quality and the quality of life within the Town.

Water Quality Impairments

Water quality impairments occur when pollution amounts are too high, waterbodies cannot support their designated uses, and waterbodies fail to meet Virginia water quality standards. After impaired waters have been identified, a Total Maximum Daily Load (TMDL), or limit, for the pollutant or pollutants causing impairment is developed. While there are no impaired waters within town boundaries, Windsor is located almost entirely in the Upper Nansemond River Watershed, which contains several impaired waters based on the state's 2008 Water Quality Assessment.

A TMDL study for bacteria was completed for the Upper Nansemond River Watershed in March 2006, and an implementation plan for the TMDL is currently being developed by Isle of Wight County and the City of Suffolk in partnership with the Virginia Department of Environmental Quality (DEQ), the Virginia Department of Health (VDH), and HRPDC. TMDL endpoints were also set for fecal coliform and enterococci in Shingle Creek and two segments of the upper Nansemond River. Waste load allocations were assigned to two point sources in the Town of Windsor:

- Windsor Apartments VA0069302

- Isle of Wight County, Windsor High School – VA0027146

In addition to point sources, stormwater pollution can also be a contributing factor to water quality impairments. Practices implemented through a stormwater management program can help reduce the amount of pollution entering the impaired water body and positively affect water quality.

PART II: STORMWATER MANAGEMENT PROGRAM

Stormwater Program Goals

The Town of Windsor is interested in managing stormwater in a manner that protects local waters from degradation and meets locally established quality of life goals and objectives. The Stormwater Management Program for the Town will incorporate various program elements and activities that can help reduce stormwater pollution and improve water quality.

In the development of a Stormwater Management Program, the following goals have been identified.

- Manage stormwater quantity and quality to the maximum extent practicable (MEP)
    - Implement best management practices (BMPs) and retrofit flood control projects to provide water quality benefits.
    - Support site planning and plan review activities.
    - Manage pesticide, herbicide, and fertilizer applications.
- Implement public information activities to increase citizen awareness and support for the program.
- Meet the following needs of citizens.
    - Address flooding and drainage problems.
    - Maintain the stormwater infrastructure.
    - Protect waterways.
    - Provide the appropriate funding for the program.
- Implement cost-effective and flexible program components.
- Satisfy regulatory requirements.
- Enhance erosion and sedimentation controls.
- Manage illicit discharges, spill response and remediation.

These goals are consistent with the Regional Stormwater Management Program that guides the operation of the programs of the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach and Williamsburg; the counties of Gloucester, Isle of Wight, James City, Southampton, Surry, and York; and the Town of Smithfield.

Stormwater Program Components

Windsor's Stormwater Management Program is comprised of six minimum control measures that, when implemented in concert over the next several years, are expected to result in reductions of stormwater pollutant discharges.

The six minimum control measures to be used in the Windsor program include the following:

1. Public Education and Outreach on Stormwater Impacts

2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

For each of the six minimum control measures identified, the Town has proposed structural and non-structural best management practices to help reduce the amount of stormwater pollution entering local creeks, streams, and swamps. Each minimum control measure has one or more goals that Windsor will strive to achieve as a part of its stormwater management program. The goals are addressed through several proposed best management practices. The listed tasks specifically identify the items the Town will perform based on the proposed best management practices. The identified best management practices and tasks for achieving the requirements of each of the six minimum control measures are described in the pages that follow.

These minimum control measures are defined in the Phase II stormwater regulations, which require the owners/operators of small MS4s located within urbanized areas to obtain a National Pollutant Discharge Elimination System (NPDES) permit. The permit requires the local government to develop a stormwater management program that addresses the six specified minimum control measures. Although the Town of Windsor is not currently a regulated small MS4 and is not required to obtain a permit or address the minimum control measures, the Town recognizes the value of implementing a stormwater program to help improve water quality, minimize stormwater pollution, and thus, improve the quality of life within the Town.

The development of a stormwater management program that is based on the Phase II program requirements and is consistent with Isle of Wight County's Stormwater Management Program also prepares the Town for potential regulation in the future and the state's delegation of the administration of the VSMP general permit for stormwater management activities to local governments. When this delegation occurs, the Town will benefit from having a program in place that meets the requirements for administration of the program.

1. PUBLIC EDUCATION & OUTREACH

Goal

- Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

Proposed Best Management Practices

To address the public education and outreach goal, the Town of Windsor will participate in HR STORM, the regional stormwater education program coordinated by the Hampton Roads Planning District Commission (HRPDC). HR STORM was formally established in 1997 to take advantage of the economies of scale resulting from the joint implementation of a regional stormwater education program by the then fifteen participating local governments of the Hampton Roads Regional Stormwater Management Committee. Since its inception, HR STORM has been responsible for meeting several of the common stormwater education needs of the local governments in the Hampton Roads region. HR STORM has been successful in the development of a host of educational strategies and materials that inform individuals and households about the steps they can take to reduce stormwater pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, and the proper disposal of used motor oil and other household hazardous wastes.

Town staff will also distribute the “Town of Windsor Stormwater Management” brochure, developed in conjunction with this stormwater management program. This brochure includes tips and techniques that can be used to minimize stormwater pollution and improve water quality within the Town.

Tasks

a) Participate in the Hampton Roads Regional Stormwater Management Program Memorandum of Agreement, which outlines the framework and responsibilities for the implementation of the stormwater public education and outreach program.

b) Identify stormwater education needs and priorities through staff participation on one or more of the HRPDC stormwater-related committees: the Regional Stormwater Management Committee, the Phase II Subcommittee, or the stormwater education subcommittee (HR STORM).

c) Distribute educational materials developed through the HRPDC and HR STORM to meet the identified needs and priorities of the Town of Windsor.

d) Distribute the "Town of Windsor Stormwater Management" brochure and make it available on the Town's website.

e) Distribute educational components through the quarterly Town newsletter.

2. PUBLIC INVOLVEMENT / PARTICIPATION

Goal

- Comply with state, tribal, and local public notice requirements when implementing the stormwater management program.

Proposed Best Management Practices

To meet the public involvement and participation goal, the Town of Windsor will, at a minimum, comply with the Virginia Freedom of Information Act (§2.2-3700 of the Code of Virginia) and public hearing and notice requirements found in §15.2-2204 of the Code of Virginia. The Act requires local governments to give the public notice of and access to all local council and commission meetings. In addition, all public records maintained by the Town are required to be accessible to the public. Section 15.2-2204 of the Code of Virginia requires local governing bodies and planning commissions to publish notices and hold public hearings on proposed amendments to locally adopted plans and ordinances. This includes stormwater management plans and ordinances.

The Town of Windsor solicits public input from citizens on issues that come before the Planning Commission and Town Council, and includes public comment periods at all regular meetings of both bodies.

Tasks

a) Comply with the public hearing/notice requirements of the Virginia Freedom of Information Act and §15.2-2204 of the Code of Virginia in developing and implementing the local stormwater management program.

b) Continue to solicit public input through informal public discussion sessions held prior to Town Council and Planning Commission meetings.

c) Continue public participation and involvement activities such as the semiannual clean-up days.

3. ILLICIT DISCHARGE DETECTION & ELIMINATION

Goals

Develop, implement, and enforce a program to detect and eliminate illicit discharges, as defined in 4 VAC 50-60-10, into the storm sewer system.

- Develop, if not already completed, a storm sewer system map showing the location of all major outfalls and the names and location of all surface waters that receive discharges from those outfalls.
- To the extent allowable under state, tribal or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the stormwater system.
- Inform public employees, businesses, and the general public of hazards associated with illegal discharges and the improper disposal of wastes.

Proposed Best Management Practices

The Town of Windsor will develop, implement and enforce a program to detect and eliminate illicit discharges by developing and implementing the following components.

First, the Town of Windsor proposes to identify, characterize, and map the major stormwater outfalls within the Town. As a part of this effort, the Town may also decide to map additional components of its stormwater drainage system.

In addition, the Town proposes to develop and adopt an illicit discharge ordinance, which will prohibit most non-stormwater discharges to the municipal separate storm sewer. The following categories of non-stormwater discharges or flows will only be prohibited if they are identified by the Town as significant contributors of pollutants to the storm sewer system: water line flushing, landscape irrigation, diverted stream flows, rising groundwater, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and discharges or flows from fire fighting activities.

In order to detect and address non-stormwater discharges, including illegal dumping, to the stormwater system, the Town of Windsor proposes to implement a complaint-driven illicit discharge detection and elimination program for the municipally owned storm sewer system. To implement

such a program, the Town of Windsor will develop a response protocol for reacting to illicit discharge complaints. The response protocol may include procedures for tracing the source of an illicit discharge, and procedures for removing the source of the discharge. Specific documentation of response procedures for sanitary sewer spills and petroleum and hazardous materials spills is desired, if not already completed and available. Currently, sanitary sewer overflows are handled by the County Department of Public Utilities, which owns and operates the sewer system. The County MS4 program indicates that all spills reaching state waters will be reported to the Virginia Department of Environmental Quality (DEQ) and to DCR. Additionally, the County will continue to utilize the regional Sanitary Sewer Overflow Reporting System (SSORS) to report overflows. Hazardous materials spills are handled by the local police and fire departments.

The Town of Windsor will inform public employees, businesses, and the general public of hazards associated with illegal discharges and the improper disposal of wastes, through its participation in the regional stormwater education program, HR STORM. The regional stormwater education efforts include the development of educational products, promotional materials, and training events about illicit discharges, illicit discharge detection, and the proper disposal of wastes. Through the HRPDC Phase II Subcommittee and the HR STORM subcommittee, educational needs will be identified and prioritized.

The Town may also consider developing an ordinance to prevent illicit discharges associated with the improper disposal of pet waste. The ordinance would to make it unlawful for a pet owner to allow urination or defecation by such animals within the curb and gutter area of a public street or roadway, or public median. Pet waste within the curb and gutter area of a street or roadway can easily enter the storm drain system and pollute the rivers and streams within the Town.

<u>Tasks</u>

a) Develop a storm sewer system map showing the location of all major outfalls and the names and location of all surface waters that receive discharges from those outfalls. Update the storm sewer system map periodically as new major outfalls are established.

b) Develop and adopt an illicit discharge ordinance, which prohibits illicit discharges from entering the stormwater system.

c) Implement the developed illicit discharge ordinance.

d) Develop a complaint-driven illicit discharge detection and elimination program for the municipally owned portions of the storm sewer system within the Town of Windsor. Specifically document sanitary sewer spill response procedures, as well as, petroleum and hazardous materials spill response procedures.

e) Implement the complaint-driven illicit discharge detection and elimination program, and track the number and types of discharges detected and eliminated.

f) Identify and prioritize education needs for public employees, businesses, and residential behaviors according to relative risk for producing illicit discharges through the HRPDC Phase II Subcommittee and HR STORM.

g) Distribute educational materials developed through HR STORM to groups with high risk for producing illicit discharges.

h) Participate in illicit discharge training events and workshops developed through HR STORM.

i) Consider development of an ordinance prohibiting pet waste within the curb and gutter area of a street or roadway.

4. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Goals

Develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre, or equal to or greater than 2,500 square feet in all areas of the jurisdiction designated as subject to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act (CBPA). Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program should include the development and implementation of, at a minimum:

- An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state or local law.
- Requirements for construction site operators to implement appropriate erosion and sediment control best management practices.
- Procedures for site plan reviews that include consideration of potential water quality impacts.
- Procedures for site inspection and enforcement of control measures.
- Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality; or procedures to ensure that construction site operators will secure a VSMP construction permit.
- Procedures for receipt and consideration of information submitted by the public.

Proposed Best Management Practices

Compliance with state erosion and sediment control regulations in the Town of Windsor is covered under Chapter 6 of the Isle of Wight County Code and in the County's Stormwater Management Program. Generally, Isle of Wight County staff is responsible for administration, inspection, and enforcement under the local erosion and sediment control program for all construction sites within town limits. Town staff is responsible for ensuring compliance with local zoning requirements, but there is no separate ordinance in place to address erosion and sediment control.

Under the Isle of Wight County Stormwater Management Program and Erosion and Sediment Control Ordinances, all construction site operators will continue to be required to implement appropriate erosion and sediment control best management practices. The county ordinance requires projects disturbing 2,500 square feet to have a locally approved erosion and sediment control plan before commencing any land disturbing activity. Once the plan is approved, the County

will periodically inspect the site and determine whether the BMPs are properly installed and maintained according to the plan. If it is found at any time that the BMPs are not properly installed and maintained, the County can bring an enforcement action against the violator under the local erosion and sediment control ordinance.

The small MS4 requirement to regulate wastes at construction sites is identical to that in the Virginia Stormwater Management Program (VSMP) Permit for the Discharge of Stormwater from Construction Activities (4 VAC 50-60-1100 et seq). Rather than duplicate this state requirement at the local level and unnecessarily increase the burden on construction site operators and private property owners, the County directs applicants to secure a VSMP Construction General Permit from the Virginia Department of Conservation and Recreation (DCR). As a result of proposed regulatory changes to the VSMP General Permit for Construction Activities, it is expected that DCR will be authorizing local governments to administer the VSMP General Permit for Construction Activities. Under the revised regulations, both Isle of Wight County and the Town of Windsor will be required to administer the permits since both are designated CBPA communities. The Town should continue to cooperate with Isle of Wight County to ensure that the need for a local program is met by 2011.

Also as a part of the Construction Site Stormwater Runoff control measure and in coordination with Isle of Wight County, the Town of Windsor will encourage the public to notify Town staff of any suggestions or problems associated with construction site stormwater runoff. The public will be able to submit comments, complaints, and notices of possible erosion and sediment control violations through a variety of means, including in person at Town offices, via email, and telephone.

<u>Tasks</u>

a) Continue to implement the site plan review, construction site BMP, and inspection provisions of the local Erosion and Sediment Control Program (Isle of Wight County).

b) Receive and respond to information from citizens relating to the local erosion and sediment control program through personal visits, email, and telephone (Isle of Wight County).

c) Require construction site owners and operators proposing to disturb 2,500 square feet or more of land in a Chesapeake Bay Preservation Area (town-wide in Windsor) or proposing to disturb one acre or more in any area to secure a VSMP Construction General Permit (Isle of Wight County).

d) Participate in the development of at least one regional contractor training session during the life of the permit (Isle of Wight County).

e) Continue to track the number of land disturbing activities and total disturbed acreage from development activities (Isle of Wight County).

f) Evaluate and assess progress toward meeting measurable goals (Isle of Wight County).

g) Encourage the public to notify Town staff of any suggestions or problems associated with construction site stormwater runoff (Town of Windsor).

h) Continue to work cooperatively with Isle of Wight County to develop an approvable program that meets state regulations.

5. POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT & REDEVELOPMENT

Goals

Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre or equal to or greater than 2,500 square feet in Chesapeake Bay Preservation Areas.

- Develop and implement strategies that include a combination of structural or nonstructural, or both, best management practices appropriate for the community.
- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under state, tribal or local law.
- Ensure adequate long-term operation and maintenance by the owner of BMPs.
- Track all permanent BMPs installed in Chesapeake Bay Preservation Areas. Include the type of BMP installed, the geographic location (hydrologic unit code), waterbody the BMP is discharging into, the number of acres treated, whether or not the BMP is inspected or maintained, and how often the BMP is maintained (quarterly, annually, etc).

Proposed Best Management Practices

To satisfy this minimum management measure, the Town of Windsor will implement and enforce its local Chesapeake Bay Preservation Overlay District (§Article 57.5 of the Town Code). Under this ordinance, any development or redevelopment activity equal to or greater than 2,500 square feet must comply with the General Performance Standards of the CBPA. The entire Bay watershed within the Windsor town limit is a designated Chesapeake Bay Preservation Area. The General Performance Standards set forth the minimum requirements for development which will prevent a net increase in nonpoint source pollution from new development, reduce nonpoint source pollution from redevelopment, and reduce nonpoint source pollution from agricultural uses. The standards most relevant to the post construction stormwater management minimum management measure include the BMP maintenance requirement and the requirement to use best management practices that are consistent with the water quality protection provisions of the Virginia Stormwater Management Regulations.

The Town of Windsor will require all BMP facilities to have an approved maintenance agreement. BMP maintenance agreements help to ensure the adequate long-term operation and maintenance of BMPs by the owner. Improvements can be made to current procedures through the development of a BMP maintenance agreement that requires the private owner to maintain his/her BMP in good working order, and ensures that the Town has the authority to repair and maintain the BMP and

assess the owner the cost of the repair in situations where the private owner or Homeowners Association fails to perform proper maintenance.

In addition to requiring BMP maintenance agreements, the Town will also develop and implement a stormwater management facility inspection program. Such a program will ensure that stormwater management facilities are regularly maintained and operated properly. The development of a stormwater management facility inspection program is one of the recommended future stormwater management improvement recommendations listed in the Windsor Comprehensive Plan. The plan recommends that Town staff inspect all private BMP structures that have a maintenance agreement at least once per year.

Windsor town staff will also track the number and types of permanent BMP structures installed within the Town. A BMP database has been developed by some of the local Hampton Roads Phase II communities. This database tracks the BMP type, geographic location, waterbody being discharged into, number of acres treated, inspection, and maintenance activities.

In 2006, six Hampton Roads cities were required to file a new Phase I VSMP MS4 permit application with the Commonwealth of Virginia, which include new terms much more extensive than previous permit requirements, especially regarding the amount of data to be tracked and reported on an annual basis. Subsequently, the affected localities agreed to the joint development of a Permit Administration and Reporting System (PARS) that can be used to manage and track this information in an efficient and intelligent manner. PARS will also be expanded to track some data required of Phase II communities, which includes Isle of Wight County. As applicable, this system should be used by the County and the Town to track data related to stormwater facilities within town limits.

<u>Tasks</u>

a) Continue to implement the stormwater performance standards of the local Chesapeake Bay Preservation Act Ordinance for new development and redevelopment.

b) Develop a BMP maintenance agreement for privately owned stormwater management facilities that requires the private owner to maintain his/her BMP in good working order, and ensures that the Town has the authority to repair and maintain the BMP and assess the owner the cost of the repair in situations where the private owner or HOA fails to perform proper maintenance.

c) Require BMP maintenance agreements for all stormwater management facilities within the Town in fulfillment of the requirements of the local Chesapeake Bay Preservation Ordinance (§57-11 (8) (b) [3].

d) Develop a stormwater management facility inspection program, which includes an inspection of all permanent BMP structures on a routine basis.

e) Track information about the newly installed structural BMPs within the Town. Include information about BMP type, geographic location, waterbody being discharged into, number of acres treated, inspection, and maintenance activities. Utilize PARS as appropriate.

6. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATORS

Goals

- Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program should include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

Proposed Best Management Practices

To satisfy this minimum management measure, the Town of Windsor proposes to develop and implement an operations and maintenance program. Such an operations program could include the development of an inventory of all of the municipal operations within the Town that have the potential to cause stormwater pollution. Such operations may include storage areas for sand, salt, fertilizers, pesticides and other chemicals; vehicle fueling, storage and maintenance areas; water and sewer treatment systems; parking lots; and locally owned and operated parks and open space. The Town will then regularly inspect the identified facilities and correct any problems observed.

Also, the Town of Windsor proposes to educate and train municipal employees to prevent and reduce pollutant runoff from municipal operations through the regional stormwater education efforts coordinated by the HRPDC. In the past, educational efforts developed through the HRPDC have included training sessions on fleet maintenance, landscaping and lawn care, and illicit discharge detection. Training events and workshops will be prioritized through the HRPDC Phase II Subcommittee.

Tasks

a) Develop an operations and maintenance program for municipally owned facilities within the Town of Windsor.

b) Identify and prioritize pollution prevention education and training needs for municipal employees based on relative risk for stormwater pollution from municipal operations through the HRPDC Phase II Subcommittee.

c) Distribute pollution prevention educational materials developed through the HRPDC to municipal employees engaging in operations with high risk of discharging pollutants into the MS4.

d) Aid with the development of a training workshop for local government employees, engaging in operations with a high risk of discharging pollutants into the MS4 and coordinated by the HRPDC Phase II Subcommittee.

e) Encourage Town staff to attend and participate in training workshops offered by the HRPDC.

PART III: STORMWATER MANAGEMENT PLAN FRAMEWORK

MS4 Program Plan

Once the Town of Windsor has made progress in implementing its Stormwater Management Program, the Town should consider developing a Municipal Separate Storm Sewer System (MS4) Program Plan. A MS4 Program Plan is a valuable tool used to aid with the organization and documentation of the best management practices (BMPs) implemented, and planned for implementation, over time, as part of a stormwater management program.

A proposed draft outline for a Town of Windsor MS4 Program Plan is presented below, divided into eight chapters. The outline for chapter one includes background information and a discussion about the purpose and various components of the plan, including the MS4 Program Annual Work Plan and the Annual Report. (The development of an annual work plan and annual report would only be necessary if the Town of Windsor becomes regulated under a Phase II VSMP permit issued by DCR.) The proposed content of chapter two includes a brief overview of the Town's stormwater program, its organizational structure, and resources for the program. Chapters three through eight are structured to discuss the Town's program categorized into the following six minimum control measures:

- Public education and outreach
- Public involvement
- Illicit discharge detection and elimination
- Construction site runoff control
- Post-construction runoff control for development and redevelopment
- Good housekeeping and pollution prevention

The BMPs used in the Town of Windsor Stormwater Management Program would be included under the appropriate chapter and minimum control measure in the plan. Fact sheets would then be developed to describe each of the BMPs in further detail. Each fact sheet could include the following proposed components:

- Description of the BMP
- Goal of the BMP
- The requirement or minimum control measure that the BMP satisfies
- The applicable state or federal regulation that requires the BMP
- Authority of the Town to perform the BMP
- Department responsible for the BMP
- Contact person
- Standard operating procedures and references that describe or assist with the performance of the BMP
- Description of what is reported regarding the BMP in the MS4 Annual Report, if required
- Schedule for performing the BMP

BMPs for each of the minimum control measures could be added, modified, and taken out as the Town's program develops and expands. Procedures for modification of the MS4 Program Plan would be identified in part 1.6 of the Town's MS4 Program Plan.

MS4 Program Plan Draft Outline

The proposed draft outline for the Town of Windsor Stormwater Management Program is presented below. Modifications will need to be made as the Town's Stormwater Program is further developed and enhanced.

1.0 Introduction
- 1.1 Background
- 1.2 Purpose of MS4 Program Plan
- 1.3 MS4 Program Annual Work Plan
- 1.4 MS4 program Annual Report
- 1.5 TMDL Implementation Plans impacting the Town
  - Include a Table of Impaired Waters in the Town
- 1.6 Modifications to MS4 Program Plan

2.0 Program Overview
- 2.1 Organizational Structure
  - Include a Stormwater Management Program Organizational Chart
- 2.2 Financial and Staff Resources
- 2.3 Legal Authority
- 2.4 Regional Program

3.0 Public Education and Outreach
- 3.1 Homeowner Education and Outreach
  - 3.1.1 HR STORM
  - 3.1.2 HR CLEAN
  - 3.1.3 HR WET
  - 3.1.4 HR FOG (fats, oils & grease)
  - 3.1.5 Town of Windsor Stormwater Brochure
  - 3.1.6 Municipal Website
- 3.2 New and Redevelopment Education and Outreach
  - 3.2.1 Development of Design and Construction Standards Manual
- 3.3 Erosion and Sediment Control Education and Outreach
  - 3.3.1 HR STORM
- 3.4 Industrial Facility Education and Outreach
  - 3.4.1 HR STORM

- 3.5 General Education and Outreach
  - 3.5.1 HR STORM
  - 3.5.2 Town of Windsor Stormwater Brochure

4.0 Public Involvement
- 4.1 Public Notification and Planning Participation
  - 4.1.1 Public Notification Requirements
  - 4.1.2 Public Meetings
  - 4.1.3 Comprehensive Planning
- 4.2 Public Comment and Input
  - 4.2.1 Informal Public Discussion Sessions Held Prior to Town Council Meetings
  - 4.2.2 Volunteer Litter Removal Programs
- 4.3 Public Availability of MS4 Documents
  - 4.3.1 Place on Website, Make Available Upon Request

5.0 Illicit Discharge Detection and Elimination
- 5.1 Outfall Update
  - 5.1.1 Storm Sewer Maps (major outfalls and stormwater drainage system)
  - 5.1.2 Storm Sewer Map Updates
- 5.2 Illicit Discharge Detection and Elimination
  - 5.2.1 Town Ordinance for Illicit Discharges
  - 5.2.2 Illicit Discharge Response Protocol
  - 5.2.3 Documentation of Discharges Detected and Eliminated
- 5.3 Sanitary Sewer Seepage into MS4
  - 5.3.1 Inflow and Infiltration Reduction Program
  - 5.3.2 Sanitary Sewer Upgrade Program (Isle of Wight County)
- 5.4 Industrial Stormwater
  - 5.4.1 HR STORM
- 5.5 Spill Response
  - 5.5.1 Petroleum and Hazardous Materials Spills
  - 5.5.2 Sanitary Sewer Spills
  - 5.5.3 Regional Web-Based Sanitary Sewer Overflow Reporting System (SSORS)

6.0 Construction Site Runoff Control (Isle of Wight County)
- 6.1 Design Standards
  - 6.1.1 In accordance with E&S Program/State Stormwater Regulations
- 6.2 Inspection and Enforcement
  - 6.2.1 In accordance with E&S Program/State Stormwater Regulations
- 6.3 Tracking
  - 6.3.1 In accordance with E&S Program/State Stormwater Regulations

- 6.4 Reporting
  - 6.4.1 In accordance with E&S Program/State Stormwater Regulations
- 6.5 Permit Coordination
  - 6.5.1 VSMP General Permits for Construction Activities
- 6.6 Municipal Projects
  - 6.6.1 Compliance with Applicable E&S Control Requirements

7.0 Post Construction Runoff Control

- 7.1 Planning and Development
  - 7.1.1 Chesapeake Bay Preservation Area District
- 7.2 Design and Plan Review
  - 7.2.1 Water Quality BMP Requirements
  - 7.2.2 Plan Review
- 7.3 Maintenance, Inspection and Compliance
  - 7.3.1 Inspections of Public BMPs
  - 7.3.2 Inspections of Private BMPs
  - 7.3.3 Routine Maintenance of Public BMPs
  - 7.3.4 Maintenance Agreements with Private BMP Owners
  - 7.3.5 BMP Database/PARS

8.0 Good Housekeeping and Pollution Preventions

- 8.1 Source Prevention
  - 8.1.1 Roadways
    - 8.1.1.1 Street Sweeping
    - 8.1.1.2 Salt Storage
  - 8.1.2 Municipal Operation Centers
    - 8.1.2.1 Annual Inspections of Town Yards
    - 8.1.2.2 Town Yard Stormwater Inlet Identification
  - 8.1.3 Other Facilities
    - 8.1.3.1 Schools
  - 8.1.4 Pesticides, Herbicides, and Fertilizers
    - 8.1.4.1 Required Certification of Town Employees
  - 8.1.5 Employee Training
    - 8.1.5.1 Stormwater Pollution Prevention Training for Selected Employees
    - 8.1.5.2 HR STORM
- 8.2 Structural Maintenance
  - 8.2.1 Operational Maintenance
    - 8.2.1.1 Stormwater System Maintenance
    - 8.2.1.2 Routine Ditch Maintenance
  - 8.2.2 CIP Programs and Retrofits

8.2.2.1 Evaluate Flood Management Projects for Water Quality Impacts

Proposed Appendices to the MS4 Program Plan: Applicable Ordinances, MOUs and MOAs, Key Personnel Contact List, and an Annual Work Plan.

PART IV: REGULATION SUMMARIES

Stormwater & Related Regulations

There are three major acts and associated regulations that address or relate to the municipal control of stormwater. They include the following: the Chesapeake Bay Preservation Act and Regulations, the Erosion and Sediment Control Act and Regulations, and the Virginia Stormwater Management Program Regulations. The purpose and major components of each of these acts and regulations are described below.

Chesapeake Bay Preservation Act (CBPA) & Regulations

The CBPA regulations are designed to protect and improve the water quality of the Chesapeake Bay and its tributaries through the definition and protection of Chesapeake Bay Preservation Areas and the provision of parameters for the proper use and development of these areas.

The CBPA and Regulations define three categories of Chesapeake Bay Preservation Areas: Resource Protection Areas (RPAs), Resource Management Areas (RMAs) and Intensely Developed Areas (IDAs). In response to the regulations, the Town of Windsor has established a program to define and protect Chesapeake Bay Preservation Areas. The Town of Windsor designated the RPA based on criteria identified in the regulations and then chose to designate the remainder of the Chesapeake Bay watershed as RMAs. This imposes similar site development and performance criteria standards upon all new development within the Town. Intensely Developed Areas (IDAs) were not designated for any locations within the Town.

Development or redevelopment of land in Chesapeake Bay Preservation Areas must meet the performance criteria outlined in the regulations. The performance criteria apply to most land disturbing activities greater than 2,500 square feet, and provide that land-disturbing activities must comply with the local erosion and sediment control ordinance and the stormwater management criteria of the Virginia Stormwater Management Regulations.

As part of the CBPA Program, the Town of Windsor has incorporated water quality protection measures into its comprehensive plan, zoning ordinance, and subdivision ordinance. In addition, a plan of development process is required prior to the issuance of a building permit to assure that the use and development of land in Chesapeake Bay Preservation Areas is accomplished in a manner that protects the quality of state waters.

Erosion & Sediment Control Act and Regulations

The goal of the Erosion and Sediment Control Act and Regulations is to control soil erosion, sedimentation, and nonagricultural runoff from regulated land-disturbing activities to prevent degradation of property and natural resources. The regulations specify nineteen "Minimum Standards," which include criteria, techniques and policies, which must be followed on all regulated

activities. These standards delineate the rights and responsibilities of governments that administer an erosion and sediment control program and those of property owners who must comply with the program.

A land disturbing activity is defined as any land change on private or public land that may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands in the Commonwealth, including but not limited to clearing, grading, excavating, transporting, and filling of land. This definition includes land-disturbing activities equal to or exceeding 10,000 square feet in area. Because the Town of Windsor is a designated Chesapeake Bay Preservation Area, all land disturbing activities within the Town that disturb more than 2,500 square feet are required to comply with the Virginia Erosion and Sediment Control Law and Regulations.

Virginia Stormwater Management Permit (VSMP) Regulations

The Virginia Stormwater Management Permit Regulations include the following major components.

- Stormwater Technical Criteria, which are applicable to every stormwater management program and every land disturbing activity in Virginia.
- Program and permit requirements for small municipal separate storm sewer systems (Phase II MS4s).
- General VSMP permit requirements for stormwater discharges from construction activities.

The Stormwater Technical Criteria include general stormwater requirements, water quality criteria, stream channel erosion requirements, and flooding requirements. The technical criteria are applicable to every land-disturbing project in Virginia with a land disturbance greater than one acre, or 2,500 square feet if the land disturbance occurs in a Chesapeake Bay Preservation Area. Certain types of land disturbing activities, such as agricultural activities, are exempt. The Town of Windsor must require that land disturbing activities within the Town address the stormwater technical criteria.

Regulated small MS4s (Phase II MS4s) are required to develop, implement, and enforce a Stormwater Management Program that includes the following six minimum control measures.

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control.
5. Post-Construction Stormwater Management in New Development and Redevelopment.
6. Pollution Prevention/Good Housekeeping for Municipal Operations.

In addition to developing a stormwater management program, the Phase II MS4s are required to obtain permit coverage under the VSMP stormwater general permit. The six Phase II small MS4s within the Hampton Roads region include the cities of Poquoson, Suffolk and Williamsburg and the counties of Isle of Wight, James City and York. The Town of Windsor is not required to obtain a permit for its municipal separate storm sewer system.

Owners/operators of construction activities larger than 2,500 square feet in the Town of Windsor are required to obtain permit coverage under the VSMP general permit for construction activities. As a requirement of permit coverage, the operator of the construction site is required to send DCR a registration statement and develop and implement a stormwater pollution prevention plan (SWPPP) for the construction activity covered by the permit. As a part of its stormwater management program, the Town proposes to notify operators of construction sites within the Town that they are required to apply for coverage under the general permit for construction activities.

Potential Changes to Stormwater Regulations

Changes to Phase II (small MS4) Permit Requirements

DCR recently approved changes to the Virginia Stormwater Management Program (VSMP) regulations in order to develop a new General Permit for Stormwater Discharges from small MS4s. The new stormwater general permit for small MS4s became effective on July 9, 2008, and will expire in 2013. The requirements of the approved regulations include the following:

- When tracking data and developing registration statements, small MS4s will have to use the new Hydrologic Unit Codes, identified in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset.
- An MS4 Program Plan must be developed and submitted with the registration statements. The MS4 Program Plan must now include a list of Best Management Practices (BMPs) employed, a list of existing policies, ordinance, schedules, inspection forms, and other documents necessary for BMP implementation, the objectives of each BMP, and the method to be utilized to determine the effectiveness of each BMP.
- If a municipal stormwater system discharges to a segment of state waters that has an approved TMDL, then the locality must update its MS4 Program Plan to include measurable goals, schedules, and strategies to ensure MS4 Program consistency with the TMDL. The program must include:

    - The development of a current list of ordinances and legal authorities, policies, plans, procedures and contracts implemented as part of the MS4 Program that are applicable to reducing the pollutant identified in a Waste Load Allocation (WLA). Evaluate and identify weaknesses of the MS4 Program regarding the reduction of the pollutant identified in the WLA.

  - The creation of a schedule to implement procedures and strategies to address the MS4 Program weaknesses including a timetable to update existing ordinances and legal authorities, policies, plans, procedures, and contracts to ensure consistency with the TMDL.
  - The establishment of a public education awareness campaign and outreach program that promotes the methods to eliminate and reduce discharges of the pollutant identified in the WLA.
  - The development and implementation of outfall reconnaissance procedures on 15% of known outfalls, to identify and eliminate the discharge of pollutants identified in the WLA from anthropogenic activities.
  - The evaluation of all properties owned or operated by the MS4 operator for potential sources of the pollutant identified in the WLA. When a property stores, transfers, transports, or has historically disposed of the identified pollutant, the MS4 operator must perform water quality monitoring at the site, and then develop and implement a schedule to minimize the discharge of the pollutant identified in the WLA.
  - The estimation of the volume of stormwater discharged in gallons from the MS4, and the quantity of the pollutant identified in the WLA.
- Prior to the submittal of the MS4 Program Plan and proposed schedule, the MS4 operator must provide public notification and provide for the receipt of public comments. Public notice shall allow at least 30 days for public comment.
- Develop and maintain an updated storm sewer system map showing the location of <u>all</u> known outfalls of the regulated small MS4.
- Provide narratives on how illicit discharges are eliminated.
- The MS4 operator must encourage Low Impact Development (LID), where determined appropriate by the operator, and track the number of acres developed utilizing low impact development principles.

<u>Changes to Stormwater Technical Criteria</u>

DCR is in the process of making changes to Part II of the VSMP stormwater regulations (4 VAC 50-60-40 et seq), which contains the stormwater technical criteria. The proposed changes to all parts of the stormwater regulations were released for public comment on June 22, 2009, for a period of 60 days. Major components of the proposed stormwater technical criteria are summarized below.

The latest proposed draft of stormwater technical criteria includes strict post development nitrogen and phosphorus water quality requirements. In addition to water quality criteria, the stormwater technical criteria will now also include water quantity criteria. Stormwater practices implemented on-site will have to be designed to detain water quality volume and release it over 48 hours; and detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour

storm. Developed sites will have to reduce the allowable peak flow rate resulting from the 1.5, 2, and 10 year, 24-hour storm to a level that is less than or equal to the peak flow rate from the site assuming that it was in good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition.

Additional pollutant control measures will be required when land disturbing activity discharges to impaired waters in which TMDLs have been established.

Where a site drains to more than one Hydrologic Unit, as identified in Virginia's 6th order National Watershed Boundary Dataset (version 2), the pollutant load reduction requirements shall be applied independently to each hydrologic unit.

Percent of imperviousness of a development site may be adjusted through implementation of low impact development (LID) practices, allowing for an adjusted pollution removal rate. Local governments can limit the use of LID practices set out in the Virginia Stormwater Management Handbook. Offsite controls to meet the water quality criteria may be allowed if a comprehensive watershed stormwater management plan has been adopted for the watershed within which the project is located.

Once the stormwater technical criteria are finalized and become effective, the Town of Windsor will have to ensure that all development within the Town greater than 2,500 square feet follows the new stormwater technical criteria requirements.

<u>Changes to VSMP General Construction Permit Issuance</u>

As a result of changes made to Part III of the Virginia Stormwater Management Program (VSMP) Permit Regulations (4 VAC 50-60-100 et seq), certain administrative procedures for the issuance of the general permit for construction activities may be delegated from DCR to localities with municipal separate storm sewer systems (MS4s), to localities covered by the Chesapeake Bay Preservation Act, and to localities requesting to operate or "opt" in to the program. If EPA allows DCR to transfer administration of the VSMP general permit for construction activities to local governments, the Town of Windsor will be required to participate because of its status as a Chesapeake Bay Preservation Act Community.

Changes to this section were developed, reviewed, and revised by DCR and the Stormwater Technical Advisory Committee (TAC) members. Some of the major components of the local program administration of the VSMP General Construction permit section are summarized below.

To issue the VSMP general permit for construction activities, the Town of Windsor will have to provide for the following:

- An ordinance that includes the state's procedures for the issuance, denial, revocation, termination, reissuance or modification of coverage under the VSMP general permit for construction activities.
- An ordinance that identifies the plan reviewing, plan approving, inspection and enforcement authorities.
- An ordinance that requires all land disturbing activities issued a VSMP general permit for construction activities to comply with the stormwater technical criteria (Part II of the Stormwater Management Regulations) and identifies other criteria used in the program.
- Procedures for submission and approval of plans, in which the locality will have to
    - Require a stormwater management plan for land disturbing activities.
    - Request proposed right of entry agreements or easements from the owner of the land disturbing activity for purposes of inspection and maintenance.
- Provide for the assessment and collection of fees. Fees collected must be placed in a separate fund and used to finance the permit program. In addition, roughly 30% of the fees must be sent to the State.
- Incorporation of VSMP general permit land-disturbing inspections into the program.
- Procedures for long-term stormwater management facility inspections
- Informal and formal enforcement procedures,
- Report to the state about
    - The number of permits issued and terminated to include the permit number, operator name, activity name, acres disturbed, and date of permit coverage.
    - Permanent stormwater management facilities accepted during the fiscal year, to include the type of stormwater management facility, GPS coordinates, acres treated, surface waters discharged into.
    - Number of VSMP general permit construction projects inspected and total number of inspections.
    - Number and type of enforcement actions.
    - Number of exceptions applied for and granted or denied.

<u>Changes to Permit Fees</u>

DCR is also in the process of finalizing changes to Part XIII of the VSMP stormwater regulations, which consists of the stormwater permit fees. The latest proposed draft of Part XIII of the regulations includes increases in some of the MS4 permit issuance, permit modification, and permit maintenance fees, and increases in all of the fees for general permits for construction activities.

This proposed regulatory action establishes a statewide fee schedule for stormwater management and state agency projects and establishes the fee assessment and the collection and distribution systems for those fees. The proposed fee schedule is as follows:

Project Size	Fee Per Permit
Greater than or equal to 2,500 sq. ft. & less than 0.5 acres	$290
Greater than or equal to 0.5 acres & less than 1 acre	$1,500
Greater than or equal to 1 acre & less than 5 acres	$2,700
Greater than or equal to 5 acres & less than 10 acres	$3,400
Greater than or equal to 10 acres & less than 50 acres	$4,500
Greater than or equal to 50 acres & less than 100 acres	$6,100
Greater than or equal to 100 acres	$9,600

PART V: COMPARISON OF TOWN POLICIES TO STATE REGULATIONS

Chesapeake Bay Preservation Act

In order to meet the requirements of the Chesapeake Bay Preservation Act (CBPA), the Town of Windsor must incorporate general water quality protection measures into its comprehensive plan, zoning ordinance, and subdivision ordinance; and establish a program to define and protect Chesapeake Bay Preservation Areas.

Local CBPA programs must contain the following seven major components.

1. A map delineating Chesapeake Bay Preservation Areas.
2. Performance criteria applying in Chesapeake Bay Preservation Areas that employ the requirement in Part IV of the regulation (9 VAC 10-20-110 et seq.)
3. A comprehensive plan or revision that incorporates the protection of Chesapeake Bay Preservation Areas and of the quality of state waters, in accordance with the criteria set forth in Part V of the regulation (9 VAC 10-20-170 et seq.)
4. A zoning ordinance or revisions that incorporates measures to protect the quality of state waters in Chesapeake Bay Preservation areas as set forth in Part VI of the regulations (9 VAC 10-20-181 et seq.) and that requires compliance with all criteria set forth in Part IV of the regulation (9 VAC 10-20-110 et seq.)
5. A subdivision ordinance or revision that incorporates measures to protect the quality of state waters in the Chesapeake Bay Preservation Areas, as set forth in Part VI of the regulations (9 VAC 10-20-181 et seq.) and that assures all subdivisions in Chesapeake Bay Preservation Areas comply with the criteria set forth in Part IV of the regulation (9 VAC 10-20-110 et seq.)
6. An erosion and sediment control ordinance or revision that requires compliance with the criteria in Part IV (9 VAC10-20-110 et seq).
7. A plan of development process prior to the issuance of a building permit to assure that use and development of land in Chesapeake Bay Preservation Areas is accomplished in a manner that protects the quality of state waters.

The Town of Windsor Comprehensive Plan includes a variety of water quality protection measures, topics, and policies, and the Town uses a Chesapeake Bay Preservation Overlay District, Chapter 57 of the Town Code, to define and protect Chesapeake Bay Preservation Areas.

As part of the CBPA, a local government must establish and maintain, as appropriate, an information base from which policy choices are made about future land use and development that will protect the quality of state waters. Local governments are also required in their comprehensive plans to clearly indicate local policy on land use issues relative to water quality protection based on an analysis of the data acquired as a part of the information base. Within the local policy discussion, the local government must address the relationship between the plan, existing and

proposed land use, public services, and capital improvement plans and budgets to ensure a consistent local policy.

The Chesapeake Bay Local Assistance Board designated the Town of Windsor as Phase I consistent with the Chesapeake Bay Preservation Act on December 8, 2003 and Phase II consistent on May 2, 1996. The Town has also undergone a CBPA compliance review and was found compliant on September 26, 2006.

Although the Town of Windsor is generally consistent with the provisions of the Chesapeake Bay Preservation Act, a few improvements to the program could be made. Based on a thorough review of the CBPA Regulations, Windsor Town Code, and the 2008 Windsor Comprehensive Plan, the following recommendations are made.

<u>Chesapeake Bay Act Recommendations</u>

1. Make the following changes to the Chesapeake Bay Preservation Area chapter (Chapter 57) of the Windsor Town Code.
    a. Change the citation reference for the Virginia Stormwater Management Regulations from (4 VAC 3-20-10 et seq.) to (4 VAC 50-60-40 et seq.). The citation changed when the stormwater regulations switched from the Department of Environmental Quality (DEQ) to the Department of Conservation and Recreation (DCR).
    b. In §57-11(C) (4), refer to the local soil and water conservation district as the Peanut SWCD.

2. Make the following programmatic changes to the Town of Windsor CBPA Program
    a. Chapter 57, §57-13(F) (1) (d) allows the Zoning Administrator to require BMP facilities to have an approved maintenance agreement with the Town of Windsor. To carry out this requirement, the Town should develop a model BMP maintenance agreement and use the BMP maintenance agreement for all new BMP facilities installed.
    b. The CBPA regulations state, “All sewage disposal site records shall be administered to provide adequate notice and enforcement”. The Town may want to consider how it addresses notification and enforcement requirements. The Town may want to develop an inventory of houses with on-site disposal systems and/or develop an educational piece targeted at homeowners with on-site sewer systems. The Town requires all new development to connect to public water and sewer.
    c. The regulations state that “Local governments should notify the board of all development requiring a [water quality impact] assessment”. The Town may want to evaluate implementation of this item. How often a water quality assessment is required, and is the Board notified regularly?

In addition to the above recommendations, the Town should also begin to prepare for Phase III of the Chesapeake Bay Preservation Act. Phase III will include the following requirements.

1. Local governments shall evaluate the relationship between the submission requirements, performance standards, and permitted uses in local land development ordinances and regulations to identify any obstacles to achieving the water quality goals of the Act.
2. Local governments shall review and revise their land development ordinances and regulations adopted to assure that their subdivision ordinances, zoning ordinances, and all other components of their local CBPA programs are consistent in promoting and achieving the protection of state waters. In addition, local governments shall identify and resolve any conflicts among the components of the local programs and with other local ordinances, regulations and administrative policies, to assure that the intent of the Chesapeake Bay Preservation Act is fulfilled.
3. Local governments shall review and revise their land development ordinances and regulations to ensure consistency with the water quality protection goals, objectives, policies and implementation strategies identified in the local comprehensive plan.

The Division of Chesapeake Bay Local Assistance (DCBLA) is currently developing procedures to implement Phase III of the Chesapeake Bay Preservation Act Regulations. There are six specific provisions that are required to be in local land development ordinances. The proposed Phase III implementation plan will combine two parts: an advisory code and ordinance review and a compliance evaluation. The evaluation will be focused on local compliance through processes and procedures, performance criteria, and the institutionalization of processes. The Chesapeake Bay Local Assistance Board authorized DCBLA to proceed with the recommended strategy at its meeting on June 15, 2009. Approval of the compliance evaluation program is expected in March 2010, and compliance reviews are expected to begin in March 2011.

Erosion and Sediment Control

An erosion and sediment control program is required for every City, County, and Town within the Commonwealth of Virginia. According to the Erosion and Sediment Control Act, “Any Town, lying within a county which has adopted its own erosion and sediment control program, may adopt its own program or become subject to the county program.”

The Town of Windsor is subject to the Isle of Wight County Erosion and Sediment Control Program. The performance standards found in §57-11 of the Chesapeake Bay Preservation Area chapter of the Windsor Town Code require any land disturbing activity greater than 2,500 square feet within the Town, including construction of all single-family houses, to comply with the requirements of the Isle of Wight Erosion and Sediment Control Ordinance. The plan of

development process found in section §57-13 E of the Chesapeake Bay Preservation Area chapter of the Town code requires an erosion and sediment control plan in accordance with the provision of the Isle of Wight County Erosion and Sediment Control Ordinance for any development or redevelopment exceeding 2,500 square feet of land disturbance.

Section §160-71 of the Land Development Chapter of the Town Code states that subdivision development disturbing 10,000 or more square feet of land for commercial or noncommercial uses shall be deemed a land-disturbing activity, as that term is defined in §10.1-560, Code of Virginia, 150 as amended. This section also states that an erosion and sediment control plan must be filed with the final plat in accordance with the Isle of Wight County Erosion and Sediment Control Ordinance and the provisions of the Virginia Erosion and Sediment Control Law.

Isle of Wight County has developed a separate stormwater management program that governs all erosion and sediment control activities within the Town of Windsor. The County is designated as the program authority, plan approving authority, and enforcement authority for the Town.

Stormwater Management

The Town of Windsor primarily addresses stormwater through its Chesapeake Bay Preservation Area Overlay District, Chapter 57 of the Town Code. Section 57-11(B) (8) specifically states that, "For any development or redevelopment, stormwater runoff shall be controlled by the use of best management practices consistent with the water quality protection provisions of the Virginia Stormwater Management Regulations." Because compliance with Chapter 57 is required throughout the Town, this consequently applies the stormwater technical criteria to every project disturbing more than 2,500 square feet of land.

The Chesapeake Bay Overlay District includes only the water quality protection provisions of the Virginia Stormwater Management Regulations. Under the new regulations, the Town will need to revise this section to reference the Stormwater Management Technical Criteria, which includes general stormwater criteria, stream channel erosion, and flooding criteria in addition to water quality protection provisions. These items should be included for clarification and to ensure regulatory compliance.

A. The determination of flooding and channel erosion impacts to receiving streams due to land-disturbing activities shall be measured at each point of discharge from the land disturbance and such determination shall include any runoff from the balance of the watershed which also contributes to that point of discharge.
B. For the purposes of computing runoff, all pervious lands in the site shall be assumed prior to development to be in good condition (if the lands are pastures, lawns, or parks), with good cover (if the lands are woods), or with conservation treatment (if the lands are cultivated); regardless of conditions existing at the time of computation.

C. Outflows from a stormwater management facility or stormwater conveyance system, shall be discharged to an adequate channel.
D. Individual lots in new subdivisions shall not be considered separate land-disturbing activities, but rather the entire subdivision shall be considered a single land development project.
E. The construction of stormwater management impoundment structures within the FEMA designated 100-year floodplain will be avoided.
F. Natural channel characteristics shall be preserved to the maximum extent practicable.

DCR is currently in the process of making regulatory changes to the stormwater management technical criteria. The proposed regulatory changes include strict nitrogen and phosphorus reduction requirements and water quantity criteria requirements. In addition, the use of low impact development measures will be encouraged. DCR is also in the process of making changes to the VSMP General Permit for construction activities. As a result of regulation changes, DCR will be authorizing local governments to administer the VSMP General Permit for Construction Activities. The Town of Windsor will be required to administer the permit due to its status as a Chesapeake Bay Preservation Act community. To administer the program, the Town of Windsor will have to develop a Stormwater Management Program approved by the Soil & Water Conservation Board.

Based on a thorough review of the Town's policies and ordinances and the State's regulatory requirements and proposed regulatory changes, the following recommendations have been prepared.

<u>Stormwater Program Recommendations</u>

1. In the Chesapeake Bay Preservation Area Overlay District, Chapter 57 of the Windsor Town Code, reword the section to require the use of best management practices consistent with the <u>Stormwater Management Technical Criteria</u> of the Virginia Stormwater Management Regulations and include a citation of the regulations.
2. Once DCR has finalized the proposed changes to Part II of the Stormwater Regulations (4 VAC 50-60-40 et seq), the Town will need to incorporate the new stormwater technical criteria into its ordinance and program. Water quantity criteria will be a new component of the Stormwater Management Technical Criteria.
3. Once DCR has finalized the proposed changes to Part III of the Stormwater Regulations (4 VAC 50-60-100 et seq) and has delegated the administration of the VSMP general permit for construction activities to local governments, the Town of Windsor will need to implement the following:
    a. Develop a Stormwater Ordinance that,
        i. Requires all land-disturbing activities issued a VSMP general permit for construction activities (land disturbing activities greater than 2,500 square feet in CBPA areas) to comply with the Stormwater Technical Criteria

(Part II of the Stormwater Management Regulations) and identifies other criteria used in the program.

ii. Identifies the plan reviewing, plan approving, and inspection and enforcement authorities for stormwater management.

iii. Includes the State's procedures for the issuance, denial, revocation, termination, reissuance or modification of coverage under the VSMP general permit for construction activities.

b. Develop procedures for the submission and approval of plans, which

i. Requires a stormwater management plan for land disturbing activities.

ii. Requests proposed right of entry agreements or easements from the owner of the land disturbing activity for purposes of inspection and maintenance.

c. Provide for the collection and assessment of fees for the program. Fees collected must be placed in a separate fund and used to finance the permit program. Thirty percent (30%) of the fees gathered from the VSMP general permits for construction activities must be sent to the State.

d. Incorporate VSMP general permit land-disturbing inspections into the program.

e. Adopt procedures for long-term stormwater management facility inspections. The draft regulation specifically states what items must be included in a BMP (stormwater management facility) maintenance agreement.

f. Adopt informal and formal procedures for enforcement as defined in the new regulation.

g. Prepare for the state's reporting requirements, to be defined in the regulation.

PART VI: INSTITUTIONAL PROCESS FOR STORMWATER MANAGEMENT

Background

In 1992, the Hampton Roads Planning District Commission prepared a stormwater management process document entitled Institutional Process for Stormwater Management in Shared Watersheds, the Pagan River Watershed: A Pilot Study. This document emphasized the need for coordinated management of stormwater between local governments who share watersheds. Multiple review processes and multiple stormwater management requirements complicate development and stormwater management in shared watersheds. Without coordinated management, this situation may result in individual developments being affected by two sets of differing requirements and in facilities that are inadequate to handle stormwater from future development in adjacent jurisdictions. The Institutional Process Pilot Study specifically addressed the Pagan River Watershed and the jurisdictions of Isle of Wight County and the Town of Smithfield, but the findings of the study will also apply to the watersheds shared by the County and the Town of Windsor.

At the time the original study was completed, Isle of Wight County and the Town of Smithfield had adopted comprehensive packages of development management regulations (Zoning, Subdivision, Erosion and Sediment Control, and Chesapeake Bay Preservation Act (CBPA) Ordinances) and neither community had adopted a stormwater management ordinance. Yet, through their CBPA and Erosion and Sediment Control ordinances, both had adopted the basic elements of a stormwater management program.

Since that time, Isle of Wight County has developed a Phase II MS4 (Municipal Separate Storm Sewer System) Stormwater Program and obtained a Virginia Stormwater Management Program (VSMP) permit from the Virginia Department of Conservation and Recreation (DCR) in 2003 for the County's stormwater discharges.

Although the Town of Windsor is not currently required to obtain a stormwater permit, the Town is going ahead with the development of a stormwater management program modeled after the Phase II program of Isle of Wight County and the other Phase II localities in Hampton Roads. As the Town's population continues to grow, Windsor may eventually be designated as a Phase II MS4 and be required to obtain a stormwater permit from DCR. Also, new state regulations will require the Town to have an operational stormwater management program in order to administer the VSMP stormwater permit for construction activities, due to its status as a Chesapeake Bay Preservation Act locality.

Consensus Points

One of the major components of the 1992 study was the creation of several consensus points regarding the development and design of a coordinated stormwater management process. The following points are still applicable today.

1. Common design standards for stormwater management are appropriate.
2. Requirements for operation and maintenance of non-local government stormwater management facilities should be developed to ensure the long-term effectiveness of the facilities and to ensure that they do not become an administrative or financial burden to the locality.
3. The two communities should continue informal discussions concerning broader coordination of development review.
4. HRPDC staff should be available to facilitate joint meetings between staff from the two jurisdictions if desired and requested.

Several of the consensus items have evolved over the past decade into current, routine stormwater program activities and several of the items will be addressed as the Town of Windsor develops and refines its Stormwater Management Program.

A key desire in the development of the Stormwater Management Program for the Town of Windsor is consistency with the County program. The Windsor Stormwater Management Program is modeled after the Phase II program, and mimics the stormwater management program of Isle of Wight County. A Stormwater Management Program for the Town that is similar to the Isle of Wight program can go a long way to ensure that all development adheres to the same criteria.

The long-term operation of non-municipal stormwater management facilities will be ensured through stormwater management facility (BMP) maintenance agreements or declarations of covenants issued by Isle of Wight County.

With the new stormwater technical criteria being developed as a result of regulatory changes, the Town and the County will ensure through continued discussions that common design standards for stormwater management are achieved. Opportunities for coordination between the two communities regularly occur through participation on the Regional Stormwater Management Committee. Specifically, both communities are or will be participants in the Phase II Subcommittee of the Regional Stormwater Management Program and the stormwater education subcommittee, HR STORM. These formal committees allow for the exchange of information and developing, in cooperation with other local governments in Hampton Roads, regional consensus positions on stormwater management issues as they arise. The HRPDC continues to be available to facilitate joint meetings between staff from the Town of Windsor and Isle of Wight County if desired and requested.

Coordination and cooperation among the localities in the Chesapeake Bay watershed continues to be important due to upcoming stormwater and development related events and increased pressures to reduce pollution from stormwater runoff. Some of these items and activities include the following:

- Chesapeake Bay TMDL development and anticipated additional local government requirements to prevent further impairment of the water body.
- Upcoming changes to the stormwater technical criteria, which will include strict nutrient and phosphorus reduction requirements and water quantity requirements for land-disturbing projects.
- Upcoming changes to the administration of the VSMP stormwater permit for construction activities, which will require local governments to administer the program.
- Upcoming changes to Phase II stormwater regulations, which will include additional stormwater program requirements.