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Regional MS4 Program Plan for Small Municipal Separate Storm Sewer Systems

Virginia General Permit | Commander, Navy
Region Mid-Atlantic



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FINAL



Commander, Navy Region Mid-Atlantic
2013 MS4 Program Plan
Contract No. N62470-10-D-3000; WE86

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- Appendix D** – Registration Statement and Supporting Attachments



MS4 Program Plan Preface

This Municipal Separate Storm Sewer System (MS4) Program Plan presents Commander, Navy Region Mid-Atlantic's (CNRMA's) plan to meet the requirements of 4VAC50-60 "General Virginia Stormwater Management Program (VSMP) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems". The plan will be enforced and implemented at the following installations and annexes:

- ❖ Naval Station Norfolk (excluding Craney Island) (NSN)
- ❖ Naval Support Activity, Hampton Roads (excluding NSA Northwest) (NSA HR)
- ❖ Joint Expeditionary Base, Little Creek (JEB LC)
- ❖ Joint Expeditionary Base, Fort Story (JEB FS)
- ❖ Naval Air Station Oceana (NASO)
- ❖ Dam Neck Annex (NASA DN)
- ❖ Naval Medical Center Portsmouth (NMCP)
- ❖ Scott Center Annex (SCA)

Unless specifically noted, the actions described in this Program Plan will be performed at each of the installations. These facilities are designated as small municipal separate storm sewer systems (MS4s) under the Virginia Department of Environmental Quality (VADEQ) Phase II stormwater program (Permit No. VAR040114).



LIST OF ACRONYMS

Baker	Michael Baker Jr., Inc.
BMP	Best Management Practice
CNRMA	Commander, Navy Region Mid-Atlantic
COMNAVREG	Commander, Navy Region (<i>historical designation</i>)
MIDLANT	NAVFAC Mid-Atlantic
NASO DN	Dam Neck Annex
DoD	Department of Defense
DON	Department of the Navy
ECATTS	Environmental Compliance Assessment, Training, and Tracking System
EISA	Energy Independence and Security Act
EOS	Edge of Stream
EPA	Environmental Protection Agency (United States)
FEAD	Facilities Engineering Acquisition Division
HUC	Hydrologic Unit Code
IDA	Intensely Developed Acres
JEB FS	Joint Expeditionary Base, Fort Story
JEB LC	Joint Expeditionary Base, Little
LID	Low Impact Development
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer Systems
NASO	Naval Air Station Oceana
NAVFAC	Naval Facilities Engineering Command
NMCP	Naval Medical Center Portsmouth
NPDES	National Pollutant Discharge Elimination System
NSA HR	Naval Support Activity, Hampton Roads (excluding NSA Northwest)
NSN	Naval Station Norfolk (excluding Craney Island)
OA	Opportunity Assessment
OPNAV	Office of the Chief of Naval Operations
POC	Pollutants of Concern
PY	Permit Year
RPM	Resource Management Area
RPA	Resource Protection Area
SCA	Scott Center Annex
SOP	Standard Operating Procedure
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UFC	Unified Facilities Criteria
VADCR	Virginia Department of Conservation & Recreation
	Virginia Department of Environmental Quality
VESCP	Virginia Erosion and Sediment Control Program
VPDES	Virginia Pollutant Discharge Elimination System
VSMP	Virginia Stormwater Management Program
WIP	Watershed Implementation Plan
WLA	Waste Load Allocation



1. Introduction

This Municipal Separate Storm Sewer System (MS4) Program Plan details a comprehensive program to minimize stormwater pollution by establishing best management practices (BMPs), measurable goals, and responsible parties to achieve compliance with each of the six minimum control measures of the Phase II stormwater management permit. Also, this Program Plan addresses additional requirements associated with impaired waters and annual reporting and program evaluation requirements. The BMPs utilized to address each minimum control measure are described in the Program Plan.

Background

In December 1999, the National Pollutant Discharge Elimination System (NPDES) program was expanded to include provisions for discharges from small MS4s. The second phase of the regulations, Stormwater Phase II (64 FR 68722), extended the requirements for NPDES permits to stormwater discharges from:

- 1) "Small" MS4s serving populations of less than 100,000 people in an "urbanized" area; and
- 2) Construction activities disturbing between one and five acres of land.

The regulations allowed the Environmental Protection Agency (EPA) to designate the states as Stormwater Permitting Authorities, allowing each authorized state to administer and enforce stormwater requirements consistent with the NPDES program.

There are several Naval installations and annexes in the Commonwealth of Virginia that meet the criteria for small MS4 designation and, as such, currently receive consolidated permit coverage under the Virginia MS4 General Permit. The Naval installations currently covered under the Navy's Consolidated MS4 permit coverage (VAR040114) include:

- ❖ Naval Station Norfolk (excluding Craney Island) (NSN)
- ❖ Naval Support Activity, Hampton Roads (excluding NSA Northwest) (NSA HR)
- ❖ Joint Expeditionary Base, Little Creek (JEB LC)
- ❖ Joint Expeditionary Base, Fort Story (JEB FS)
- ❖ Naval Air Station Oceana (NASO)
- ❖ Dam Neck Annex (NASO DN)
- ❖ Naval Medical Center Portsmouth (NMCP)
- ❖ Scott Center Annex (SCA)

Waivers from regulatory coverage under the Virginia Phase II MS4 permit are available to MS4 operators who meet specific criteria as detailed in the NPDES regulations. The following Naval installations have applied for and received a waiver from the requirements of the Virginia MS4 General Permit regulations:

- ❖ New Gosport
- ❖ Southgate Annex
- ❖ Lafayette River Annex
- ❖ St. Helena's Annex



- ❖ Yorktown Fuel Terminal
- ❖ South Virginia Beach Annex

Other Naval installations in Virginia that are not regulated MS4s because they are outside of an urbanized area as determined by the latest census include:

- ❖ Cheatham Annex
- ❖ Naval Support Activity, Northwest Annex
- ❖ Naval Surface Warfare Center Dahlgren Division
- ❖ Naval Weapons Station Yorktown
- ❖ Surface Combat Systems Center Wallops Island

Other Naval installations in Virginia that are not regulated by MS4s because they are solely industrial include:

- ❖ Norfolk Naval Shipyard
- ❖ Saint Juliens Creek Annex

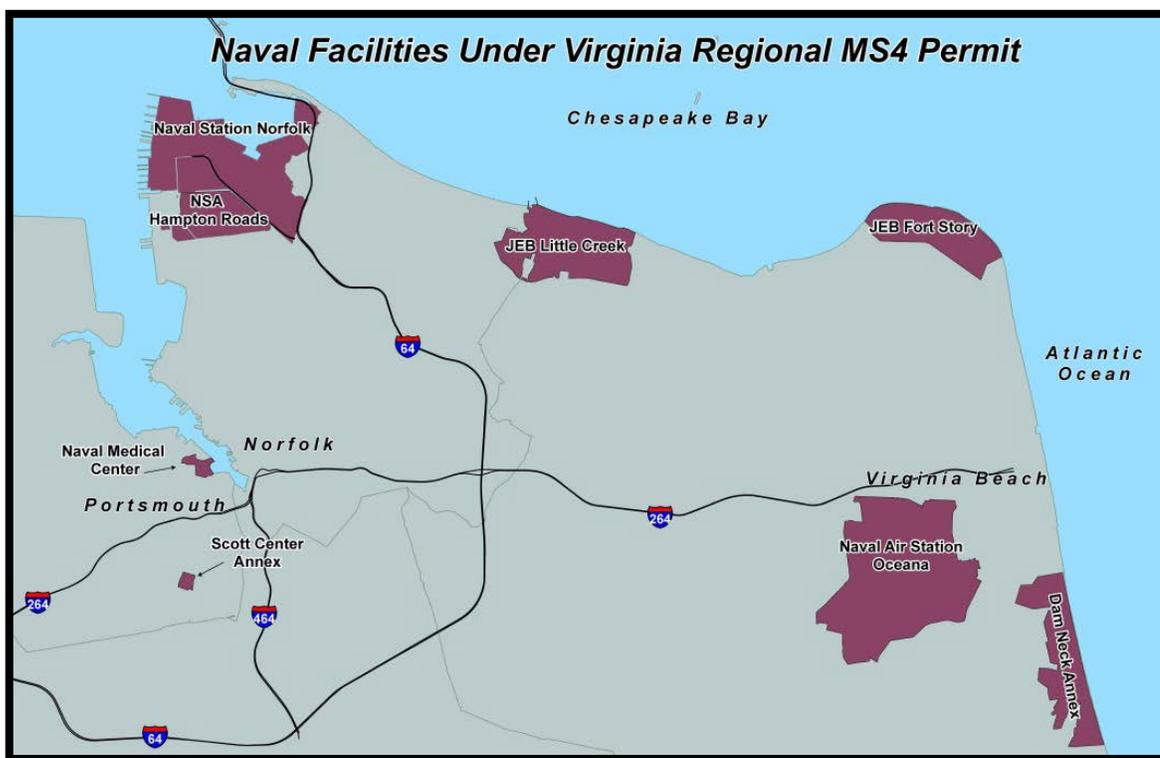


Figure 1-1. Naval Facilities under Virginia Regional MS4 Permit

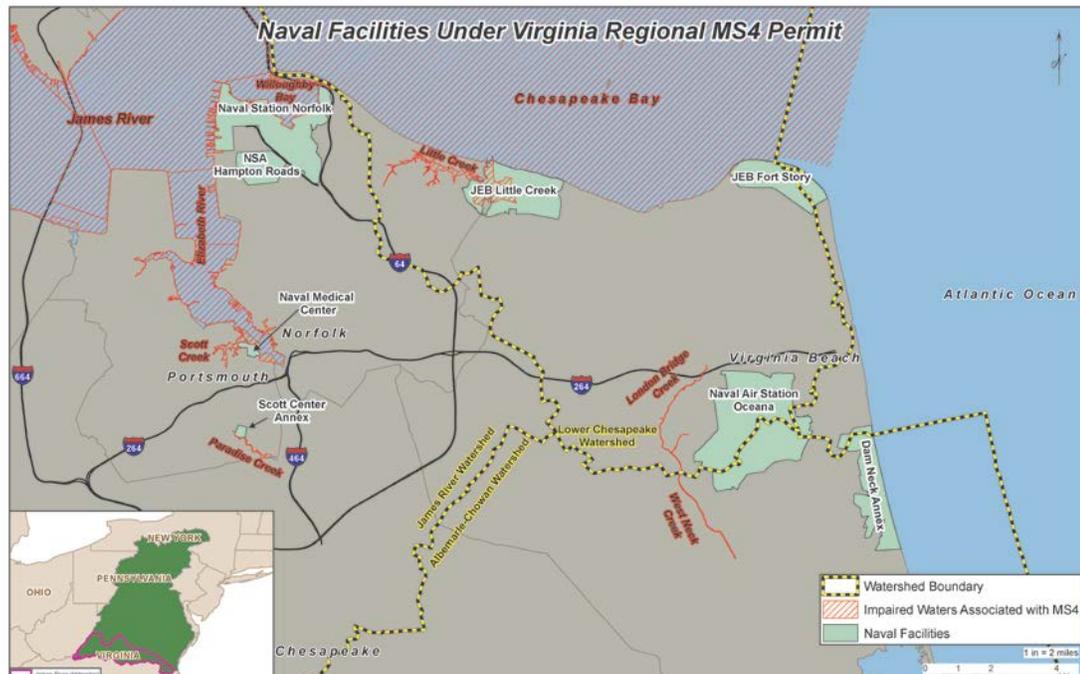


Figure 1-2. Impaired Receiving Waters Associated with the Virginia Regional MS4 Permit

Authorization, Scope and Purpose

Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic (MIDLANT) retained Michael Baker Jr., Inc. (Baker) under N62470-10-D-3000, WE86 to develop a Storm Water Phase II Storm Water Management Plan and Registration Statement for all Naval installations in the Commonwealth of Virginia that are subject to coverage under the Virginia Stormwater Management Program Small MS4 General Permit and to develop a MS4 Program Plan. The registration statement submitted to the Virginia Department of Conservation and Recreation (VADCR) in April 2013 can be found in Appendix D. Since submittal of the registration statement, administration of the MS4 program has been moved from VADCR to the Virginia Department of Environmental Quality (VADEQ).

The latest urbanized area maps from the 2010 Census were reviewed, and no additional Naval installations in Virginia were identified that fall under the Phase II MS4 permit coverage requirements. The enclosed plan was developed based on input received during two workshops with NAVFAC MIDLANT staff to discuss the requirements and potential BMPs of the first three and last three minimum control measures of the permit. Also, information was added to the plan to address specific requirements of impaired receiving waters.

Report Organization

The purpose of this report is to present the updated MS4 Program Plan, which is required by the VSMP Permit for Discharges of Stormwater from Small MS4s.



The MS4 Program Plan contains eleven sections:

- ❖ **Section 1** presents an introduction to the report, including an overview of the sites, background information on the regulatory requirements, and a description of the report organization.
- ❖ **Section 2** presents the organization and implementation of the total maximum daily load (TMDL) Action Plan for the Chesapeake Bay, and information on the annual inspection reports.
- ❖ **Section 3** addresses the requirements and implementation of the TMDL Action Plans for areas other than the Chesapeake Bay.
- ❖ **Section 4** addresses the requirements and implementation of the Public Education and Outreach Plan, and information on the annual evaluation and inspection reports.
- ❖ **Section 5** addresses the requirements and implementation of the Public Involvement and Participation Plan, and information on the annual evaluation.
- ❖ **Section 6** addresses the requirements and implementation of the Illicit Discharge Detection and Elimination Procedures, and information on the annual evaluation.
- ❖ **Section 7** addresses the requirements, implementation, and enforcement of the Construction Site Runoff Control Plan, and information on the annual inspection reports.
- ❖ **Section 8** addresses the requirements and implementation of the Post-Construction Runoff Control Plan, and information on the annual tracking and inspection reports.
- ❖ **Section 9** addresses the requirements and implementation of the Pollution Prevention/Good Housekeeping Plan, and information on the annual tracking reports.
- ❖ **Section 10** presents information on the annual program evaluation.
- ❖ **Section 11** presents the references for development of this report and supporting materials.

The MS4 Program Plan also contains the following appendices:

- ❖ **Appendix A** presents a complete list of the BMPs for each minimum control measure, including descriptions, metrics, responsible parties, and timeline.
- ❖ **Appendix B** presents the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems.
- ❖ **Appendix C** presents instructions, procedures, and forms.
- ❖ **Appendix D** presents the registration statement and supporting attachments.



2. Special Conditions for the Chesapeake Bay TMDL

This section presents the organization and implementation of the TMDL Action Plan for the Chesapeake Bay, and information on the annual inspection reports. More specifically, this section addresses:

- ❖ Permit Regulations
- ❖ TMDL Action Plan
- ❖ Implementation of TMDL Action Plan
- ❖ Annual Reporting

Since some of the permitted installations discharge into the Bay, these installations are subject to the requirements of the Chesapeake Bay TMDL. Table 2-1 presents the main receiving waters of the installations and whether or not they are regulated by the Chesapeake Bay TMDL. Please note that NASO drains partially to the Bay and partially to the North Lunding River, which discharges into the Atlantic Ocean.

Table 2-1 Chesapeake Bay TMDL Receiving Waters

Receiving Waters	Installations	Subject to Chesapeake Bay TMDL Requirements
James River	Naval Station Norfolk Naval Support Activity, Hampton Roads Scott Center Annex Naval Medical Center Portsmouth	YES
Chesapeake Bay	Joint Expeditionary Base, Fort Story (partial) Joint Expeditionary Base, Little Creek Naval Air Station Oceana (partial)	YES
Atlantic Ocean	Dam Neck Annex, Joint Expeditionary Base, Fort Story (partial)	NO
North Lunding River (to Atlantic Ocean)	Naval Air Station Oceana (partial)	NO

The Chesapeake Bay TMDL Action Plan addresses three pollutants of concern (POCs) based on the Bay's impairment:

- ❖ Phosphorus;
- ❖ Total nitrogen; and
- ❖ Total suspended solids.

In its Phase I and Phase II Chesapeake Bay TMDL Watershed Implementation Plans (WIPs), the Commonwealth of Virginia committed to a phased approach for MS4s that affords MS4 permittees up to three full 5-year permit cycles to implement necessary reductions. The permit requires 5% of the necessary reduction in the first permit cycle, 35% in the second permit cycle, and the remaining 60% in the third permit cycle.



Permit Regulations (as of 07/01/2013)

An excerpt from Section I of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit, including Table 1 (as referenced below) can be found in Appendix B.

C. Special condition for the Chesapeake Bay TMDL. *The Commonwealth in its Phase I and Phase II Chesapeake Bay TMDL Watershed Implementation Plans (WIP) committed to a phased approach for MS4s, affording MS4 operators up to three full five-year permit cycles to implement necessary reductions. This permit is consistent with the Chesapeake Bay TMDL and the Virginia Phase I and II WIPs to meet the Level 2 (L2) scoping run for existing developed lands as it represents an implementation of 5.0% of L2 as specified in the 2010 Phase I WIP. Conditions of future permits will be consistent with the TMDL or WIP conditions in place at the time of permit issuance.*

1. Definitions. *The following definitions apply to this state permit for the purpose of the special condition for discharges in the Chesapeake Bay Watershed:*

"Existing sources" means pervious and impervious urban land uses served by the MS4 as of June 30, 2009.

"New sources" means pervious and impervious urban land uses served by the MS4 developed or redeveloped on or after July 1, 2009.

"Pollutants of concern" or "POC" means total nitrogen, total phosphorus, and total suspended solids.

"Transitional sources" means regulated land disturbing activities that are temporary in nature and discharge through the MS4.

2. Chesapeake Bay TMDL planning.

a. In accordance with Table 1 in this section, the operator shall develop and submit to the department for its review and acceptance an approvable Chesapeake Bay TMDL Action Plan. Unless specifically denied in writing by the department, this plan becomes effective and enforceable 90 days after the date received by the department. The plan shall include:

(1) A review of the current MS4 program implemented as a requirement of this state permit including a review of the existing legal authorities and the operator's ability to ensure compliance with this special condition;

(2) The identification of any new or modified legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements implemented or needing to be implemented to meet the requirements of this special condition;

(3) The means and methods that will be utilized to address discharges into the MS4 from new sources;

(4) An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009, based on the 2009 progress run. The operator shall utilize the applicable versions of Tables 2 a-d in this section based on the river basin to which the MS4 discharges by multiplying the total existing acres served by the MS4 on June 30, 2009, and the 2009 Edge of Storm (EOS) loading rate:



Table 2 a: Calculation Sheet for Estimating Existing Source Loads for the James River Basin
***Based on Chesapeake Bay Program Watershed Model Phase 5.3.2**

<i>Subsource</i>	<i>Pollutant</i>	<i>Total Existing Acres Served by MS4 (6/30/09)</i>	<i>2009 EOS Loading Rate (lbs/acre)</i>	<i>Estimated Total POC Load Based on 2009 Progress Run</i>
<i>Regulated Urban Impervious</i>	<i>Nitrogen</i>		<i>9.39</i>	
<i>Regulated Urban Pervious</i>			<i>6.99</i>	
<i>Regulated Urban Impervious</i>	<i>Phosphorus</i>		<i>1.76</i>	
<i>Regulated Urban Pervious</i>			<i>0.5</i>	
<i>Regulated Urban Impervious</i>	<i>Total Suspended Solids</i>		<i>676.94</i>	
<i>Regulated Urban Pervious</i>			<i>101.08</i>	

(5) A determination of the total pollutant load reductions necessary to reduce the annual POC loads from existing sources utilizing the applicable versions of Tables 3 a-d in this section based on the river basin to which the MS4 discharges. This shall be calculated by multiplying the total existing acres served by the MS4 by the first permit cycle required reduction in loading rate. For the purposes of this determination, the operator shall utilize those existing acres identified by the 2000 U.S. Census Bureau urbanized area and served by the MS4.

(6) The means and methods, such as management practices and retrofit programs that will be utilized to meet the required reductions included in subdivision 2 a (5) of this subsection, and a schedule to achieve those reductions. The schedule should include annual benchmarks to demonstrate the ongoing progress in meeting those reductions;

(7) The means and methods to offset the increased loads from new sources initiating construction between July 1, 2009, and June 30, 2014, that disturb one acre or greater as a result of the utilization of an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids. The operator shall offset 5.0% of the calculated increased load from these new sources during the permit cycle.

(8) The means and methods to offset the increased loads from projects as grandfathered in accordance with 4VAC50-60-48, that disturb one acre or greater that begin construction after July 1, 2014, where the project utilizes an average land cover condition greater than 16% impervious cover in the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids.

(9) The operator shall address any modification to the TMDL or watershed implementation plan that occurs during the term of this state permit as part of its permit reapplication and not during the term of this state permit.



Table 3 a: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the James River Basin

**Based on Chesapeake Bay Program Watershed Model Phase 5.3.2*

<i>Subsource</i>	<i>Pollutant</i>	<i>Total Existing Acres Served by MS4 (6/30/09)</i>	<i>First Permit Cycle Required Reduction in Loading Rate (lbs/acre)</i>	<i>Total Reduction Required First Permit Cycle (lbs)</i>
<i>Regulated Urban Impervious</i>	<i>Nitrogen</i>		0.04	
<i>Regulated Urban Pervious</i>			0.02	
<i>Regulated Urban Impervious</i>	<i>Phosphorus</i>		0.01	
<i>Regulated Urban Pervious</i>			0.002	
<i>Regulated Urban Impervious</i>	<i>Total Suspended Solids</i>		6.67	
<i>Regulated Urban Pervious</i>			0.44	

Table 4: Ratio of Phosphorus Loading Rate to Nitrogen and Total Suspended Solids Loading Rates for Chesapeake Bay Basins

<i>Ratio of Phosphorus to Other POCs (Based on All Land Uses 2009 Progress Run)</i>	<i>Phosphorus Loading Rate (lbs/acre)</i>	<i>Nitrogen Loading Rate (lbs/acre)</i>	<i>Total Suspended Solids Loading Rate (lbs/acre)</i>
<i>James River Basin</i>	1.0	5.2	420.9
<i>Potomac River Basin</i>	1.0	6.9	469.2
<i>Rappahannock River Basin</i>	1.0	6.7	320.9
<i>York River Basin</i>	1.0	9.5	531.6



(10) A list of future projects and associated acreage that qualify as grandfathered in accordance with 4VAC50-60-48;

(11) An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle; and

(12) An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan.

b. As part of development of the Chesapeake Bay TMDL Action Plan, the operator may consider:

(1) Implementation of BMPs on unregulated lands provided any necessary baseline reduction is not included toward meeting the required reduction in this permit;

(2) Utilization of stream restoration projects, provided that the credit applied to the required POC load reduction is prorated based on the ratio of regulated urban acres to total drainage acres upstream of the restored area;

(3) Establishment of a memorandum of understanding (MOU) with other MS4 operators that discharge to the same or adjacent eight digit hydrologic unit within the same basin to implement BMPs collectively. The MOU shall include a mechanism for dividing the POC reductions created by BMP implementation between the cooperative MS4s;

(4) Utilization of any pollutant trading or offset program in accordance with § 10.1-603.15:1 et seq. of the Code of Virginia, governing trading and offsetting;

(5) A more stringent average land cover condition based on less than 16% impervious cover for new sources initiating construction between July 1, 2009, and June 30, 2014, and all grandfathered projects where allowed by law; and

(6) Any BMPs installed after June 30, 2009 as part of a retrofit program may be applied towards meeting the required load reductions provided any necessary baseline reductions is not included.

3. Chesapeake Bay TMDL Action Plan implementation. The operator shall implement the TMDL Action Plan according to the schedule therein. Compliance with this requirement represents adequate progress for this state permit term towards achieving TMDL wasteload allocations consistent with the assumptions and requirements of the TMDL. For the purposes of this permit, the implementation of the following represents implementation to the maximum extent practicable and demonstrates adequate progress:

a. Implementation of nutrient management plans in accordance with the schedule identified in the minimum control measure in Section II related to pollution prevention/good housekeeping for municipal operations;

b. Implementation of the minimum control measure in Section II related to construction site stormwater runoff control in accordance with this state permit shall address discharges from transitional sources;

c. Implementation of the means and methods to address discharges from new sources in accordance with the minimum control measure in Section II related to post-construction stormwater management in new development and development of prior developed lands and in order to offset 5.0% of the total increase in POC loads between July 1, 2009, and June 30, 2014. Increases in the POC load from grandfathered projects initiating construction after July 1, 2014, must be offset prior to completion of the project; and

d. Implementation of means and methods sufficient to meet the required reductions of POC loads from existing sources in accordance with the Chesapeake Bay TMDL Action Plan.

4. Annual reporting requirements.

a. In accordance with Table 1 in this section, the operator shall submit the Chesapeake Bay Action Plan with the appropriate annual report.

b. Each subsequent annual report shall include a list of control measures implemented during the reporting period and the cumulative progress toward meeting the compliance targets for nitrogen, phosphorus, and total suspended solids.

c. Each subsequent annual report shall include a list of control measures, in an electronic format provided by the department, that were implemented during the reporting cycle and the estimated reduction achieved by the control. For stormwater management controls, the report shall include the information required in Section II B 5 e and shall include whether an existing stormwater management control was retrofitted, and if so, the existing stormwater management control type retrofit used.



d. Each annual report shall include a list of control measures that are expected to be implemented during the next reporting period and the expected progress toward meeting the compliance targets for nitrogen, phosphorus, and total suspended solids.

5. The operator shall include the following as part of its reapplication package due in accordance with Section III M:

a. Documentation that sufficient control measures have been implemented to meet the compliance target identified in this special condition. If temporary credits or offsets have been purchased in order to meet the compliance target, the list of temporary reductions utilized to meet the required reduction in this state permit and a schedule of implementation to ensure the permanent reduction must be provided; and

b. A draft second phase Chesapeake Bay TMDL Action Plan designed to reduce the existing pollutant load as follows:

(1) The existing pollutant of concern loads by an additional seven times the required reductions in loading rates using the applicable Table 3 for sources included in the 2000 U.S. Census Bureau urbanized areas;

(2) The existing pollutant of concerns loads by an additional eight times the required reductions in loading rates using the applicable Table 3 for expanded sources identified in the U.S. Census Bureau 2010 urbanized areas;

(3) An additional 35% reduction in new sources developed between 2009 and 2014 and for which the land use cover condition was greater than 16%; and

(4) Accounts for any modifications to the applicable loading rate provided to the operator as a result of TMDL modification.

TMDL Action Plan

As required by the permit, a phased Chesapeake Bay TMDL Action Plan will be developed in permit year (PY) 1 and 2 and submitted to VADEQ within the 24 months after permit coverage. The Action Plan will include the components specified in Section I C of the permit: A brief summary of these items is provided below.

- ❖ Annual review of the MS4 Program for appropriateness;
- ❖ Identification of any new or modified legal authorities that need to be implemented to meet the requirements of the Chesapeake Bay TMDL Action Plan;
- ❖ The means and methods that will be used to address discharges into the MS4 from new sources;
- ❖ An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009;
- ❖ A determination of the total pollutant load reductions necessary to reduce the annual POC loads from existing sources;
- ❖ The means and methods, such as management practices and retrofit programs, that will be used to meet the required reductions;
- ❖ The means and methods to offset the increased loads from new sources initiating construction between July 1, 2009, and June 30, 2014, that disturb one acre or greater;
- ❖ The means and methods to offset the increased loads from projects, as grandfathered in accordance with 4VAC50-60-48, that disturb one acre or greater;



- ❖ Modifications to the TMDL Action Plan or WIP that occur during the term of this state permit as part of its permit reapplication and not during the term of this state permit;
- ❖ A list of future projects and associated acreage that qualify as grandfathered in accordance with 4VAC50-60-48;
- ❖ An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle; and
- ❖ An opportunity for receipt and consideration of public comments regarding the draft Chesapeake Bay TMDL Action Plan.

The means and methods to address pollutants may include low impact development (LID) practices, stream restoration practices, use of pollutant trading or offset programs, and conversion of impervious surfaces with the overall goal of reducing runoff and encouraging infiltration.

Annual POC Loads

The permit requires an estimation of the annual POC loads discharged from the existing sources, based on the 2009 progress run using Table 2a (shown in the permit excerpt). The Navy's MS4s drain either directly to the Chesapeake Bay or to the James River. The regulated areas will be computed for the installations and input into the appropriate table. The corresponding load based on the 2009 progress run will then be computed.

Necessary Reductions

The permit requires an estimation of the total reductions necessary to reduce the annual POC load from existing sources to the appropriate implementation level using Table 3a (shown in the permit excerpt). The regulated areas determined for Table 2a will be used to calculate the total reduction requirements for the first permit cycle. The reduction for the first permit cycle will correspond to 5% of the total reduction required. In accordance with the document entitled, "Fact Sheet – General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems," the installations that drain directly to the Chesapeake Bay will use the James River Basin tables in the permit to determine the required pollutant reductions.

NAVFAC MIDLANT has currently contracted with Baker and other contractors to perform opportunity assessments on various installations and annexes to identify locations where the installation of BMP facilities will be most useful. After these locations are identified and prioritized, the Navy will decide how and where to install and implement these BMPs.

Implementation of TMDL Action Plan

The TMDL Action Plan will be implemented in phases as follows:

- ❖ BMPs for MCM #4, Construction Site Runoff Control, will be implemented within 24 months after permit coverage.
- ❖ The nutrient management plans described in a BMP under MCM #6, Pollution Prevention/Good Housekeeping, will be fully implemented within 60 months after permit coverage.



- ❖ Means and methods to address discharges from new sources in accordance with MCM #5 and to offset 5% of the total increase in POC loads between July 1, 2009, and June 30, 2014. Increases in the POC load from grandfathered projects initiating construction after July 1, 2014 must be offset prior to completion of the project. These means and methods will be installed in PY 2 through 5.
- ❖ Means and methods to meet 5% of the total required reductions of POC loads from existing sources in accordance with the Chesapeake Bay TMDL Action Plan will be installed in PY 2 through 5.

Annual Reporting

As stated above, the Chesapeake Bay TMDL Action Plan will be developed and submitted to VADEQ within 24 months after permit coverage. Each subsequent annual report will include:

- ❖ A list of control measures implemented during the reported period and the cumulative progress toward meeting the required reduction for the POCs.
- ❖ A list of control measures, in electronic format, that were implemented during the reporting cycle and the estimated reduction achieved by the control. If the control measure is a stormwater management control, the report will include the corresponding stormwater management facility tracking and reporting requirements outlined in MCM #5.
- ❖ A list of control measures that are expected to be implemented during the next reporting period and the expected progress toward meeting the compliance targets for the POCs.



3. Special Conditions for Other TMDLs

This section discusses the special conditions for TMDLs other than the Chesapeake Bay TMDL Action Plan that was summarized in the preceding section. EPA's website was consulted in January 2013 to identify TMDLs that are associated with the MS4 permitted installations. Table 3-1 provides a summary of these TMDLs.

Table 3-1. TMDLs Associated with Permitted Installations

Installation	Impairment	Water	Approval Date	WLA (count/day)	WLA (cfu/yr)
Naval Air Station Oceana	Fecal Coliform	West Neck Creek (Upper), London Bridge Creek	9/27/2005	Not Given	1.45E+13
Scott Center Annex	Enterococcus Bacteria	Paradise Creek	7/20/2010	1.91E+10	Not Given
Naval Medical Center Portsmouth	Enterococcus Bacteria	Elizabeth River Mainstem (Upper)	7/20/2010	9.48E+10	Not Given

The waste load allocation (WLA) for Scott Center Annex (SCA) has been documented in past MS4 Program Plans. SCA and Naval Medical Center Portsmouth (NMCP) currently have WLAs associated with them which are further described in "The Bacteria TMDL Development for the Elizabeth River," which was published in July 2010 and can be found at

<http://www.deq.virginia.gov/portals/0/DEQ/Water/TMDL/apptmdls/jamesrvr/elizabethec.pdf>

The subsequent sections present the applicable excerpt from the permit and discuss relevant aspects of the permit, including pertinent requirements.

Permit Regulations (as of 07/01/2013)

An excerpt from Section I of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit, including Table 1 (as referenced below) can be found in Appendix B.

B. Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL. An approved TMDL may allocate an applicable wasteload to a small MS4 that identifies a pollutant or pollutants for which additional stormwater controls are necessary for the surface waters to meet water quality standards. The MS4 operator shall address the pollutants in accordance with this special condition where the MS4 has been allocated a wasteload in an approved TMDL.

1. The operator shall maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in approved TMDLs. TMDL Action Plans may be implemented in multiple phases over more than one state permit cycle using the adaptive iterative approach provided adequate progress to reduce pollutant discharge in a manner consistent with the assumptions and requirements of the specific TMDL wasteload is demonstrated in accordance with subdivision 2 e of this subsection. These TMDL Actions Plans shall identify the best management practices and other interim milestone activities to be implemented during the remaining terms of this state permit.



a. In accordance with Table 1 in this section, the operator shall update the MS4 Program Plans to address any new or modified requirements established under this special condition for pollutants identified in TMDL wasteload allocations approved prior to July 9, 2008.

b. In accordance with Table 1 in this section, the operator shall update the MS4 Program Plan to incorporate approvable TMDL Action Plans that identify the best management practices and other interim milestone activities that will be implemented during the remaining term of this permit for pollutants identified in TMDL wasteload allocations approved either on or after July 9, 2008, and prior to issuance of this permit.

c. Unless specifically denied in writing by the department, TMDL Action Plans and updates developed in accordance with this section become effective and enforceable 90 days after the date received by the department.

2. The operator shall:

a. Develop and maintain a list of its legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements applicable to reducing the pollutant identified in each applicable WLA;

b. Identify and maintain an updated list of all additional management practices, control techniques and system design and engineering methods, beyond those identified in Section II B, that have been implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;

c. Enhance its public education and outreach and employee training programs to also promote methods to eliminate and reduce discharges of the pollutants identified in the WLA;

d. Assess all significant sources of pollutant(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit and identify all municipal facilities that may be a significant source of the identified pollutant. For the purposes of this assessment, a significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL. (For example, a significant source of pollutant from a facility of concern for a bacteria TMDL would be expected to be greater at a dog park than at other recreational facilities where dogs are prohibited.)

e. Develop and implement a method to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs. The evaluation shall use any newly available information, representative and adequate water quality monitoring results, or modeling tools to estimate pollutant reductions for the pollutant or pollutants of concern from implementation of the MS4 Program Plan. Monitoring may include BMP, outfall, or in-stream monitoring, as appropriate, to estimate pollutant reductions. The operator may conduct monitoring, utilize existing data, establish partnerships, or collaborate with other MS4 operators or other third parties, as appropriate. This evaluation shall include assessment of the facilities identified in subdivision 2 d of this subsection. The methodology used for assessment shall be described in the TMDL Action Plan.

3. Analytical methods for any monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the Environmental Protection Agency (EPA). Where an approved method does not exist, the operator must use a method consistent with the TMDL.

4. The operator is encouraged to participate as a stakeholder in the development of any TMDL implementation plans applicable to their discharge. The operator may incorporate applicable best management practices identified in the TMDL implementation plan in the MS4 Program Plan or may choose to implement BMPs of equivalent design and efficiency provided that the rationale for any substituted BMP is provided and the substituted BMP is consistent with the assumptions and requirements of the TMDL WLA.

5. Annual reporting requirements.

a. The operator shall submit the required TMDL Action Plans with the appropriate annual report and in accordance with the associated schedule identified in this state permit.

b. On an annual basis, the operator shall report on the implementation of the TMDL Action Plans and associated evaluation including the results of any monitoring conducted as part of the evaluation.



6. The operator shall identify the best management practices and other steps that will be implemented during the next state permit term as part of the operator's reapplication for coverage as required under Section III M.

7. For planning purposes, the operator shall include an estimated end date for achieving the applicable wasteload allocations as part of its reapplication package due in accordance with Section III M.

TMDL Action Plans

The EPA website will be consulted annually to identify any additional permitted installations with WLAs. The annual reports will include updates on the current status of the TMDL Action Plans and any associated evaluation results.

TMDL Action Plans will be developed or updated for Naval Air Station Oceana (NASO), NMCP, and SCA as required by the permit. The Action Plans will identify BMPs and other implementation steps to reduce the pollutants identified in the TMDL. The method(s) to assess the effectiveness of the Action Plan will be documented. These method(s) may include modeling, monitoring of BMPs, outfalls, or in-stream monitoring.

In addition to the VPDES MS4 permit requirements for reducing the pollutants identified in the WLAs, the VPDES industrial stormwater permit also includes similar requirements.

Additional management practices, control techniques and system design, and engineering methods that have been implemented and are applicable to reducing fecal coliform and enterococcus bacteria, other than those identified in MCM #1 through #6 will be discussed in the TMDL Action Plans. Since all three WLAs are bacteria based, focus will be placed on areas with large goose populations, pet areas, etc.

Table 3-2 presents CNRMA's list of plans and instructions to address the TMDL. It is anticipated that the instruction documents will be converted to standard operating procedures within this permit cycle.

Table 3-2. Summary of Management Actions for TMDL Reduction

Management Category	Management Documents and Instructions
Agricultural BMPs	Nutrient Management Plan and Conservation Plan for NASO
Utilities	COMNAVREG MIDLANT Illegal Discharge and Dumping Instruction.
Illicit Discharges	OPNAV Instruction 5090.1C Environmental Readiness Program Manual
Erosion and Sediment Control	COMNAVREG MIDLANT Erosion and Sediment Control Instruction
Stormwater Management	COMNAVREG MIDLANT VSMP Construction Permit Instruction
	COMNAVREG MIDLANT Post Construction Stormwater Runoff Management Instruction
	EISA Sect 438 & the DON Low Impact Development Policy
General	OPNAV Instruction 5090.1C Environmental Readiness Program Manual
	TMDL Implementation Plan for Lynnhaven Bay, Broad Bay and Linkhorn Bay Watersheds



Public education, outreach, and employee training programs will be implemented in accordance with MCM #1 and #2 BMPs. Facilities will be identified that may be a significant source of the identified pollutant and are not covered under a separate VPDES permit at NASO, NMCP, and SCA. These facilities will be assessed annually to ensure the BMPs are being implemented as required.

West Neck Creek – Naval Air Station Oceana

The TMDL Action Plan for fecal coliform at NASO will be updated in PY 1 through 2 and within 24 months after permit coverage, as required by the permit. The Action Plan will identify BMPs and other implementation steps to reduce the amount of fecal coliform entering West Neck Creek.

The current TMDL Action Plan includes the following BMPs:

- ❖ Public Education and Outreach;
- ❖ Outfall Reconnaissance and Sampling (conducted as a requirement to the VPDES industrial stormwater permit renewal);
- ❖ Property Evaluations and Site Evaluations; and
- ❖ Program Evaluation and Assessment.

Elizabeth River – Naval Medical Center Portsmouth

A TMDL Action Plan for the NMCP will be developed during PY 1 through 3 and within 36 months after permit coverage, as required by the permit. The Action Plan will identify BMPs and other implementation steps to reduce the amount of enterococcus bacteria entering the Elizabeth River.

Paradise Creek – Scott Center Annex

A TMDL Action Plan for the SCA will be developed during PY 1 through 3 and within 36 months after permit coverage, as required by the permit. The Action Plan will identify BMPs and other implementation steps to reduce the amount of enterococcus bacteria entering Paradise Creek.



4. MCM #1: Public Education and Outreach

This section addresses the requirements and implementation of the Public Education and Outreach Plan, and information on the annual evaluation and inspection reports. More specifically, this section addresses the following areas which correspond to the permit requirements:

- ❖ High-Priority Water Quality Issues
- ❖ Training
- ❖ Public Education
- ❖ Pet Waste Stations
- ❖ Plan Evaluation and Annual Reporting

The Public Education Outreach Plan outlined below will be finalized in PY 1 and within 12 months after permit coverage. Until this time, the public education and outreach program will be implemented according to the 2011 MS4 Program Plan. The draft MS4 Program Plan will be posted on the NAVFAC MIDLANT webpage, and comments regarding the Public Education Outreach Plan and the entire MS4 Program Plan will be able to be received through the website. The term “public” has been interpreted as suggested in the permit as the resident and employee population within the property boundary of the facility.

Permit Regulations (as of 07/01/2013)

An excerpt from Section II B of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit, including Table 1 (as referenced below) can be found in Appendix B.

1. Public education and outreach on stormwater impacts.

a. The operator shall continue to implement the public education and outreach program as included in the registration statement until the program is updated to meet the conditions of this state permit. Operators who have not previously held MS4 permit coverage shall implement this program in accordance with the schedule provided with the completed registration statement.

b. The public education and outreach program should be designed with consideration of the following goals:

- (1) Increasing target audience knowledge about the steps that can be taken to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;*
- (2) Increasing target audience knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and*
- (3) Implementing a diverse program with strategies that are targeted towards audiences most likely to have significant stormwater impacts.*

c. The updated program shall be designed to:

- (1) Identify, at a minimum, three high-priority water quality issues, that contribute to the discharge of stormwater (e.g., Chesapeake Bay nutrients, pet wastes and local bacteria TMDLs, high-quality receiving waters, and illicit discharges from commercial sites) and a rationale for the selection of the three high-priority water quality issues;*
- (2) Identify and estimate the population size of the target audience or audiences who is most likely to have significant impacts for each high-priority water quality issue;*



(3) *Develop relevant message or messages and associated educational and outreach materials (e.g., various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, websites, and social media) for message distribution to the selected target audiences while considering the viewpoints and concerns of the target audiences including minorities, disadvantaged audiences, and minors;*

(4) *Provide for public participation during public education and outreach program development;*

(5) *Annually conduct sufficient education and outreach activities designed to reach an equivalent 20% of each high-priority issue target audience. It shall not be considered noncompliance for failure to reach 20% of the target audience. However, it shall be a compliance issue if insufficient effort is made to annually reach a minimum of 20% of the target audience; and*

(6) *Provide for the adjustment of target audiences and messages including educational materials and delivery mechanisms to reach target audiences in order to address any observed weaknesses or shortcomings.*

d. The operator may coordinate their public education and outreach efforts with other MS4 operators; however, each operator shall be individually responsible for meeting all of its state permit requirements.

e. Prior to application for continued state permit coverage required in Section III M, the operator shall evaluate the education and outreach program for:

(1) Appropriateness of the high-priority stormwater issues;

(2) Appropriateness of the selected target audiences for each high-priority stormwater issue;

(3) Effectiveness of the message or messages being delivered; and

(4) Effectiveness of the mechanism or mechanisms of delivery employed in reaching the target audiences.

f. The MS4 Program Plan shall describe how the conditions of this permit shall be updated in accordance with Table 1 in this section.

g. The operator shall include the following information in each annual report submitted to the department during this permit term:

(1) A list of the education and outreach activities conducted during the reporting period for each high-priority water quality issue, the estimated number of people reached, and an estimated percentage of the target audience or audiences that will be reached; and

(2) A list of the education and outreach activities that will be conducted during the next reporting period for each high-priority water quality issue, the estimated number of people that will be reached, and an estimated percentage of the target audience or audiences that will be reached.

High-Priority Water Quality Issues

Three high-priority water quality issues were identified to include:

- ❖ Construction site (sediment and erosion) issues;
- ❖ Household hazardous waste (including illicit discharges); and
- ❖ Chesapeake Bay Nutrient Removal.

Public education and outreach will focus on the three issues outlined below.

Construction Site Issues

Construction site issues include improperly installed erosion and sediment control devices, areas that are not stabilized within the allotted time, and permitting procedures that are not followed. These items will be addressed with BMPs #4.1 to 4.5.



The population size of the target audience for construction site issues will be determined in PY 1. The population will include base personnel who perform construction. Education and outreach activities will be designed to reach 20% of the target audience.

Household Hazardous Waste

Because many individuals do not know how to properly dispose of household hazardous waste such as paint, oil, cleaners, fertilizer, etc., it can end up in the waterways. Fertilizers are a source of nutrients that are addressed in the Chesapeake Bay TMDL Action Plan. The proper disposal of household hazardous waste will be addressed through public education and outreach (BMP #1.1 through #1.5).

The population size of the target audience for household hazardous waste disposal will be determined in PY 1. The population will include individuals living on the installations as well as individuals who only work on the installation. Education and outreach activities will be designed to reach 20% of the target audience.

Chesapeake Bay Nutrient Removal

With the majority of the runoff from the installations draining to the Chesapeake Bay, NAVFAC MIDLANT will focus their efforts on nutrient removal from stormwater runoff. The Chesapeake Bay TMDL Action Plan addresses phosphorus, total nitrogen, and total suspended solids. As required by the permit, a Chesapeake Bay Action Plan and Turf and Landscape Nutrient Management Plans (BMP #6.3) will be developed. In addition, car wash areas on each installation will be identified and tracked (BMP #1.6) and brochures regarding proper disposal of pet waste will be distributed (BMP #1.3).

The population size of the target audience for Chesapeake Bay nutrient issues will be determined in PY 1. The population will include all individuals living and working on the installations. Education and outreach activities will be designed to reach 20% of the target audience.

Environmental Awareness Training (BMP #1.1)

The Environmental Awareness Training Program will continue to be implemented. In PY 1, the materials will be evaluated and updated. In PY 2 through 5, training will be conducted at least annually and include training of members of the Facilities Engineering & Acquisition Division (FEAD). For each high-priority water quality issue, the number of people trained and the date of the training will be recorded. The BMP List in Appendix A provides additional information, including a description of the BMP, measurable goals, metrics, responsible parties, and a timeline.

ECATTS Training (BMP #1.2)

Training will also be conducted for both Military Base Employees and NAVFAC Construction Contractors using the Web-based Environmental Compliance Assessment, Training and Tracking System (ECATTS). Several stormwater training modules have been developed including Principals or Erosion and Sedimentation, Erosion and Sediment Control Practices, Vegetative Stabilization, Stormwater Runoff, Stormwater BMPs, Construction Site Pollution Prevention, and Sediment and Stormwater Plans. The training will be conducted in PY 1 through 5. The number of people trained using



each module will be recorded. The modules will be reviewed annually and updated as needed. The BMP List in Appendix A provides additional information.

Brochures (BMP #1.3)

A series of public education tri-fold brochures will be developed as a part of the Navy Stormwater Pollution Prevention Program. The brochure topics will support the three high-priority water quality issues and include:

- ❖ General Stormwater (addressing nutrients from fertilizers and yard waste, etc.);
- ❖ Construction Sediment and Erosion Control - Virginia Stormwater Management Program (VSMP);
- ❖ Pet Waste; and
- ❖ Household Hazardous Waste.

Each brochure will include general information about the issues, guidance about what the public can do to help, contact information, and sources of additional data. In PY 1 through 5, the brochures will be distributed during training/events/functions where the members of the target audience will be present. For example, the Construction Sediment and Erosion Control brochure will be distributed at preconstruction meetings. Copies of the brochures will be retained, and the number of brochures distributed per event will be recorded. Brochures will be distributed to housing at least semiannually. In addition, the general, pet waste and hazardous waste brochures will be displayed in stands that include a general information poster at each installation. The BMP List in Appendix A provides additional information.

Newspaper Articles and Ads (BMP #1.4)

Articles and/or ads concerning stormwater pollution prevention related to the three high-priority water quality issues will be developed and will be placed semiannually in "The Flagship," the "Jet Observer," or the emailed "Plan of the Week" in PY 1 through 5. Copies of all published materials will be retained, and the publication dates will be recorded. The BMP List in Appendix A provides additional information.

External Website (BMP #1.5)

The NAVFAC MIDLANT website will be used to post public education material such as EPA's video entitled "After the Storm." In PY 1, content for the website will be identified and the materials will be posted. The website will also be used to post the draft and final MS4 Program Plans, as well as the annual reports. The number of times a material is viewed will be tracked and recorded in PY 2 through 5. The BMP List in Appendix A provides additional information.

Car Wash Areas (BMP #1.6)

Each installation has a designated car wash area with a corresponding point of contact. Whenever individuals want to hold a car wash fundraiser, the point contact is called and only the designated location(s) can be used. Designated washing areas will be located



on pervious surfaces to allow for infiltration of wash water or located on portions of the base with no connection to the MS4 system (i.e. no storm drains present). The car wash information will be posted in the “Plan of the Week” and/or the installation newspaper at least annually. In PY 1 through PY 5, the number of car washes held will be tracked and reported. The BMP List in Appendix A provides additional information.

Plan Evaluation and Annual Reporting (BMP #1.7)

The Public Education and Outreach Plan will be evaluated during each permit cycle, including an assessment of:

- ❖ Appropriateness of the high-priority stormwater issues;
- ❖ Appropriateness of the selected target audiences for each high-priority issue;
- ❖ Effectiveness of the message(s) being delivered; and
- ❖ Effectiveness of the mechanism(s) of delivery employed in reaching the target audiences.

The annual report will include a list of the education and outreach activities that took place during the reporting period for each high-priority water quality issue, the estimated number of people reached, and an estimated percentage of the target audience reached. This same information will be estimated for the next reporting period. Any identified weakness or shortcomings will be addressed as necessary. The BMP List in Appendix A provides additional information.



5. MCM #2: Public Involvement and Participation

This section addresses the requirements and implementation of the Public Involvement and Participation Plan, and information on the annual evaluation. More specifically, this section addresses the following:

- ❖ Permit Regulations
- ❖ Posting of Program and Annual Report
- ❖ Storm Drain Marking Program
- ❖ Local Activity Participation
- ❖ Evaluation and Assessment

The Public Involvement and Participation Plan outlined below will be reviewed and updated, as appropriate, in PY 1 through 5. The term “public” has been interpreted as suggested in the permit as “the resident and employee population within the fences line of the facility.”

Permit Regulations (as of 07/01/2013)

An excerpt from Section II B of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit can be found in Appendix B.

2. Public involvement/participation.

a. Public involvement.

(1) The operator shall comply with any applicable federal, state, and local public notice requirements.

(2) The operator shall:

(a) Maintain an updated MS4 Program Plan. Any required updates to the MS4 Program Plan shall be completed at a minimum of once a year and shall be updated in conjunction with the annual report. The operator shall post copies of each MS4 program plan on its webpage at a minimum of once a year and within 30 days of submittal of the annual report to the department.

(b) Post copies of each annual report on the operator's web page within 30 days of submittal to the department and retain copies of annual reports online for the duration of this state permit; and

(c) Prior to applying for coverage as required by Section III M, notify the public and provide for receipt of comment of the proposed MS4 Program Plan that will be submitted with the registration statement. As part of the reapplication, the operator shall address how it considered the comments received in the development of its MS4 Program Plan. The operator shall give public notice by a method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to solicit public participation.

b. Public participation. The operator shall participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually e.g., stream cleanups; hazardous waste cleanup days; and meetings with watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the operator's small MS4. The activities shall be aimed at increasing public participation to reduce stormwater pollutant loads;



improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement.

c. The MS4 Program Plan shall include written procedures for implementing this program.

d. Each annual report shall include:

(1) A web link to the MS4 Program Plan and annual report; and

(2) Documentation of compliance with the public participation requirements of this section.

Posting of Program Plan and Annual Report (BMP #2.1)

Copies of the 2011 MS4 Program Plan and the PY 4 Annual Report are located on the NAVFAC MIDLANT webpage. These documents can be found at

https://portal.navy.mil/portal/page/portal/navfac/navfac_ww_pp/navfac_navfacmidlant_pp/midlant_ps/environmental_norfolk/tab3987837

Once approved, the draft version of the 2013 MS4 Program Plan will also be placed on the webpage for public review and comment. The MS4 Program Plan will be updated yearly in conjunction with the annual report, and copies of these documents will be posted on the website within 30 days of submittal to VADEQ.

At the end of the permit cycle, the draft MS4 Program Plan will be posted on the website, and a notification stating that the document is available for review and comment will be sent to the public through the "Plan of the Week" and/or the newspaper "The Flagship." Comments will be received through the website. The reapplication package will include a description of the comments received and how they were addressed. The BMP List in Appendix A provides additional information.

Storm Drain Marking Program (BMP #2.2)

The Navy will continue the storm drain marking program, which places markers on inlets to the MS4, to remind the public that materials that flow into the storm drain end up in local waterways. These storm drain markers were developed specifically for the Navy. The target areas for the program will be identified in PY 1. In PY 2 through 5, annual markings of the storm drains will be completed. The BMP List in Appendix A provides additional information.

Local Activity Participation (BMP #2.3)

The Navy will participate in at least four local activities annually across the permitted Naval installations. Every effort will be taken to hold the four activities at four different installations. Most installations hold an Earth Day event and a Clean the Bay Day. Outreach information will be distributed at these events. When a booth is involved at an event, a banner (to be developed for the program and using the newly developed logo) will be used. For Clean the Bay Day events, the number of volunteers and amount of litter collected will be recorded. For both events, the amount of outreach materials that were distributed will be documented, as well as the date and location of each event. The BMP List in Appendix A provides additional information.



Evaluation and Assessment (BMP #2.4)

The Public Involvement and Participation Plan will be assessed on an annual basis to assess and evaluate progress toward meeting the measurable goals. The BMP List in Appendix A provides additional information.



6. MCM #3: Illicit Discharge Detection and Elimination

This section addresses the requirements and implementation of the Illicit Discharge Detection and Elimination Procedures, and information on the annual evaluation. More specifically, this section addresses the following:

- ❖ Permit Regulations
- ❖ Storm Sewer System Map
- ❖ Written Procedures
- ❖ Public Reporting
- ❖ Public Education
- ❖ Spill Control Documentation
- ❖ Evaluation and Assessment

The illicit discharge procedures will be updated in PY 1 and within 12 months after permit coverage. Until that time, MCM #3 will be implemented according to the 2011 MS4 Program Plan.

Permit Regulations (as of 07/01/2013)

An excerpt from Section II B of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit, including Table 1 (as referenced below) can be found in Appendix B.

3. Illicit discharge detection and elimination.

a. The operator shall maintain an accurate storm sewer system map and information table and shall update it in accordance with the schedule set out in Table 1 of this section.

(1) The storm sewer system map must show the following, at a minimum:

(a) The location of all MS4 outfalls. In cases where the outfall is located outside of the MS4 operator's legal responsibility, the operator may elect to map the known point of discharge location closest to the actual outfall. Each mapped outfall must be given a unique identifier, which must be noted on the map; and

(b) The name and location of all waters receiving discharges from the MS4 outfalls and the associated HUC.

(2) The associated information table shall include for each outfall the following:

(a) The unique identifier;

(b) The estimated MS4 acreage served;

(c) The name of the receiving surface water and indication as to whether the receiving water is listed as impaired in the Virginia 2010 303(d)/305(b) Water Quality Assessment Integrated Report; and

(d) The name of any applicable TMDL or TMDLs.

(3) Within 48 months of coverage under this state permit, the operator shall have a complete and updated storm sewer system map and information table that includes all MS4 outfalls located within the boundaries identified as "urbanized" areas in the 2010 Decennial Census and shall submit the updated information table as an appendix to the annual report.

(4) The operator shall maintain a copy of the current storm sewer system map and outfall information table for review upon request by the public or by the department.



(5) *The operator shall continue to identify other points of discharge. The operator shall notify in writing the downstream MS4 of any known physical interconnection.*

b. The operator shall effectively prohibit, through ordinance or other legal mechanism, nonstormwater discharges into the storm sewer system to the extent allowable under federal, state, local law, regulation, or ordinance. Categories of nonstormwater discharges or flows (i.e., illicit discharges) identified in 4VAC50-60-400 D 2 c (3) must be addressed only if they are identified by the operator as significant contributors of pollutants to the small MS4. Flows that have been identified in writing by the Department of Environmental Quality as de minimis discharges are not significant sources of pollutants to surface water and do not require a VPDES permit.

c. The operator shall develop, implement, and update, when appropriate, written procedures to detect, identify, and address unauthorized nonstormwater discharges, including illegal dumping, to the small MS4. These procedures shall include:

(1) Written dry weather field screening methodologies to detect and eliminate illicit discharges to the MS4 that include field observations and field screening monitoring and that provide:

(a) A prioritized schedule of field screening activities determined by the operator based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping or cross connections.

(b) The minimum number of field screening activities the operator shall complete annually to be determined as follows: (i) if the total number of outfalls in the small MS4 is less than 50, all outfalls shall be screened annually or (ii) if the small MS4 has 50 or more total outfalls, a minimum of 50 outfalls shall be screened annually.

(c) Methodologies to collect the general information such as time since the last rain, the quantity of the last rain, site descriptions (e.g., conveyance type and dominant watershed land uses), estimated discharge rate (e.g., width of water surface, approximate depth of water, approximate flow velocity, and flow rate), and visual observations (e.g., order, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology);

(d) A time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent nonstormwater discharge prioritized as follows: (i) illicit discharges suspected of being sanitary sewage or significantly contaminated must be investigated first and (ii) investigations of illicit discharges suspected of being less hazardous to human health and safety such as noncontact cooling water or wash water may be delayed until after all suspected sanitary sewage or significantly contaminated discharges have been investigated, eliminated, or identified. Discharges authorized under a separate VPDES or state permit require no further action under this permit.

(e) Methodologies to determine the source of all illicit discharges shall be conducted. If an illicit discharge is found, but within six months of the beginning of the investigation neither the source nor the same nonstormwater discharge has been identified, then the operator shall document such in accordance with Section II B 3 f. If the observed discharge is intermittent, the operator must document that a minimum of three separate investigations were made in an attempt to observe the discharge when it was flowing. If these attempts are unsuccessful, the operator shall document such in accordance with Section II B 3 f.

(f) Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;

(g) Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated.

(h) A mechanism to track all investigations to document: (i) the date or dates that the illicit discharge was observed and reported; (ii) the results of the investigation; (iii) any follow-up to the investigation; (iv) resolution of the investigation; and (v) the date that the investigation was closed.

d. The operator shall promote, publicize, and facilitate public reporting of illicit discharges into or from MS4s. The operator shall conduct inspections in response to complaints and follow-up



inspections as needed to ensure that corrective measures have been implemented by the responsible party.

e. The MS4 Program Plan shall include all procedures developed by the operator to detect, identify, and address nonstormwater discharges to the MS4 in accordance with the schedule in Table 1 in this section. In the interim, the operator shall continue to implement the program as included as part of the registration statement until the program is updated to meet the conditions of this permit. Operators, who have not previously held MS4 permit coverage, shall implement this program in accordance with the schedule provided with the completed registration statement.

f. Annual reporting requirements. Each annual report shall include:

- (1) A list of any written notifications of physical interconnection given by the operator to other MS4s;
- (2) The total number of outfalls screened during the reporting period, the screening results, and detail of any follow-up actions necessitated by the screening results; and
- (3) A summary of each investigation conducted by the operator of any suspected illicit discharge. The summary must include: (i) the date that the suspected discharge was observed, reported, or both; (ii) how the investigation was resolved, including any follow-up, and (iii) resolution of the investigation and the date the investigation was closed.

Storm Sewer System Map (BMP #3.1)

A storm sewer system map and corresponding information table will be developed within 48 months after permit coverage. Maps will be developed for each permitted installation and will include data from a geodatabase. The maps will include:

- ❖ The location of all MS4 outfalls with unique identifiers; and
- ❖ The name and location of waters receiving MS4 discharges and the associated hydrologic unit code (HUC).

The corresponding information table will include:

- ❖ The unique identifier;
- ❖ The estimated MS4 acreage served;
- ❖ The name of the receiving surface water and whether the waters are listed as impaired on the Virginia 2012 303(d)/305(b) list; and
- ❖ The name of any applicable TMDL(s).

Most, if not all, of the MS4 outfall locations are currently mapped. However, in order to meet the permit requirements, the HUC numbers, receiving waters, and MS4 acreage served will need to be added. These and any other necessary updates will be identified in PY 1. In PY 2 and 3, the maps will be updated accordingly. In PY 4 and 5, the maps will be maintained and updated annually. A record of the date the maps were updated will be kept on file, and a copy of the maps and information table will be retained. The BMP List in Appendix A provides additional information.

Written Procedures and Dry Weather Screening (BMP #3.2)

Draft instructions related to illegal dumping and discharges have been developed by CNRMA and are included in Appendix C. The draft instructions require that periodic



hours of the spill discovery and a 5-day spill letter, which documents specific details of the spill. The 5-day spill letter includes:

- ❖ Date of release/discovery;
- ❖ Time of release/discovery;
- ❖ Location;
- ❖ Substance released;
- ❖ NRC # (if applicable);
- ❖ Quantity released;
- ❖ Quantity recovered;
- ❖ Receiving waterway;
- ❖ Cause of release; and
- ❖ Cleanup actions taken.

In PY 1 through 5, these reports/letters will be included in the annual reports. The BMP List in Appendix A provides additional information. Appendix C contains the Spill Reporting and Documentation SOP.

Evaluation and Assessment (BMP #3.6)

The illicit discharge SOP will be assessed on an annual basis in PY 2 through 5 in regard to compliance and effectiveness. The BMP List in Appendix A provides additional information.



7. MCM #4: Construction Site Runoff Control

This section addresses the requirements, implementation, and enforcement of the Construction Site Runoff Control Plan, and information on the annual inspection reports. More specifically, this section addresses:

- ❖ Permit Regulations
- ❖ Legal Authority
- ❖ Erosion and Sediment Control Plans
- ❖ Compliance and Enforcement Procedures
- ❖ Tracking and Reporting

Permit Regulations (as of 07/01/2013)

An excerpt from Section II B of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit can be found in Appendix B.

4. Construction site stormwater runoff control.

a. Applicable oversight requirements. The operator shall utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from the following land-disturbing activities:

- (1) Land-disturbing activities as defined in § 10.1-560 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater;*
- (2) Land-disturbing activities in Tidewater jurisdictions, as defined in § 10.1-2101 of the Code of Virginia, that disturb 2,500 square feet or greater and are located in areas designated as Resource Protection Areas (RPA), Resource Management Areas (RMA) or Intensely Developed Acres (IDA), pursuant to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act;*
- (3) Land-disturbing activities disturbing less than the minimum land disturbance identified in subdivision (1) or (2) above for which a local ordinance requires that an erosion and sediment control plan be developed; and*
- (4) Land-disturbing activities on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 10,000 square feet or greater. The operator may utilize an agreement in lieu of a plan as provided in § 10.1-563 of the Code of Virginia for this category of land disturbances.*

b. Required plan approval prior to commencement of the land disturbing activity. The operator shall require that land disturbance not begin until an erosion and sediment control plan or an agreement in lieu of a plan as provided in § 10.1-563 is approved by a VESCP authority in accordance with the Erosion and Sediment Control Act (§ 10.1-560 et seq.). The plan shall be:

- (1) Compliant with the minimum standards identified in 4VAC-50-30-40 of the Erosion and Sediment Control Regulations; or*
- (2) Compliant with department-approved annual standards and specifications. Where applicable, the plan shall be consistent with any additional or more stringent, or both, erosion and sediment control requirements established by state regulation or local ordinance.*

c. Compliance and enforcement.



(1) *The operator shall inspect land-disturbing activities for compliance with an approved erosion and sediment control plan or agreement in lieu of a plan in accordance with the minimum standards identified in 4VAC50-30-40 or with department-approved annual standards and specifications.*

(2) *The operator shall implement an inspection schedule for land-disturbing activities identified in Section II B 4 a as follows:*

(a) *Upon initial installation of erosion and sediment controls;*

(b) *At least once during every two-week period;*

(c) *Within 48 hours of any runoff-producing storm event; and*

(d) *Upon completion of the project and prior to the release of any applicable performance bonds.*

Where an operator establishes an alternative inspection program as provided for in 4VAC50-30-60 B 2, the written schedule shall be implemented in lieu of Section II B 4 c (2) and the written plan shall be included in the MS4 Program Plan.

(3) *Operator inspections shall be conducted by personnel who hold a certificate of competence in accordance with 4VAC-50-50-40. Documentation of certification shall be made available upon request by the VESCP authority or other regulatory agency.*

(4) *The operator shall promote to the public a mechanism for receipt of complaints regarding regulated land-disturbing activities and shall follow up on any complaints regarding potential water quality and compliance issues.*

(5) *The operator shall utilize its legal authority to require compliance with the approved plan where an inspection finds that the approved plan is not being properly implemented.*

(6) *The operator shall utilize, as appropriate, its legal authority to require changes to an approved plan when an inspection finds that the approved plan is inadequate to effectively control soil erosion, sediment deposition, and runoff to prevent the unreasonable degradation of properties, stream channels, waters, and other natural resources.*

(7) *The operator shall require implementation of appropriate controls to prevent nonstormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land-disturbing activity inspections of the MS4. The discharge of nonstormwater discharges other than those identified in 4VAC50-60-1220 through the MS4 is not authorized by this state permit.*

(8) *The operator may develop and implement a progressive compliance and enforcement strategy provided that such strategy is included in the MS4 Program Plan and is consistent with 4VAC50-30.*

d. Regulatory coordination. The operator shall implement enforceable procedures to require that large construction activities as defined in 4VAC50-60-10 and small construction activities as defined in 4VAC50-60-10, including municipal construction activities, secure necessary state permit authorizations from the department to discharge stormwater.

e. MS4 Program requirements. The operator's MS4 Program Plan shall include:

(1) *A description of the legal authorities utilized to ensure compliance with the minimum control measure in Section II related to construction site stormwater runoff control such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements;*

(2) *Written plan review procedures and all associated documents utilized in plan review;*

(3) *For the MS4 operators who obtain department-approved standards and specifications, a copy of the current standards and specifications;*

(4) *Written inspection procedures and all associated documents utilized during inspection including the inspection schedule;*

(5) *Written procedures for compliance and enforcement, including a progressive compliance and enforcement strategy, where appropriate; and*



(6) *The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to construction site stormwater runoff control. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary.*

Reference may be made to any listed requirements in this subdivision provided the location of where the reference material can be found is included and the reference material is made available to the public upon request.

f. Reporting requirements. The operator shall track regulated land-disturbing activities and submit the following information in all annual reports:

- (1) Total number of regulated land-disturbing activities;*
- (2) Total number of acres disturbed;*
- (3) Total number of inspections conducted; and*
- (4) A summary of the enforcement actions taken, including the total number and type of enforcement actions taken during the reporting period.*

Legal Authority (BMP #4.1)

CNRMA has two sets of draft instructions related to construction site runoff control. The first, entitled "Virginia Stormwater Management Program Construction Permit Instruction," establishes a procedure for obtaining coverage under the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities at installations and annexes and applies to projects with a disturbance of 1 acre or greater. The second set of instructions, entitled "Erosion and Sediment Control Instruction," establishes minimum standards for the effective control of soil erosion, sediment deposition, and non-agricultural runoff from land-disturbing activities at installations and applies to projects with a disturbance of 10,000 square feet or greater. Both instruction documents can be found in Appendix C.

It is anticipated that these instructions will be converted to SOPs and updated in PY 1 to conform to the permit requirements. Since the installations are federal and do not include any delineated Resource Projection Areas (RPAs) or Resource Management Areas (RMAs), only land-disturbing activities that result in the disturbance of 10,000 square feet or greater are deemed regulated. The legal mechanisms will be implemented in PY 2 through 5. The BMP List in Appendix A provides additional information.

Erosion and Sediment Control Plans (BMP #4.2)

A regulated land-disturbing activity will not be authorized to begin until an erosion and sediment control plan, or an agreement in lieu of a plan, is approved. Current practices implemented within the NAVFAC MIDLANT Region are consistent with the "COMNAVREG MIDLANT Erosion and Sediment Control Instruction" which incorporates the Virginia Erosion and Sediment Control Regulations. NAVFAC MIDLANT has requested a meeting with VADEQ to clarify the necessary steps to meet the VSMP requirements regarding VESCP authority. As of the date of this publication, VADEQ has not confirmed a meeting date. In the interim, NAVFAC MIDLANT or their designee will



continue to review the erosion and sediment control plans until further instruction is received from VADEQ.

The BMP List in Appendix A provides additional information.

VSMP Construction Permit Instruction (BMP #4.3)

A VSMP Construction Permit Instruction has been developed and will be maintained and enforced to require adherence to the Virginia Stormwater Management Program Construction General Permit for construction activities that result in land disturbance greater than or equal to one acre, or activities greater than 2500 square feet which are part of a “larger common plan of development.” This instruction can be found in Appendix C. In PY 1, the instruction will be converted to an SOP. In PY 1 through 5, the instruction will be enforced accordingly.

Construction Activity SWMP & SWPPP Review (BMP #4.4)

Stormwater management plans (SWMPs) and construction site stormwater pollution prevention plans (SWPPPs) for activities disturbing one acre or greater shall undergo a plan review to ensure that each plan is consistent with the requirements set forth in the Virginia Stormwater Management Law and Regulations and the VSMP Construction Permit Instruction. As stated above, the instruction can be found in Appendix C and will be converted to an SOP in PY 1. In PY 1 through PY 5, SWMPs and SWPPPs will be reviewed for compliance. NAVFAC MIDLANT has requested a meeting with VADEQ to clarify the necessary steps to meet the VSMP requirements regarding VSMP authority. As of the date of this publication, VADEQ has not confirmed a meeting date. In the interim, NAVFAC MIDLANT or their designee will continue to review the SWMPs until further instruction is received from VADEQ.

Compliance and Enforcement Procedures (BMP #4.5)

In PY 1 and 2, inspections of the regulated land-disturbing activities for compliance with the approved erosion and sediment control plan will be completed as outlined in the 2011 MS4 Program Plan. During this time, oversight inspections will continue to be completed. In PY 3 through 5, the CNRMA inspections will be conducted according to the following schedule:

- ❖ Upon initial installation of erosion and sediment controls;
- ❖ At least once during every 2-week period;
- ❖ Within 48 hours of any runoff-producing storm event; and
- ❖ Upon completion of the project and prior to the release of any applicable performance bonds.

The Erosion and Sediment Control Instruction document includes the same inspection schedule requirement for the operator of the land-disturbing activity.

The inspections will be completed by personnel with the appropriate certificate of competence. The public reporting system (hotline, email, and/or website) described in



MCM #3 will also be used for reporting of complaints regarding the regulated land-disturbing activities. These comments will be documented, tracked, and included in the annual report.

In regard to enforcement, the Erosion and Sediment Control Instruction document states, "Any activity that violates this instruction may be subject to enforcement actions under the Clean Water Act; including Warning Letters, Notices of Violation, fines, and penalties from the Environmental Protection Agency, the Virginia Department of Conservation and Recreation, and the Virginia Department of Environmental Quality. The party that causes the violation will be responsible for all required corrective actions and will have to provide a written description of why the violation occurred to the Regional Environmental Group."

Additional compliance inspection procedures and enforcement actions will be investigated and documented during PY 1 and 2 and within 24 months after permit coverage. The procedures will be implemented in PY 3 through 5. The BMP List in Appendix A provides additional information.

Tracking and Reporting (BMP #4.6)

All regulated land-disturbing activities will be tracked. In PY 1 and 2, the annual report will include:

- ❖ Total number of regulated land-disturbing activities; and
- ❖ Total disturbed acreage.

In PY 3 through 5, the annual report will also include:

- ❖ Total number of inspections performed; and
- ❖ A summary of the enforcement actions taken, including the total number and type of enforcement actions.

The BMP List in Appendix A provides additional information.



8. MCM #5: Post Construction Runoff Control

This section addresses the requirements and implementation of the Post-Construction Runoff Control Plan, and information on the annual tracking and inspection reports. More specifically, this section addresses:

- ❖ Permit Regulations
- ❖ Legal Authority
- ❖ Inspection, Operation and Maintenance
- ❖ Tracking and Reporting

Permit Regulations (as of 07/01/2013)

An excerpt from Section II B of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit, including Table 1 (as referenced below) can be found in Appendix B.

5. Post-construction stormwater management in new development and development on prior developed lands.

a. Applicable oversight requirements. The operator shall address post-construction stormwater runoff that enters the MS4 from the following land-disturbing activities:

- (1) New development and development on prior developed lands that are defined as large construction activities or small construction activities in 4VAC50-60-10;*
- (2) New development and development on prior developed lands that disturb greater than or equal to 2,500 square feet, but less than one acre, located in a Chesapeake Bay Preservation Area designated by a local government located in Tidewater, Virginia, as defined in § 10.1-2101 of the Code of Virginia; and*
- (3) New development and development on prior developed lands where an applicable state regulation or local ordinance has designated a more stringent regulatory size threshold than that identified in subdivision (1) or (2) above.*

b. Required design criteria for stormwater runoff controls. The operator shall utilize legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to require that activities identified in Section II B 5 a address stormwater runoff in such a manner that stormwater runoff controls are designed and installed:

- (1) In accordance with the appropriate water quality and water quantity design criteria as required in Part II (4VAC50-60-40 et seq.) of 4VAC50-60;*
- (2) In accordance with any additional applicable state or local design criteria required at project initiation; and*
- (3) Where applicable, in accordance with any department-approved annual standards and specifications.*

Upon board approval of a Virginia Stormwater Management Program authority (VSMP Authority) as defined in § 10.1-603.2 of the Code of Virginia and reissuance of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities, the operator shall require that stormwater management plans are approved by the appropriate VSMP Authority prior to land disturbance. In accordance with § 10.1-603.3 M of the Code of Virginia, VSMPs shall become effective July 1, 2014, unless otherwise specified by state law or by the board.



c. Inspection, operation, and maintenance verification of stormwater management facilities.

(1) For stormwater management facilities not owned by the MS4 operator, the following conditions apply:

(a) The operator shall require adequate long-term operation and maintenance by the owner of the stormwater management facility by requiring the owner to develop a recorded inspection schedule and maintenance agreement to the extent allowable under state or local law or other legal mechanism;

(b) The operator or his designee shall implement a schedule designed to inspect all privately owned stormwater management facilities that discharge into the MS4 at least once every five years to document that maintenance is being conducted in such a manner to ensure long-term operation in accordance with the approved designs.

(c) The operator shall utilize its legal authority for enforcement of maintenance responsibilities if maintenance is neglected by the owner. The operator may develop and implement a progressive compliance and enforcement strategy provided that the strategy is included in the MS4 Program Plan.

(d) Beginning with the issuance of this state permit, the operator may utilize strategies other than maintenance agreements such as periodic inspections, homeowner outreach and education, and other methods targeted at promoting the long-term maintenance of stormwater control measures that are designed to treat stormwater runoff solely from the individual residential lot. Within 12 months of coverage under this permit, the operator shall develop and implement these alternative strategies and include them in the MS4 Program Plan.

(2) For stormwater management facilities owned by the MS4 operator, the following conditions apply:

(a) The operator shall provide for adequate long-term operation and maintenance of its stormwater management facilities in accordance with written inspection and maintenance procedures included in the MS4 Program Plan.

(b) The operator shall inspect these stormwater management facilities annually. The operator may choose to implement an alternative schedule to inspect these stormwater management facilities based on facility type and expected maintenance needs provided that the alternative schedule is included in the MS4 Program Plan.

(c) The operator shall conduct maintenance on its stormwater management facilities as necessary.

d. MS4 Program Plan requirements. The operator's MS4 Program Plan shall be updated in accordance with Table 1 in this section to include:

(1) A list of the applicable legal authorities such as ordinance, state and other permits, orders, specific contract language, and interjurisdictional agreements to ensure compliance with the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands;

(2) Written policies and procedures utilized to ensure that stormwater management facilities are designed and installed in accordance with Section II B 5 b;

(3) Written inspection policies and procedures utilized in conducting inspections;

(4) Written procedures for inspection, compliance and enforcement to ensure maintenance is conducted on private stormwater facilities to ensure long-term operation in accordance with approved design;

(5) Written procedures for inspection and maintenance of operator-owned stormwater management facilities;

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the



written agreement must be retained in the MS4 Program Plan. Roles and responsibilities shall be updated as necessary.

e. Stormwater management facility tracking and reporting requirements. The operator shall maintain an updated electronic database of all known operator-owned and privately-owned stormwater management facilities that discharge into the MS4. The database shall include the following:

- (1) The stormwater management facility type;
- (2) A general description of the facility's location, including the address or latitude and longitude;
- (3) The acres treated by the facility, including total acres, as well as the breakdown of pervious and impervious acres;
- (4) The date the facility was brought online (MM/YYYY). If the date is not known, the operator shall use June 30, 2005, as the date brought online for all previously existing stormwater management facilities;
- (5) The sixth order hydrologic unit code (HUC) in which the stormwater management facility is located;
- (6) The name of any impaired water segments within each HUC listed in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report to which the stormwater management facility discharges;
- (7) Whether the stormwater management facility is operator-owned or privately-owned;
- (8) Whether a maintenance agreement exists if the stormwater management facility is privately owned; and
- (9) The date of the operator's most recent inspection of the stormwater management facility.

In addition, the operator shall annually track and report the total number of inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.

The operator shall submit an electronic database or spreadsheet of all stormwater management facilities brought online during each reporting year with the appropriate annual report. Upon such time as the department provides the operators access to a statewide web-based reporting electronic database or spreadsheet, the operator shall utilize such database to complete the pertinent reporting requirements of this state permit.

Legal Authority (BMP #5.1)

CNRMA has developed a draft set of instructions related to post-construction site runoff control, entitled "Post Construction Stormwater Runoff Management Instruction." These instructions require minimum post-construction best management practices at installations and annexes. The instruction applies to all development and redevelopment activities greater than or equal to 1 acre in size. The instruction also applies to land development activities for an area smaller than 1 acre, if the activities are part of a larger common plan of development. It is anticipated that these instructions will be converted to SOPs and updated in PY 1 to conform to the permit requirements. In PY 2 through 5, these procedures will be implemented. These instructions can be found in Appendix C.

In November of 2007, the Department of the Navy (DON) issued an LID policy with a stated objective of "no net increase in stormwater runoff volume and sediment of nutrient loading from major renovation and construction projects." The policy applied only to major renovations with a stormwater component that exceeded \$5M in value and major construction projects exceeding \$750K. Approximately one month later in December of 2007, Section 438 of the Energy Independence and Security Act (EISA) was issued and requires that Federal facility projects over 5,000 square feet must "maintain or restore, to



the maximum extent technically feasible, the predevelopment hydrology of the property with regard to temperature, rate, volume, and duration of flow.”

In October of 2009, Executive Order 13514 was issued and included a requirement for all federal agencies to comply with the requirements of EISA Section 438 along with other sustainability measures such as water and energy conservation. In January of 2010, the Department of Defense (DoD) Policy of Implementing Section 438 of the EISA was issued and includes a flowchart with implementation steps. This document and the DON LID Policy can be found in Appendix C. As a result of these policies, the DoD updated the Unified Facilities Criteria (UFC) Low Impact Development Manual in November 2010 so that it addresses both EISA and LID.

Stormwater runoff controls will be designed and installed in accordance with Part II of 4VAC50-60 and the Post Construction Stormwater Runoff Management Instruction. The BMP List in Appendix A provides additional information.

Inspection, Operation and Maintenance (BMP #5.2)

Since all stormwater management facilities with the permitted MS4 are owned and operated by the CNRMA, the conditions described below apply.

Inspections are currently conducted in accordance with Chapter 9, “BMP Inspection and Maintenance,” of the Draft 2009 Virginia Stormwater Management Handbook. NAVFAC has developed inspections forms for the different types of BMPs, including:

- ❖ Bioretention;
- ❖ Detention, retention and wetlands;
- ❖ Green roofs;
- ❖ Infiltration practices;
- ❖ Rooftop disconnection; and
- ❖ Swales, bioswales, and channels.

These inspection forms can be found in Appendix C. Each BMP will be given a rating of satisfactory, unsatisfactory, or satisfactory with notes. The definitions of these ratings are:

- ❖ **Satisfactory** – There were no deficiencies requiring immediate corrective action identified during the BMP inspection. For record keeping purposes, the date of inspection must be recorded on the BMP inventory spreadsheet and "SAT" noted in the inspection results column.
- ❖ **Unsatisfactory** – There were deficiencies identified during inspection which require immediate corrective action to ensure the BMP will function as designed. For record keeping purposes, the date of inspection must be recorded on the BMP inventory spreadsheet, "UNSAT" shall be noted in the inspection results column, and an inspection report shall be completed, distributed, and a copy retained on file.
- ❖ **Satisfactory with Notes** – The BMP is properly functioning however the inspector observed areas of concern which may develop into a deficiency if routine maintenance is not performed. For record keeping purposes, the date of



inspection shall be recorded on the BMP inventory spreadsheet, "SAT / Notes" shall be noted in the inspection results column, and all applicable notes from the inspection shall be recorded and retained on file.

Maintenance of the stormwater management facilities will be performed on an "as needed" basis and as a result of issues identified during the annual inspections. Reports from the public using the notification vessels (hotline, email, or website) will also prompt an inspection of the facility and possible maintenance.

Each stormwater management facility will be inspected annually. Strategies such as periodic inspections, outreach and education, and other methods targeted at promoting the long-term maintenance of stormwater control measures on individual residential lots will be included in the final procedures and documented in the MS4 Program Plan. The final inspection and maintenance procedures will be completed in PY 1 and within the 12 months after permit coverage. They will be implemented in PY 2 through 5.

The BMP List in Appendix A provides additional information.

Tracking and Reporting (BMP #5.3)

CNRMA has developed an Excel spreadsheet to track the BMPs on the installations and annexes. The database includes the following information:

- ❖ Stormwater management facility type;
- ❖ Building or area in which the facility is located;
- ❖ Latitude and longitude of the facility;
- ❖ Drainage area;
- ❖ Date installed;
- ❖ Sixth order HUC;
- ❖ Receiving waters; and
- ❖ Date of the most recent inspection.

In order to meet the permit regulations, the following data categories will be added to the spreadsheet:

- ❖ A breakdown of the pervious and impervious areas contributing to the facility;
- ❖ The name of any impaired water segments to which the facility discharges;
- ❖ Whether the facility is operator-owned or privately owned; and
- ❖ Whether a maintenance agreement exists (if the facility is privately owned).

In PY 1, the spreadsheet will be updated with the remaining data categories required by the permit. The spreadsheet will be maintained and updated semiannually in PY 2 through 5. The BMP List in Appendix A provides additional information.



9. MCM #6: Pollution Prevention/Good Housekeeping

This section addresses the requirements and implementation of the Pollution Prevention/Good Housekeeping Plan, and information on the annual tracking reports. More specifically, this section addresses the following:

- ❖ Permit Regulations
- ❖ Policies and Procedures
- ❖ High-Priority Facilities and SWPPPs
- ❖ Turf and Landscape Nutrient Management
- ❖ Training
- ❖ Tracking and Reporting

Permit Regulations (as of 07/01/2013)

An excerpt from Section II B of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit, including Table 1 (as referenced below) can be found in Appendix B.

6. Pollution prevention/good housekeeping for municipal operations.

a. Operations and maintenance activities. The MS4 Program Plan submitted with the registration statement shall be implemented by the operator until updated in accordance with this state permit. In accordance with Table 1 in this section, the operator shall develop and implement written procedures designed to minimize or prevent pollutant discharge from: (i) daily operations such as road, street, and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The written procedures shall be utilized as part of the employee training. At a minimum, the written procedures shall be designed to:

- (1) Prevent illicit discharges;*
- (2) Ensure the proper disposal of waste materials, including landscape wastes;*
- (3) Prevent the discharge of municipal vehicle wash water into the MS4 without authorization under a separate VPDES permit;*
- (4) Prevent the discharge of wastewater into the MS4 without authorization under a separate VPDES permit;*
- (5) Require implementation of best management practices when discharging water pumped from utility construction and maintenance activities;*
- (6) Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) through the use of best management practices;*
- (7) Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment; and*
- (8) Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.*

b. Municipal facility pollution prevention and good housekeeping.

- (1) Within 12 months of state permit coverage, the operator shall identify all municipal high-priority facilities. These high-priority facilities shall include: (i) composting facilities; (ii) equipment storage and maintenance facilities; (iii) materials storage yards; (iv) pesticide storage facilities; (v) public works yards; (vi) recycling facilities; (vii) salt storage facilities; (viii) solid waste handling and transfer facilities; and (ix) vehicle storage and maintenance yards.*



(2) *With 12 months of state permit coverage, the operator shall identify which of the municipal high-priority facilities have a high potential discharging pollutants. Municipal high-priority facilities that have a high potential for discharging pollutants are those facilities identified in subsection (1) above that are not covered under a separate VPDES permit and which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff:*

- (a) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;*
- (b) Materials or residuals on the ground or in stormwater inlets from spills or leaks;*
- (c) Material handling equipment (except adequately maintained vehicles);*
- (d) Materials or products that would be expected to be mobilized in stormwater runoff during loading/unloading or transporting activities (e.g., rock, salt, fill dirt);*
- (e) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);*
- (f) Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;*
- (g) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);*
- (h) Application or disposal of process wastewater (unless otherwise permitted); or*
- (i) Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow.*

(3) *The operator shall develop and implement specific stormwater pollution prevention plans for all high-priority facilities identified in subdivision 2 of this subsection. The operator shall complete SWPPP development and implementation shall be completed within 48 months of coverage under this state permit. Facilities covered under a separate VPDES permit shall adhere to the conditions established in that permit and are excluded from this requirement.*

(4) *Each SWPPP shall include:*

- (a) A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;*
- (b) A discussion and checklist of potential pollutants and pollutant sources;*
- (c) A discussion of all potential nonstormwater discharges;*
- (d) Written procedures designed to reduce and prevent pollutant discharge;*
- (e) A description of the applicable training as required in Section II B 6 d;*
- (f) Procedures to conduct an annual comprehensive site compliance evaluation;*
- (g) An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;*
- (h) The contents of each SWPPP shall be evaluated and modified as necessary to accurately reflect any discharge, release, or spill from the high priority facility reported in accordance with Section III G. For each such discharge, release or spill, the SWPPP must include the following information: date of incident; material discharged, released, or spilled; and quantity discharged, released or spilled; and*
- (i) A copy of each SWPPP shall be kept at each facility and shall be kept updated and utilized as part of staff training required in Section II B 6 d.*

c. *Turf and landscape management.*

(1) *The operator shall implement turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the MS4 operator where nutrients are applied to a contiguous area greater than one acre. Implementation shall be in accordance with the following schedule:*



(a) Within 12 months of state permit coverage, the operator shall identify all applicable lands where nutrients are applied to a contiguous area of more than one acre. A latitude and longitude shall be provided for each such piece of land and reported in the annual report.

(b) Within 60 months of state permit coverage, the operator shall implement turf and landscape nutrient management plans on all lands where nutrients are applied to a contiguous area of more than one acre. The following measurable outcomes are established for the implementation of turf and landscape nutrient management plans: (i) within 24 months of permit coverage, not less than 15% of all identified acres will be covered by turf and landscape nutrient management plans; (ii) within 36 months of permit coverage, not less than 40% of all identified acres will be covered by turf and landscape nutrient management plans; and (iii) within 48 months of permit coverage, not less than 75% of all identified acres will be covered by turf and landscape nutrient management plans. The operator shall not fail to meet the measurable goals for two consecutive years.

(c) MS4 operators with lands regulated under § 10.1-104.4 of the Code of Virginia shall continue to implement turf and landscape nutrient management plans in accordance with this statutory requirement.

(2) Operators shall annually track the following:

(a) The total acreage of lands where turf and landscape nutrient management plans are required; and

(b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented.

(3) The operator shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

d. *Training.* The operator shall conduct training for employees. The training requirements may be fulfilled, in total or in part, through regional training programs involving two or more MS4 localities provided; however, that each operator shall remain individually liable for its failure to comply with the training requirements in this permit. Training is not required if the topic is not applicable to the operator's operations and therefore does not have applicable personnel provided the lack of applicability is documented in the MS4 Program Plan. The operator shall determine and document the applicable employees or positions to receive each type of training. The operator shall develop an annual written training plan including a schedule of training events that ensures implementation of the training requirements as follows:

(1) The operator shall provide biennial training to applicable field personnel in the recognition and reporting of illicit discharges.

(2) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed during road, street, and parking lot maintenance.

(3) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around maintenance and public works facilities.

(4) The operator shall ensure that employees, and require that contractors, who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act (§ 3.2-3900 *et seq.* of the Code of Virginia).

(5) The operator shall ensure that employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(6) The operator shall ensure that applicable employees obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(7) The operators shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around recreational facilities.



(8) *The appropriate emergency response employees shall have training in spill responses. A summary of the training or certification program provided to emergency response employees shall be included in the first annual report.*

(9) *The operator shall keep documentation on each training event including the training date, the number of employees attending the training, and the objective of the training event for a period of three years after each training event.*

e. The operator shall require that municipal contractors use appropriate control measures and procedures for stormwater discharges to the MS4 system. Oversight procedures shall be described in the MS4 Program Plan.

f. At a minimum, the MS4 Program Plan shall contain:

(1) The written protocols being used to satisfy the daily operations and maintenance requirements;

(2) A list of all municipal high-priority facilities that identifies those facilities that have a high potential for chemicals or other materials to be discharged in stormwater and a schedule that identifies the year in which an individual SWPPP will be developed for those facilities required to have a SWPPP. Upon completion of a SWPPP, the SWPPP shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual SWPPP is located;

(3) A list of lands where nutrients are applied to a contiguous area of more than one acre. Upon completion of a turf and landscape nutrient management plan, the turf and landscape nutrient management plan shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual turf and landscape nutrient management plan is located; and

(4) The annual written training plan for the next reporting cycle.

g. Annual reporting requirements.

(1) A summary report on the development and implementation of the daily operational procedures;

(2) A summary report on the development and implementation of the required SWPPPs;

(3) A summary report on the development and implementation of the turf and landscape nutrient management plans that includes:

(a) The total acreage of lands where turf and landscape nutrient management plans are required; and

(b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented; and

(4) A summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.

Policies and Procedures (BMP #6.1)

Written policies and procedures addressing good housekeeping for municipal operations will be developed in PY 1 and 2 and within 24 months after permit coverage. They will be implemented in PY 3 through 5. The procedures will be written to minimize or prevent pollutant discharge from:

- ❖ Daily operations, such as road, street, and parking lot maintenance;
- ❖ Equipment maintenance; and
- ❖ The application, storage, transport, and disposal of pesticides, herbicides, and fertilizers.



The procedures will also be designed to address criteria found in Section II B 6 a of the permit. A summary report on the development and implementation of the daily operational procedures will be included in the annual report.

The policies and procedures will include ECATTS training for all NAVFAC MIDLANT contractors regarding stormwater management. Contractors will also be required to complete an environmental checklist related to the erosion and sediment control activities. Compliance and enforcement regarding contractors and construction sites was described in BMP # 4.5.

The BMP List in Appendix A provides additional information.

High-Priority Facilities and SWPPPs (BMP #6.2)

All municipal high-priority facilities will be identified in PY 1 and within 12 months after permit coverage. The facilities shall include composting facilities, equipment storage and maintenance facilities, materials storage yards, pesticide storage facilities, public works yards, recycling facilities, salt storage facilities, solid waste handling and transfer facilities, and vehicle storage and maintenance yards. Of these facilities, the municipal high-priority facilities with a high potential of discharging chemicals or other non-stormwater materials into stormwater will be identified using the criteria found in Section II B 6 b (2), within the 12 months after permit coverage.

A comprehensive SWPPP will be developed in PY 2 through 4, within 48 months after permit coverage for the high-priority facilities identified as having a high potential of discharging chemical or other non-stormwater materials. A SWPPP will be developed to address the various municipal activities at the permitted installations (similar to the SWPPPs required by the industrial stormwater permit). CNRMA is one of the few permitted MS4s in Virginia that also has industrial stormwater permits and, therefore, industrial SWPPPs. The below installations are covered by an industrial stormwater VPDES permit and have already developed SWPPPs to address stormwater pollution:

- ❖ Naval Station Norfolk
- ❖ Naval Support Activity, Hampton Roads (covered under the Norfolk permit)
- ❖ Joint Expeditionary Base, Little Creek (JEB LC)
- ❖ Joint Expeditionary Base Fort Story (JEB FS)
- ❖ Naval Air Station Oceana (NASO)
- ❖ Dam Neck Annex (NASO DN)

Therefore, only the two installations listed below will require municipal SWPPPs since they do not already have a developed industrial SWPPP:

- ❖ Naval Medical Center Portsmouth (NMCP)
- ❖ Scott Center Annex (SCA)

Items to be included in the SWPPP are found in Section II B 6 b (4) of the permit. The SWPPP will be implemented during PY 5. A summary report on the development and implementation of the required SWPPP will be included in the annual report. The BMP List in Appendix A provides additional information.



Documentation of each training event will be retained for a period of 3 years after the training date. The documentation will include the training date, the number of employees trained, and the training objective

The training program will be implemented in PY 2 through 5. A summary report on the required training, list of training events, dates, number of employees trained and the training objectives will be included in the annual report. The BMP List in Appendix A provides additional information.

Tracking and Reporting (BMP #6.5)

The annual report will include summary reports on the development and implementation of the daily operational procedures, SWPPP, nutrient management plans, and training events. The BMP List in Appendix A provides additional information.



10. Program Evaluation and Assessment

This section presents information on the annual program evaluation. The program will be evaluated annually for the reporting period of July 1 through June 30 and a report submitted to the department by the following October 1. The program will be evaluated based on the criteria given in Section II E 1 and will include the items listed in Section II E 3 of the permit.

Permit Regulations (as of 07/01/2013)

An excerpt from Section II of the final General Permit for Discharges of Stormwater from Small MS4s, dated July 1, 2013 is presented below. The entire General Permit can be found in Appendix B.

E. Evaluation and assessment.

1. MS4 Program Evaluation. *The operator must annually evaluate:*

- a. Program compliance;*
- b. The appropriateness of the identified BMPs (as part of this evaluation, the operator shall evaluate the effectiveness of BMPs in addressing discharges into waters that are identified as impaired in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report); and*
- c. Progress towards achieving the identified measurable goals.*

2. Recordkeeping. *The operator must keep records required by the state permit for at least three years. These records must be submitted to the department only upon specific request. The operator must make the records, including a description of the stormwater management program, available to the public at reasonable times during regular business hours.*

3. Annual reports. *The operator must submit an annual report for the reporting period of July 1 through June 30 to the department by the following October 1 of that year. The reports shall include:*

a. Background Information.

- (1) The name and permit number of the program submitting the annual report;*
- (2) The annual report permit year;*
- (3) Modifications to any operator's department's roles and responsibilities;*
- (4) Number of new MS4 outfalls and associated acreage by HUC added during the permit year; and*
- (5) Signed certification.*

b. The status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices and progress towards achieving the identified measurable goals for each of the minimum control measures;

c. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

d. A summary of the stormwater activities the operator plans to undertake during the next reporting cycle;

e. A change in any identified best management practices or measurable goals for any of the minimum control measures including steps to be taken to address any deficiencies;

f. Notice that the operator is relying on another government entity to satisfy some of the permit obligations (if applicable);



- g. The approval status of any programs pursuant to Section II C (if appropriate), or the progress towards achieving full approval of these programs; and*
- h. Information required for any applicable TMDL special condition contained in Section I.*



11. References

Bacteria Total Maximum Daily Load (TMDL) Development for the Elizabeth River Watershed; The Louis Berger Group, Inc.; April 2010.

Draft Chapter 9 BMP Inspection and Maintenance; Draft 2009 Virginia Stormwater Management Handbook; September 2009.

Draft Erosion and Sediment Control Instruction; Commander, Navy Region, Mid-Atlantic.

Draft Illegal Discharge and Illegal Dumping Instruction; Commander, Navy Region, Mid-Atlantic.

Draft Post Construction Stormwater Runoff Management Instruction; Commander, Navy Region, Mid-Atlantic.

Draft Virginia Stormwater Management Program Construction Permit Instruction; Commander, Navy Region, Mid-Atlantic.

Fact Sheet – General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems; Virginia Soil and Water Conservation Board; March 2013.

Hampton Roads Naval Installation Spill Reporting and Documentation Standard Operating Procedure; NAVFAC MIDLANT Spill Program Manager; September 2012.

Hampton Roads Stormwater BMP Inventory in excel maintained by Commander, Navy Region, Mid-Atlantic.

NAVFAC Mid-Atlantic, Environmental Norfolk, Environmental Compliance:
https://portal.navy.mil/portal/page/portal/navfac/navfac_ww_pp/navfac_navfacmidlant_pp/midlant_ps/environmental_norfolk/tab3987837

Nutrient Management Plan Identification; Ed Joyner; June 2009.

Regional MS4 Stormwater Program Annual Report, Plan Year 4; Commander, Navy Region, Mid-Atlantic; 2012.

Regional Phase II Stormwater Program Plan; Commander, Navy Region, Mid-Atlantic; August 2011.

Virginia Stormwater Management Program (VSMP) Permit Regulations (amending 4VAC50-60-10, 4VAC50-60-1200 through 4VAC50-60-1240); Virginia Soil and Water Conservation Board; November 2012.

<http://register.dls.virginia.gov/vol29/iss05/v29i05.htm>

VPDES Phase II Regional Stormwater Management Plan; Commander, Navy Region, Mid-Atlantic; December 2008.



APPENDIX A

BMP List

***(Including Descriptions, Metrics, Responsible Parties
and Timelines)***

Best Management Practices List
NAVFAC Midlant Phase II MS4 Program Plan

MCM	BMP Number	BMP Name	BMP Description	Measurable Goals	Metric	Responsible Party	Timeline
Chesapeake Bay TMDL	A-1	TMDL Action Plan	Develop and implement a Chesapeake Bay TMDL Action Plan.	In permit years 1 and 2, develop the TMDL Action Plan. In permit years 3 through 5 implement the action plan.	Retain a copy of the Chesapeake Bay TMDL Action Plan.	Phase II Water Program Media Manager	Continuously
Chesapeake Bay TMDL	A-2	Annual Reporting	Submit annual reports documenting the status of installing control measures.	Submit annual reports in permit years 3 through 5.	Record a list of control measured implemented, the corresponding pollutant reductions, and control measures to be implemented.	Phase II Water Program Media Manager	Annually
Other TMDLs	B-1	TMDL Action Plans	Develop and implement TMDL Action Plan for WLAs.	A TMDL Action Plan for NASO will be developed in PY 1 through 2. TMDL Action Plans will be developed for NMCP and SCA during PY 1 through 3. Plans will be implemented after development.	Retain a copy of each TMDL Action Plan.	Phase II Water Program Media Manager	Continuously
1	1.1	Environmental Awareness Trainings for Target Audiences	Conduct training for the target audiences for the Three Priority Water Quality Issues.	In permit year 1, evaluate and update stormwater pollution prevention materials utilized as part of the Environmental Awareness Training Program. In permit years 2 through 5, revised the new materials as needed. Conduct trainings annually including the Facilities Engineering Acquisition Division (FEAD).	Track the number of trainings conducted pertaining to each of the priority water quality issues and the number of people trained.	Phase II Water Program Media Manager and Installation Water Program Media Manager	Annually
1	1.2	Stormwater Management Training through ECATTS	Conduct training for the target audiences through the ECATTS or the web-based Environmental Compliance Assessment, Training, and Tracking System.	In permit years 1 through 5 annually review and update as needed the ECATTS stormwater training modules.	Record and report the number of people trained on each stormwater training module presented through ECATTS.	Phase II Water Program Media Manager and Installation Water Program Media Manager	Annually
1	1.3	Stormwater Education Brochures	Brochures for the Three Priority Water Quality Issues will be developed and distributed.	In permit years 1 through 5, on a semi-annual basis distribute stormwater educational brochures to targeted areas.	Retain a copy of each brochure distributed and record the date, location, and number of brochures distributed.	Phase II Water Program Media Manager	Semi-Annually
1	1.4	Newspaper Articles and Ads	Place articles and/or ads in installation newspapers such as the Flagship and Jet Observer or Plan of the Week emails.	On a semi-annual basis, in permit years 1 through 5 include at least one article/ad in base publications addressing stormwater pollution prevention.	Retain a copy of all articles/ads published and record the dates of publication.	Phase II Water Program Media Manager	Semi-Annually
1	1.5	External Website	Maintain a website that the general public can access that includes information about stormwater education.	In permit years 1 though 5, maintain the website and update content as needed. Include a link to EPA's "After the Storm" video.	Document the number of hits that the website has per year and the average amount of time each user spends on the website.	Phase II Water Program Media Manager	Annually
1	1.6	Car Wash Areas	Place articles in installation newspapers and/or in the "Plan of the Week" about the designated car wash areas.	In permit years 1 through 5, track the number of time each installation's car wash area is used.	Retain copies of all articles published related to car washing. Track the number of times each car wash is used.	Phase II Water Program Media Manager	Annually
1	1.7	Evaluation and Assessment	Annually evaluate and assess the Public Education and Outreach Program to effectiveness	In permit years 1 through 5, on an annual basis, estimate the number of people reached and the percentage of people reached in each target audience. Address any weakness or shortcomings as necessary.	In accordance with Section II of 4VAC50-60-1240.	Phase II Water Program Media Manager	Annually

Best Management Practices List
NAVFAC Midlant Phase II MS4 Program Plan

MCM	BMP Number	BMP Name	BMP Description	Measurable Goals	Metric	Responsible Party	Timeline
2	2.1	Post the MS4 Program Plan and Annual Report	Make the stormwater program plan and other stormwater program information available through the website.	In permit year 1, post the MS4 Program Plan on the website and notify the public through the Plan of the Week of its availability for review. In permit years 2 through 5, update as needed the MS4 Program Plan as needed and post the Annual Report in accordance with Section II of 4VAC50-60-1240. Provide for receipt of comment.	Track all comments and responses received from public reviews.	Phase II Water Program Media Manager	Continuously
2	2.2	Storm Drain Marking Program	Place storm drain markers on inlets to the MS4 reminding the public that flows that drain into the system go directly to streams and waterways.	In permit year 1, evaluate and target areas for storm drain marking efforts. In permit years 2 through 5, conduct annual storm drain marking efforts	Record location, date, number of storm drains marked, and if applicable the number of volunteer participants for each storm drain marking event	Phase II Water Program Media Manager	Annually
2	2.3	Local Activity Participation	Participate during the Annual Clean the Bay Day and Earth Day Events held at the installation. Outreach information will be distributed during these events.	In permit years 1 through 5, participate in the Clean the Bay Day and Earth Day Events at various installations.	For Clean the Bay Day, record the number of volunteers utilized and an estimate of the volume of litter collected. For both events, document the amount of outreach materials distributed.	Phase II Water Program Media Manager	Annually
2	2.4	Evaluation and Assessment	Annually evaluate and assess compliance.	In permit years 1 through 5, on a annual basis, evaluate and assess progress towards meeting measurable goals.	In accordance with Section II of 4VAC50-60-1240.	Phase II Water Program Manager	Annually
3	3.1	Maintain Storm Sewer System Map	Maintain an accurate storm sewer system map in accordance with Section II of 4VAC50-60-1240.	In permit year 1, identify required updates to the storm sewer system map at each installation. In permit years 2 and 3, update the maps accordingly. In permit years 4 and 5, maintain and update the mapping as needed.	Record revision dates on storm system mapping for each regulated installation.	Installation Water Program Media Managers; Phase II Water Program Media Manager	Annually
3	3.2	Written Procedures	Develop and implement written procedures to detect, identify, and eliminate illicit discharges in accordance with Section II of 4VAC50-60-1240.	In permit year 1, finalize draft procedures to detect, identify and eliminate illicit discharges. These procedures will likely be identified as Standard Operating Procedures (SOP). In permit years 2 through 5, implement these final procedures.	Document the number of outfalls screened, the screening results, and other pertinent details. Document each investigation into a suspected illicit discharge. All reporting shall be in accordance with Section II of 4VAC50-60-1240.	Phase II Water Program Media Manager	Continuously
3	3.3	Promote, Publicize, and Facilitate Public Reporting	Use reporting mechanisms such as hotlines, email, and website links to allow the public to report suspected illicit discharges.	In permit year 1, generate a hotline phone number, an email address, and/or a website link for public reporting of suspected illicit discharges. In permit years 2 through 5, publicize this information through public outreach BMPs.	Record the details (date, problem location, etc.) and number of the reports received using each reporting mechanism.	Phase II Water Program Media Manager	Continuously
3	3.4	Public Education for Illicit Discharges	Through the use of BMPs identified in MCM#1 and MCM#2, educate the public regarding illicit discharges.	In permit years 1 through 5, include information addressing illicit discharges in the BMPs used in MCM#1 and MCM#2.	Retain copies of materials published and dates of publication. Document the number of people trained annually.	Phase II Water Program Media Manager	Annually

Best Management Practices List
NAVFAC Midlant Phase II MS4 Program Plan

MCM	BMP Number	BMP Name	BMP Description	Measurable Goals	Metric	Responsible Party	Timeline
3	3.5	Spill Control Documentation	Report Spills to DEQ and DCR and document in accordance with the Spill Reporting and Documentation SOP.	In permit years 1 through 5, report spills to the proper authorities and retain a copy of the initial report and the 5-day spill letter.	Retain copies of all spill reports and letters.	Spill Program Media Manager	Continuously
3	3.6	Evaluation and Assessment	Annually evaluate and assess the illicit discharge program for compliance and effectiveness.	In permit years 2 through 5, on a annual basis, evaluate and assess progress towards meeting measurable goals	In accordance with Section II of 4VAC50-60-1240.	Phase II Water Program Media Manager	Annually
4	4.1	Legal Authority	Utilize legal authority to address discharges entering the MS4 from certain land-disturbing activities.	In permit year 1, identify and install legal mechanisms. In permit years 2 through 5, implement these policies and procedures.	Retain copies of documents outlining the policies and procedures.	Phase II Water Program Media Manager	Continuously
4	4.2	Approval of Erosion and Sediment Control Plan	Require that all Erosion and Sediment Control Plans are approved prior to commencement of the land disturbing activity.	In permit years 1 through 5, have all Erosion and Sediment Control Plans approved.	Retain copies of all approved plans. Document the number of plans approved annually.	Phase II Water Program Media Manager	Continuously
4	4.3	VSMP Construction Permit Instruction	Maintain and enforce the VSMP Construction Permit Instruction.	In permit year 1, convert the VSMP Construction Permit Instruction to an SOP. In PY 1 through PY 5, enforce the instruction accordingly.	Retain copies of all approved plans. Document the number of plans approved annually.	Phase II Water Program Media Manager	Continuously
4	4.4	Construction Activity SWMP & SWPPP Review	Review SWMPs and SWPPPs to ensure that each plan is consistent with the requirements set forth in the Virginia Stormwater Management Regulations and the VSMP Construction Permit Instruction.	In permit year 1, convert the VSMP Construction Permit Instruction to an SOP. In PY 1 through PY 5, SWMPs and SWPPPs will be reviewed for compliance.	Retain copies of all approved plans. Document the number of plans approved annually.	Phase II Water Program Media Manager	Continuously
4	4.5	Compliance and Enforcement Procedures	Document compliance inspection procedures and enforcement actions.	In permit years 1 through 2, develop the compliance inspection procedures and enforcement actions and conduct quarterly inspections. In permit years 3 through 5, implement these procedures in accordance with the permit requirements.	Retain copies of inspection procedures and enforcement actions.	Phase II Water Program Media Manager	Continuously
4	4.6	Tracking and Reporting	Track the number of regulated land-disturbing activities and corresponding information.	In permit years 1 through 2, track the number of land-disturbing activities and total disturbed acreage. In permit years 3 though 5, also track the number of inspections and number and type of enforcement actions.	Track the regulated land-disturbing activities in accordance with Section II of 4.VAC50-60-1240.	Phase II Water Program Media Manager	Continuously
5	5.1	Legal Authority	Utilize legal authority to require that stormwater runoff controls are designed and installed in accordance with regulations.	In permit year 1, identify and install legal mechanisms. In permit years 2 through 5, implement these policies and procedures.	Retain copies of documents outlining the policies and procedures.	Phase II Water Program Media Manager	Continuously
5	5.2	Inspection, Operation and Maintenance	Require long-term operation and maintenance procedures that include inspection schedules.	In permit year 1, develop operator-owned maintenance and inspection procedures in accordance with Section II of 4.VAC50-60-1240. In permit years 2 through 5, implement these inspection procedures.	Retain operator-owned maintenance and inspection procedures. Retain copies of the inspection reports.	Phase II Water Program Media Manager	Continuously

Best Management Practices List
 NAVFAC Midlant Phase II MS4 Program Plan

MCM	BMP Number	BMP Name	BMP Description	Measurable Goals	Metric	Responsible Party	Timeline
5	5.3	Tracking and Reporting	Maintain a electronic database of all stormwater management facilities.	In permit year 1, update the existing database to include all of the requirements listed in Section II of 4.VAC50-60-1240. In permit years 2 through 5, update the database semi-annually.	Retain a copy of the most current stormwater management facility database.	Phase II Water Program Media Manager	Semi-Annually
6	6.1	Written Policies and Procedures	Document policies and procedures to minimize or prevent pollutant discharge from various sources in accordance with Section II of 4.VAC50-60-1240.	In permit years 1 through 2, develop pollution prevention policies and procedures. In permit years 3 through 5, implement these policies and procedures.	Retain copies of the policy and procedural documents.	Phase II Water Program Media Manager	Continuously
6	6.2	SWPPPs	Develop and implement SWPPPs in accordance with Section II of 4.VAC50-60-1240.	In permit year 1, identify the high-priority facilities. In permit years 2 through 4, develop a general SWPPP for these facilities. In permit year 5, implement this SWPPP at each high-priority facility and updated as necessary.	Retain a list of high-priority facilities and a copy of the SWPPP.	Phase II Water Program Media Manager	Continuously
6	6.3	Turf and Landscape Nutrient Management	Develop and implement turf and landscape nutrient management plans in accordance with Section II of 4.VAC50-60-1240.	In permit year 1, identify the lands where turf and landscape nutrient management plans are required. In permit years 2 through 5, develop and implement these plans based on the phased approach found in Section II of 4.VAC50-60-1240.	Retain a list of lands requiring turf and landscape nutrient management plans and a copy of each plan.	Phase II Water Program Media Manager	Continuously
6	6.4	Training	Provide training in accordance with Section II of 4.VAC50-60-1240 on pollution prevention/good housekeeping to applicable personnel.	In permit year 1, develop a training schedule and program. Also, identify the applicable personnel and generate the training materials. In permit years 2 through 5, implement the training schedule.	Document each training event or ECATTS module. Include the date, number of employees, and training topic.	Phase II Water Program Media Manager	Continuously
6	6.5	Tracking and Reporting	Provide annual summary reports on that status of requirements outlined in Section II of 4.VAC50-60-1240.	In permit years 1 through 5, provide a summary report on the development and implementation of daily operational procedures, SWPPPs, and nutrient management plans.	Retain a copy of the three summary reports.	Phase II Water Program Media Manager	Annually



APPENDIX B

General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

July 1, 2013

Ms. Elizabeth Nashold, Environmental Program Manager
Navy Region, Mid-Atlantic
9742 Maryland Ave.
Norfolk, Virginia 23511

RE: General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems
General Permit No. VAR040114
Navy Consolidated MS4

Dear Permittee:

Department staff has reviewed your Registration Statement and determined that the referenced Municipal Storm Sewer System (MS4) is hereby covered under the General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems. The effective date of your coverage under this general permit is July 1, 2013, or the date of this letter, whichever is later. The enclosed copy of the general permit contains the applicable reporting requirements and other conditions of coverage.

During its 2013 Legislative Session, the General Assembly passed Chapters 756 (HB2048) and 793 (SB1279) which moved several programs from the Virginia Department of Conservation and Recreation (DCR) to the Virginia Department of Environmental Quality (DEQ). As a result of this legislative change, the General Assembly transferred the administration and oversight of the General Permit for Discharges from Small Municipal Separate Storm Sewer Systems from DCR to DEQ. Please submit future permit correspondence and your annual MS4 program reports to the DEQ Tidewater Regional Office at the following address:

DEQ Tidewater Regional Office
5636 Southern Blvd.
Virginia Beach, VA 23462

The general permit will expire on June 30, 2018. The conditions of the permit require that you submit a new registration statement on or before April 1, 2018, if you wish to have continued coverage under the general permit.

If you have any questions about this letter or the general permit, please contact Mr. Mark Sauer, Water Permits Manager, at (757) 518-2105 or mark.sauer@deq.virginia.gov.

Sincerely,

A handwritten signature in black ink that reads "Melanie D. Davenport".

Melanie D. Davenport, Director
Water Division

Enc. General Permit No. VAR040114

Cc. Mark Sauer, DEQ-TRO



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

General Permit No.: VAR040114

Effective Date: July 1, 2013

Expiration Date: June 30, 2018

**GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM SMALL MUNICIPAL SEPARATE
STORM SEWER SYSTEMS**

**AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT
PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT**

In compliance with the provisions of the Clean Water Act, as amended and pursuant to the Virginia Stormwater Management Act and regulations adopted pursuant thereto, this state permit authorizes operators of small municipal separate storm sewer systems to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those waters specifically named in State Water Control Board and Virginia Soil and Water Conservation Board regulations which prohibit such discharges.

The authorized discharge shall be in accordance with this cover page, Section I – Discharge Authorization and Special Conditions, Section II – MS4 Program and Section III – Conditions Applicable To All State Permits, as set forth herein. The operator shall utilize all legal authority provided by the laws and regulations of the Commonwealth of Virginia to control discharges to and from the MS4. This legal authority may be a combination of statute, ordinance, permit, specific contract language, order or interjurisdictional agreements.

For operators of small MS4s that are applying for initial coverage under this general permit, the schedule to develop and implement the MS4 Program Plan shall be submitted with the completed registration statement.

For operators that have previously held MS4 state permit coverage, the operator shall update the MS4 Program Plan in accordance with the following schedule. Until such time as the required updates are completed and implemented, the operator shall continue to implement the MS4 Program consistent with the MS4 Program Plan submitted with the registration statement.

Table 1: Schedule of MS4 Program Plan Updates Required in this Permit		
Program Update Requirement	Permit Reference	Update Completed By
Public Education Outreach Plan (Minimum Control Measure 1 – Public Education and Outreach on Stormwater Impacts)	Section II B 1	12 months after permit coverage
Illicit Discharge Procedures - (Minimum Control Measure 3 – Illicit Discharge Detection and Elimination)	Section II B 3	
Individual Residential Lot Special Criteria (Minimum Control Measure 5 – Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands)	Section II B 5 c (1) (d)	
Operator-Owned Stormwater Management Inspection Procedures (Minimum Control Measure 5 – Post-Construction Stormwater Management in New Development and Development on Prior Developed Lands)	Section II B 5	
Identification of Locations Requiring SWPPPs (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 b	
Nutrient Management Plan (NMP) Locations - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 c (1) (a)	
Training Schedule and Program - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6	

Table 1: Schedule of MS4 Program Plan Updates Required in this Permit		
Program Update Requirement	Permit Reference	Update Completed By
Updated TMDL Action Plans (TMDLs approved before July of 2008) – (Special Conditions for Approved Total Maximum Daily Loads (TMDL) Other Than Chesapeake Bay)	Section I B	24 months after permit coverage
Chesapeake Bay TMDL Action Plan – (Special Condition for Chesapeake Bay TMDL)	Section I C	
Stormwater Management Progressive Compliance and Enforcement – (Minimum Control Measure 4 - Construction Site Stormwater Runoff Control)	Section II B 5	
Daily Good Housekeeping Procedures (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 a	
Other TMDL Action Plans for applicable TMDLs approved between July 2008 and June 2013 - (Special Conditions for Approved Total Maximum Daily Loads (TMDL) Other Than Chesapeake Bay)	Section I B	36 months after permit coverage
Outfall Map Completed - (Minimum Control Measure 3 – Illicit Discharge Detection and Elimination) – Applicable to new boundaries identified as “urbanized” areas in the 2010 Decennial Census	Section II B 3 a (3)	48 months after permit coverage
SWPPP Implementation - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 b (3)	
NMP Implementation - (Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping for Municipal Operations)	Section II B 6 c (1) (b)	60 months after permit coverage
*Updates should be submitted with the appropriate annual report.		

SECTION I**DISCHARGE AUTHORIZATION AND SPECIAL CONDITIONS**

A. Coverage under this state permit. During the period beginning with the date of coverage under this general permit and lasting until the expiration and reissuance of this state permit, the operator is authorized to discharge in accordance with this state permit from the small municipal separate storm sewer system identified in the registration statement into surface waters within the boundaries of the Commonwealth of Virginia and consistent with 4VAC50-60-1230.

B. Special conditions for approved total maximum daily loads (TMDL) other than the Chesapeake Bay TMDL. An approved TMDL may allocate an applicable wasteload to a small MS4 that identifies a pollutant or pollutants for which additional stormwater controls are necessary for the surface waters to meet water quality standards. The MS4 operator shall address the pollutants in accordance with this special condition where the MS4 has been allocated a wasteload in an approved TMDL.

1. The operator shall maintain an updated MS4 Program Plan that includes a specific TMDL Action Plan for pollutants allocated to the MS4 in approved TMDLs. TMDL Action Plans may be implemented in multiple phases over more than one state permit cycle using the adaptive iterative approach provided adequate progress to reduce the pollutant discharge in a manner consistent with the assumptions and requirements of the specific TMDL wasteload is demonstrated in accordance with subdivision 2 e of this subsection. These TMDL Action Plans shall identify the best management practices and other interim milestone activities to be implemented during the remaining terms of this state permit.

a. In accordance with Table 1 in this section, the operator shall update the MS4 Program Plans to address any new or modified requirements established under this special condition for pollutants identified in TMDL wasteload allocations approved prior to July 9, 2008.

b. In accordance with Table 1 in this section, the operator shall update the MS4 Program Plan to incorporate approvable TMDL Action Plans that identify the best management practices and other interim milestone activities that will be implemented during the remaining term of this permit for pollutants identified in TMDL wasteload allocations approved either on or after July 9, 2008, and prior to issuance of this permit.

c. Unless specifically denied in writing by the department, TMDL Action Plans and updates developed in accordance with this section become effective and enforceable 90 days after the date received by the department.

2. The operator shall:

a. Develop and maintain a list of its legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements applicable to reducing the pollutant identified in each applicable WLA;

b. Identify and maintain an updated list of all additional management practices, control techniques and system design and engineering methods, beyond those identified in Section II B, that have been implemented as part of the MS4 Program Plan that are applicable to reducing the pollutant identified in the WLA;

c. Enhance its public education and outreach and employee training programs to also promote methods to eliminate and reduce discharges of the pollutants identified in the WLA;

d. Assess all significant sources of pollutant(s) from facilities of concern owned or operated by the MS4 operator that are not covered under a separate VPDES permit and identify all municipal facilities that may be a significant source of the identified pollutant. For the purposes of this assessment, a significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL. (For example, a significant source of pollutant from a facility of concern for a bacteria TMDL would be expected to be greater at a dog park than at other recreational facilities where dogs are prohibited);

e. Develop and implement a method to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs. The evaluation shall use any newly available

information, representative and adequate water quality monitoring results, or modeling tools to estimate pollutant reductions for the pollutant or pollutants of concern from implementation of the MS4 Program Plan. Monitoring may include BMP, outfall, or in-stream monitoring, as appropriate, to estimate pollutant reductions. The operator may conduct monitoring, utilize existing data, establish partnerships, or collaborate with other MS4 operators or other third parties, as appropriate. This evaluation shall include assessment of the facilities identified in subdivision 2 d of this subsection. The methodology used for assessment shall be described in the TMDL Action Plan.

3. Analytical methods for any monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the Environmental Protection Agency (EPA). Where an approved method does not exist, the operator must use a method consistent with the TMDL.

4. The operator is encouraged to participate as a stakeholder in the development of any TMDL implementation plans applicable to their discharge. The operator may incorporate applicable best management practices identified in the TMDL implementation plan in the MS4 Program Plan or may choose to implement BMPs of equivalent design and efficiency provided that the rationale for any substituted BMP is provided and the substituted BMP is consistent with the assumptions and requirements of the TMDL WLA.

5. Annual reporting requirements.

a. The operator shall submit the required TMDL Action Plans with the appropriate annual report and in accordance with the associated schedule identified in this state permit.

b. On an annual basis, the operator shall report on the implementation of the TMDL Action Plans and associated evaluation including the results of any monitoring conducted as part of the evaluation.

6. The operator shall identify the best management practices and other steps that will be implemented during the next state permit term as part of the operator's reapplication for coverage as required under Section III M.

7. For planning purposes, the operator shall include an estimated end date for achieving the applicable wasteload allocations as part of its reapplication package due in accordance with Section III M.

C. Special condition for the Chesapeake Bay TMDL. The Commonwealth in its Phase I and Phase II Chesapeake Bay TMDL Watershed Implementation Plans (WIP) committed to a phased approach for MS4s, affording MS4 operators up to three full five-year permit cycles to implement necessary reductions. This permit is consistent with the Chesapeake Bay TMDL and the Virginia Phase I and II WIPs to meet the Level 2 (L2) scoping run for existing developed lands as it represents an implementation of 5.0% of L2 as specified in the 2010 Phase I WIP. Conditions of future permits will be consistent with the TMDL or WIP conditions in place at the time of permit issuance.

1. Definitions. The following definitions apply to this state permit for the purpose of the special condition for discharges in the Chesapeake Bay Watershed:

"Existing sources" means pervious and impervious urban land uses served by the MS4 as of June 30, 2009.

"New sources" means pervious and impervious urban land uses served by the MS4 developed or redeveloped on or after July 1, 2009.

"Pollutants of concern" or "POC" means total nitrogen, total phosphorus, and total suspended solids.

"Transitional sources" means regulated land disturbing activities that are temporary in nature and discharge through the MS4.

2. Chesapeake Bay TMDL planning.

a. In accordance with Table 1 in this section, the operator shall develop and submit to the department for its review and acceptance an approvable Chesapeake Bay TMDL Action Plan. Unless specifically denied in writing by the department, this plan becomes effective and enforceable 90 days after the date received by the department. The plan shall include:

- (1) A review of the current MS4 program implemented as a requirement of this state permit including a review of the existing legal authorities and the operator's ability to ensure compliance with this special condition;
- (2) The identification of any new or modified legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements implemented or needing to be implemented to meet the requirements of this special condition;
- (3) The means and methods that will be utilized to address discharges into the MS4 from new sources;
- (4) An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009, based on the 2009 progress run. The operator shall utilize the applicable versions of Tables 2 a-d in this section based on the river basin to which the MS4 discharges by multiplying the total existing acres served by the MS4 on June 30, 2009, and the 2009 Edge of Stream (EOS) loading rate:

Table 2a: Calculation Sheet for Estimating Existing Source Loads for the James River Basin *Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/ acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		9.39	
Regulated Urban Pervious			6.99	
Regulated Urban Impervious	Phosphorus		1.76	
Regulated Urban Pervious			0.5	
Regulated Urban Impervious	Total Suspended Solids		676.94	
Regulated Urban Pervious			101.08	

Table 2b: Calculation Sheet for Estimating Existing Source Loads for the Potomac River Basin *Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/ acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		16.86	
Regulated Urban Pervious			10.07	
Regulated Urban Impervious	Phosphorus		1.62	
Regulated Urban Pervious			0.41	
Regulated Urban Impervious	Total Suspended Solids		1,171.32	
Regulated Urban Pervious			175.8	

Table 2c: Calculation Sheet for Estimating Existing Source Loads for the Rappahannock River Basin *Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/ acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		9.38	
Regulated Urban Pervious			5.34	
Regulated Urban Impervious	Phosphorus		1.41	
Regulated Urban Pervious			0.38	
Regulated Urban Impervious	Total Suspended Solids		423.97	
Regulated Urban Pervious			56.01	

Table 2d: Calculation Sheet for Estimating Existing Source Loads for the York River Basin *Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	2009 EOS Loading Rate (lbs/ acre)	Estimated Total POC Load Based on 2009 Progress Run
Regulated Urban Impervious	Nitrogen		7.31	
Regulated Urban Pervious			7.65	
Regulated Urban Impervious	Phosphorus		1.51	
Regulated Urban Pervious			0.51	
Regulated Urban Impervious	Total Suspended Solids		456.68	
Regulated Urban Pervious			72.78	

(5) A determination of the total pollutant load reductions necessary to reduce the annual POC loads from existing sources utilizing the applicable versions of Tables 3 a-d in this section based on the river basin to which the MS4 discharges. This shall be calculated by multiplying the total existing acres served by the MS4 by the first permit cycle required reduction in loading rate. For the purposes of this determination, the operator shall utilize those existing acres identified by the 2000 U.S. Census Bureau urbanized area and served by the MS4.

Table 3a: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the James River Basin				
*Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/ acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.04	
Regulated Urban Pervious			0.02	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.002	
Regulated Urban Impervious	Total Suspended Solids		6.67	
Regulated Urban Pervious			0.44	

Table 3b: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the Potomac River Basin				
*Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/ acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.08	
Regulated Urban Pervious			0.03	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.001	
Regulated Urban Impervious	Total Suspended Solids		11.71	
Regulated Urban Pervious			0.77	

Table 3c: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the Rappahannock River Basin				
*Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.04	
Regulated Urban Pervious			0.02	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.002	
Regulated Urban Impervious	Total Suspended Solids		4.24	
Regulated Urban Pervious			0.25	

Table 3d: Calculation Sheet for Determining Total POC Reductions Required During this Permit Cycle for the York River Basin				
*Based on Chesapeake Bay Program Watershed Model Phase 5.3.2				
Subsource	Pollutant	Total Existing Acres Served by MS4 (6/30/09)	First Permit Cycle Required Reduction in Loading Rate (lbs/acre)	Total Reduction Required First Permit Cycle (lbs)
Regulated Urban Impervious	Nitrogen		0.03	
Regulated Urban Pervious			0.02	
Regulated Urban Impervious	Phosphorus		0.01	
Regulated Urban Pervious			0.002	
Regulated Urban Impervious	Total Suspended Solids		4.60	
Regulated Urban Pervious			0.32	

(6) The means and methods, such as management practices and retrofit programs that will be utilized to meet the required reductions included in subdivision 2 a (5) of this subsection, and a schedule to achieve those reductions. The schedule should include annual benchmarks to demonstrate the ongoing progress in meeting those reductions;

(7) The means and methods to offset the increased loads from new sources initiating construction between July 1, 2009, and June 30, 2014, that disturb one acre or greater as a result of the utilization of an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids. The operator shall offset 5.0% of the calculated increased load from these new sources during the permit cycle.

(8) The means and methods to offset the increased loads from projects as grandfathered in accordance with 4VAC50-60-48, that disturb one acre or greater that begin construction after July 1, 2014, where the project utilizes an average land cover condition greater than 16% impervious cover in the design of post-development stormwater management facilities. The operator shall utilize Table 4 in this section to develop the equivalent pollutant load for nitrogen and total suspended solids.

(9) The operator shall address any modification to the TMDL or watershed implementation plan that occurs during the term of this state permit as part of its permit reapplication and not during the term of this state permit.

Ratio of Phosphorus to Other POCs (Based on All Land Uses 2009 Progress Run)	Phosphorus Loading Rate (lbs/acre)	Nitrogen Loading Rate (lbs/acre)	Total Suspended Solids Loading Rate (lbs/acre)
James River Basin	1.0	5.2	420.9
Potomac River Basin	1.0	6.9	469.2
Rappahannock River Basin	1.0	6.7	320.9
York River Basin	1.0	9.5	531.6

(10) A list of future projects and associated acreage that qualify as grandfathered in accordance with 4VAC50-60-48;

(11) An estimate of the expected costs to implement the requirements of this special condition during the state permit cycle; and

(12) An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan.

b. As part of development of the Chesapeake Bay TMDL Action Plan, the operator may consider:

(1) Implementation of BMPs on unregulated lands provided any necessary baseline reduction is not included toward meeting the required reduction in this permit;

(2) Utilization of stream restoration projects, provided that the credit applied to the required POC load reduction is prorated based on the ratio of regulated urban acres to total drainage acres upstream of the restored area;

(3) Establishment of a memorandum of understanding (MOU) with other MS4 operators that discharge to the same or adjacent eight digit hydrologic unit within the same basin to implement BMPs collectively. The MOU shall include a mechanism for dividing the POC reductions created by BMP implementation between the cooperative MS4s;

(4) Utilization of any pollutant trading or offset program in accordance with § 10.1-603.15:1 et seq. of the Code of Virginia, governing trading and offsetting;

- (5) A more stringent average land cover condition based on less than 16% impervious cover for new sources initiating construction between July 1, 2009, and June 30, 2014, and all grandfathered projects where allowed by law; and
- (6) Any BMPs installed after June 30, 2009, as part of a retrofit program may be applied towards meeting the required load reductions provided any necessary baseline reductions are not included.

3. Chesapeake Bay TMDL Action Plan implementation. The operator shall implement the TMDL Action Plan according to the schedule therein. Compliance with this requirement represents adequate progress for this state permit term towards achieving TMDL wasteload allocations consistent with the assumptions and requirements of the TMDL. For the purposes of this permit, the implementation of the following represents implementation to the maximum extent practicable and demonstrates adequate progress:

- a. Implementation of nutrient management plans in accordance with the schedule identified in the minimum control measure in Section II related to pollution prevention/good housekeeping for municipal operations;
- b. Implementation of the minimum control measure in Section II related to construction site stormwater runoff control in accordance with this state permit shall address discharges from transitional sources;
- c. Implementation of the means and methods to address discharges from new sources in accordance with the minimum control measure in Section II related to post-construction stormwater management in new development and development of prior developed lands and in order to offset 5.0% of the total increase in POC loads between July 1, 2009, and June 30, 2014. Increases in the POC load from grandfathered projects initiating construction after July 1, 2014, must be offset prior to completion of the project; and
- d. Implementation of means and methods sufficient to meet the required reductions of POC loads from existing sources in accordance with the Chesapeake Bay TMDL Action Plan.

4. Annual reporting requirements.

- a. In accordance with Table 1 in this section, the operator shall submit the Chesapeake Bay Action Plan with the appropriate annual report.
- b. Each subsequent annual report shall include a list of control measures implemented during the reporting period and the cumulative progress toward meeting the compliance targets for nitrogen, phosphorus, and total suspended solids.
- c. Each subsequent annual report shall include a list of control measures, in an electronic format provided by the department, that were implemented during the reporting cycle and the estimated reduction achieved by the control. For stormwater management controls, the report shall include the information required in Section II B 5 e and shall include whether an existing stormwater management control was retrofitted, and if so, the existing stormwater management control type retrofit used.
- d. Each annual report shall include a list of control measures that are expected to be implemented during the next reporting period and the expected progress toward meeting the compliance targets for nitrogen, phosphorus, and total suspended solids.

5. The operator shall include the following as part of its reapplication package due in accordance with Section III M:

- a. Documentation that sufficient control measures have been implemented to meet the compliance target identified in this special condition. If temporary credits or offsets have been purchased in order to meet the compliance target, the list of temporary reductions utilized to meet the required reduction in this state permit and a schedule of implementation to ensure the permanent reduction must be provided; and
- b. A draft second phase Chesapeake Bay TMDL Action Plan designed to reduce the existing pollutant load as follows:
 - (1) The existing pollutant of concern loads by an additional seven times the required reductions in loading rates using the applicable Table 3 for sources included in the 2000 U.S. Census Bureau urbanized areas;

- (2) The existing pollutant of concerns loads by an additional eight times the required reductions in loading rates using the applicable Table 3 for expanded sources identified in the U.S. Census Bureau 2010 urbanized areas;
- (3) An additional 35% reduction in new sources developed between 2009 and 2014 and for which the land use cover condition was greater than 16%; and
- (4) Accounts for any modifications to the applicable loading rate provided to the operator as a result of TMDL modification.

SECTION II

MUNICIPAL SEPARATE STORM SEWER SYSTEM MANAGEMENT PROGRAM

A. The operator of a small MS4 must develop, implement, and enforce a MS4 Program designed to reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, to ensure compliance by the operator with water quality standards, and to satisfy the appropriate water quality requirements of the Clean Water Act and its attendant regulations. The MS4 Program must include the minimum control measures described in paragraph B of this section. Implementation of best management practices consistent with the provisions of an iterative MS4 Program required pursuant to this section constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable", protects water quality in the absence of a TMDL wasteload allocation, ensures compliance by the operator with water quality standards, and satisfies the appropriate water quality requirements of the Clean Water Act and regulations in the absence of a TMDL WLA. The requirements of this section and those special conditions set out in Section I B also apply where a WLA is applicable.

B. Minimum control measures.

NOTE regarding minimum control measures for public education and outreach on stormwater impacts and public involvement/participation: "Public" is not defined in this permit. However, the department concurs with the following EPA statement, which was published in the Federal Register, Volume 64, No. 235, page 68,750 on December 8, 1999, regarding "public" and its applicability to MS4 programs: "EPA acknowledges that federal and state facilities are different from municipalities. EPA believes, however, that the minimum measures are flexible enough that they can be implemented by these facilities. As an example, DOD commentators asked about how to interpret the term "public" for military installations when implementing the public education measure. EPA agrees with the suggested interpretation of "public" for DOD facilities as "the resident and employee population within the fence line of the facility." The department recommends that nontraditional MS4 operators, such as state and federal entities and local school districts, utilize this statement as guidance when determining their applicable "public" for compliance with this permit.

1. Public education and outreach on stormwater impacts.

a. The operator shall continue to implement the public education and outreach program as included in the registration statement until the program is updated to meet the conditions of this state permit. Operators who have not previously held MS4 permit coverage shall implement this program in accordance with the schedule provided with the completed registration statement.

b. The public education and outreach program should be designed with consideration of the following goals:

- (1) Increasing target audience knowledge about the steps that can be taken to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;
- (2) Increasing target audience knowledge of hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and

(3) Implementing a diverse program with strategies that are targeted towards audiences most likely to have significant stormwater impacts.

c. The updated program shall be designed to:

- (1) Identify, at a minimum, three high-priority water quality issues, that contribute to the discharge of stormwater (e.g., Chesapeake Bay nutrients, pet wastes and local bacteria TMDLs, high-quality receiving waters, and illicit discharges from commercial sites) and a rationale for the selection of the three high-priority water quality issues;
- (2) Identify and estimate the population size of the target audience or audiences who is most likely to have significant impacts for each high-priority water quality issue;
- (3) Develop relevant message or messages and associated educational and outreach materials (e.g., various media such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, websites, and social media) for message distribution to the selected target audiences while considering the viewpoints and concerns of the target audiences including minorities, disadvantaged audiences, and minors;
- (4) Provide for public participation during public education and outreach program development;
- (5) Annually conduct sufficient education and outreach activities designed to reach an equivalent 20% of each high-priority issue target audience. It shall not be considered noncompliance for failure to reach 20% of the target audience. However, it shall be a compliance issue if insufficient effort is made to annually reach a minimum of 20% of the target audience; and
- (6) Provide for the adjustment of target audiences and messages including educational materials and delivery mechanisms to reach target audiences in order to address any observed weaknesses or shortcomings.

d. The operator may coordinate their public education and outreach efforts with other MS4 operators; however, each operator shall be individually responsible for meeting all of its state permit requirements.

e. Prior to application for continued state permit coverage required in Section III M, the operator shall evaluate the education and outreach program for:

- (1) Appropriateness of the high-priority stormwater issues;
- (2) Appropriateness of the selected target audiences for each high-priority stormwater issue;
- (3) Effectiveness of the message or messages being delivered; and
- (4) Effectiveness of the mechanism or mechanisms of delivery employed in reaching the target audiences.

f. The MS4 Program Plan shall describe how the conditions of this permit shall be updated in accordance with Table 1 in this section.

g. The operator shall include the following information in each annual report submitted to the department during this permit term:

- (1) A list of the education and outreach activities conducted during the reporting period for each high-priority water quality issue, the estimated number of people reached, and an estimated percentage of the target audience or audiences that will be reached; and
- (2) A list of the education and outreach activities that will be conducted during the next reporting period for each high-priority water quality issue, the estimated number of people that will be reached, and an estimated percentage of the target audience or audiences that will be reached.

2. Public involvement/participation.

a. Public involvement.

(1) The operator shall comply with any applicable federal, state, and local public notice requirements.

(2) The operator shall:

(a) Maintain an updated MS4 Program Plan. Any required updates to the MS4 Program Plan shall be completed at a minimum of once a year and shall be updated in conjunction with the annual report. The operator shall post copies of each MS4 program plan on its webpage at a minimum of once a year and within 30 days of submittal of the annual report to the department.

(b) Post copies of each annual report on the operator's web page within 30 days of submittal to the department and retain copies of annual reports online for the duration of this state permit; and

(c) Prior to applying for coverage as required by Section III M, notify the public and provide for receipt of comment of the proposed MS4 Program Plan that will be submitted with the registration statement. As part of the reapplication, the operator shall address how it considered the comments received in the development of its MS4 Program Plan. The operator shall give public notice by a method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to solicit public participation.

b. Public participation. The operator shall participate, through promotion, sponsorship, or other involvement, in a minimum of four local activities annually e.g., stream cleanups; hazardous waste cleanup days; and meetings with watershed associations, environmental advisory committees, and other environmental organizations that operate within proximity to the operator's small MS4. The activities shall be aimed at increasing public participation to reduce stormwater pollutant loads; improve water quality; and support local restoration and clean-up projects, programs, groups, meetings, or other opportunities for public involvement.

c. The MS4 Program Plan shall include written procedures for implementing this program.

d. Each annual report shall include:

(1) A web link to the MS4 Program Plan and annual report; and

(2) Documentation of compliance with the public participation requirements of this section.

3. Illicit discharge detection and elimination.

a. The operator shall maintain an accurate storm sewer system map and information table and shall update it in accordance with the schedule set out in Table 1 of this section.

(1) The storm sewer system map must show the following, at a minimum:

(a) The location of all MS4 outfalls. In cases where the outfall is located outside of the MS4 operator's legal responsibility, the operator may elect to map the known point of discharge location closest to the actual outfall. Each mapped outfall must be given a unique identifier, which must be noted on the map; and

(b) The name and location of all waters receiving discharges from the MS4 outfalls and the associated HUC.

(2) The associated information table shall include for each outfall the following:

(a) The unique identifier;

(b) The estimated MS4 acreage served;

(c) The name of the receiving surface water and indication as to whether the receiving water is listed as impaired in the Virginia 2010 303(d)/305(b) Water Quality Assessment Integrated Report; and

(d) The name of any applicable TMDL or TMDLs.

(3) Within 48 months of coverage under this state permit, the operator shall have a complete and updated storm sewer system map and information table that includes all MS4 outfalls

located within the boundaries identified as "urbanized" areas in the 2010 Decennial Census and shall submit the updated information table as an appendix to the annual report.

(4) The operator shall maintain a copy of the current storm sewer system map and outfall information table for review upon request by the public or by the department.

(5) The operator shall continue to identify other points of discharge. The operator shall notify in writing the downstream MS4 of any known physical interconnection.

b. The operator shall effectively prohibit, through ordinance or other legal mechanism, nonstormwater discharges into the storm sewer system to the extent allowable under federal, state, or local law, regulation, or ordinance. Categories of nonstormwater discharges or flows (i.e., illicit discharges) identified in 4VAC50-60-400 D 2 c (3) must be addressed only if they are identified by the operator as significant contributors of pollutants to the small MS4. Flows that have been identified in writing by the Department of Environmental Quality as de minimis discharges are not significant sources of pollutants to surface water and do not require a VPDES permit.

c. The operator shall develop, implement, and update, when appropriate, written procedures to detect, identify, and address unauthorized nonstormwater discharges, including illegal dumping, to the small MS4. These procedures shall include:

(1) Written dry weather field screening methodologies to detect and eliminate illicit discharges to the MS4 that include field observations and field screening monitoring and that provide:

(a) A prioritized schedule of field screening activities determined by the operator based on such criteria as age of the infrastructure, land use, historical illegal discharges, dumping or cross connections.

(b) The minimum number of field screening activities the operator shall complete annually to be determined as follows: (i) if the total number of outfalls in the small MS4 is less than 50, all outfalls shall be screened annually or (ii) if the small MS4 has 50 or more total outfalls, a minimum of 50 outfalls shall be screened annually.

(c) Methodologies to collect the general information such as time since the last rain, the quantity of the last rain, site descriptions (e.g., conveyance type and dominant watershed land uses), estimated discharge rate (e.g., width of water surface, approximate depth of water, approximate flow velocity, and flow rate), and visual observations (e.g., order, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology);

(d) A time frame upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent nonstormwater discharge prioritized as follows: (i) illicit discharges suspected of being sanitary sewage or significantly contaminated must be investigated first and (ii) investigations of illicit discharges suspected of being less hazardous to human health and safety such as noncontact cooling water or wash water may be delayed until after all suspected sanitary sewage or significantly contaminated discharges have been investigated, eliminated, or identified. Discharges authorized under a separate VPDES or state permit require no further action under this permit.

(e) Methodologies to determine the source of all illicit discharges shall be conducted. If an illicit discharge is found, but within six months of the beginning of the investigation neither the source nor the same nonstormwater discharge has been identified, then the operator shall document such in accordance with Section II B 3 f. If the observed discharge is intermittent, the operator must document that a minimum of three separate investigations were made in an attempt to observe the discharge when it was flowing. If these attempts are unsuccessful, the operator shall document such in accordance with Section II B 3 f.

(f) Mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;

(g) Methods for conducting a follow-up investigation in order to verify that the discharge has been eliminated.

(h) A mechanism to track all investigations to document: (i) the date or dates that the illicit discharge was observed and reported; (ii) the results of the investigation; (iii) any follow-up to the investigation; (iv) resolution of the investigation; and (v) the date that the investigation was closed.

d. The operator shall promote, publicize, and facilitate public reporting of illicit discharges into or from MS4s. The operator shall conduct inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party.

e. The MS4 Program Plan shall include all procedures developed by the operator to detect, identify, and address nonstormwater discharges to the MS4 in accordance with the schedule in Table 1 in this section. In the interim, the operator shall continue to implement the program as included as part of the registration statement until the program is updated to meet the conditions of this permit. Operators, who have not previously held MS4 permit coverage, shall implement this program in accordance with the schedule provided with the completed registration statement.

f. Annual reporting requirements. Each annual report shall include:

- (1) A list of any written notifications of physical interconnection given by the operator to other MS4s;
- (2) The total number of outfalls screened during the reporting period, the screening results, and detail of any follow-up actions necessitated by the screening results; and
- (3) A summary of each investigation conducted by the operator of any suspected illicit discharge. The summary must include: (i) the date that the suspected discharge was observed, reported, or both; (ii) how the investigation was resolved, including any follow-up, and (iii) resolution of the investigation and the date the investigation was closed.

4. Construction site stormwater runoff control.

a. Applicable oversight requirements. The operator shall utilize its legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to address discharges entering the MS4 from the following land-disturbing activities:

- (1) Land-disturbing activities as defined in § 10.1-560 of the Code of Virginia that result in the disturbance of 10,000 square feet or greater;
- (2) Land-disturbing activities in Tidewater jurisdictions, as defined in § 10.1-2101 of the Code of Virginia, that disturb 2,500 square feet or greater and are located in areas designated as Resource Protection Areas (RPA), Resource Management Areas (RMA) or Intensely Developed Acres (IDA), pursuant to the Chesapeake Bay Preservation Area Designation and Management Regulations adopted pursuant to the Chesapeake Bay Preservation Act;
- (3) Land-disturbing activities disturbing less than the minimum land disturbance identified in subdivision (1) or (2) above for which a local ordinance requires that an erosion and sediment control plan be developed; and
- (4) Land-disturbing activities on individual residential lots or sections of residential developments being developed by different property owners and where the total land disturbance of the residential development is 10,000 square feet or greater. The operator may utilize an agreement in lieu of a plan as provided in § 10.1-563 of the Code of Virginia for this category of land disturbances.

b. Required plan approval prior to commencement of the land disturbing activity. The operator shall require that land disturbance not begin until an erosion and sediment control plan or an agreement in lieu of a plan as provided in § 10.1-563 is approved by a VESCP authority in accordance with the Erosion and Sediment Control Act (§ 10.1-560 et seq.). The plan shall be:

- (1) Compliant with the minimum standards identified in 4VAC-50-30-40 of the Erosion and Sediment Control Regulations; or
- (2) Compliant with department-approved annual standards and specifications. Where applicable, the plan shall be consistent with any additional or more stringent, or both, erosion and sediment control requirements established by state regulation or local ordinance.

c. Compliance and enforcement.

(1) The operator shall inspect land-disturbing activities for compliance with an approved erosion and sediment control plan or agreement in lieu of a plan in accordance with the minimum standards identified in 4VAC50-30-40 or with department-approved annual standards and specifications.

(2) The operator shall implement an inspection schedule for land-disturbing activities identified in Section II B 4 a as follows:

(a) Upon initial installation of erosion and sediment controls;

(b) At least once during every two-week period;

(c) Within 48 hours of any runoff-producing storm event; and

(d) Upon completion of the project and prior to the release of any applicable performance bonds.

Where an operator establishes an alternative inspection program as provided for in 4VAC50-30-60 B 2, the written schedule shall be implemented in lieu of Section II B 4 c (2) and the written plan shall be included in the MS4 Program Plan.

(3) Operator inspections shall be conducted by personnel who hold a certificate of competence in accordance with 4VAC-50-50-40. Documentation of certification shall be made available upon request by the VESCP authority or other regulatory agency.

(4) The operator shall promote to the public a mechanism for receipt of complaints regarding regulated land-disturbing activities and shall follow up on any complaints regarding potential water quality and compliance issues.

(5) The operator shall utilize its legal authority to require compliance with the approved plan where an inspection finds that the approved plan is not being properly implemented.

(6) The operator shall utilize, as appropriate, its legal authority to require changes to an approved plan when a inspection finds that the approved plan is inadequate to effectively control soil erosion, sediment deposition, and runoff to prevent the unreasonable degradation of properties, stream channels, waters, and other natural resources.

(7) The operator shall require implementation of appropriate controls to prevent nonstormwater discharges to the MS4, such as wastewater, concrete washout, fuels and oils, and other illicit discharges identified during land-disturbing activity inspections of the MS4. The discharge of nonstormwater discharges other than those identified in 4VAC50-60-1220 through the MS4 is not authorized by this state permit.

(8) The operator may develop and implement a progressive compliance and enforcement strategy provided that such strategy is included in the MS4 Program Plan and is consistent with 4VAC50-30.

d. Regulatory coordination. The operator shall implement enforceable procedures to require that large construction activities as defined in 4VAC50-60-10 and small construction activities as defined in 4VAC50-60-10, including municipal construction activities, secure necessary state permit authorizations from the department to discharge stormwater.

e. MS4 Program requirements. The operator's MS4 Program Plan shall include:

(1) A description of the legal authorities utilized to ensure compliance with the minimum control measure in Section II related to construction site stormwater runoff control such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements;

(2) Written plan review procedures and all associated documents utilized in plan review;

(3) For the MS4 operators who obtain department-approved standards and specifications, a copy of the current standards and specifications;

(4) Written inspection procedures and all associated documents utilized during inspection including the inspection schedule;

(5) Written procedures for compliance and enforcement, including a progressive compliance and enforcement strategy, where appropriate; and

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to construction site stormwater runoff control. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the

MS4 Program Plan. The description of each party's roles and responsibilities, including any written agreements with third parties, shall be updated as necessary.

Reference may be made to any listed requirements in this subdivision provided the location of where the reference material can be found is included and the reference material is made available to the public upon request.

f. Reporting requirements. The operator shall track regulated land-disturbing activities and submit the following information in all annual reports:

- (1) Total number of regulated land-disturbing activities;
- (2) Total number of acres disturbed;
- (3) Total number of inspections conducted; and
- (4) A summary of the enforcement actions taken, including the total number and type of enforcement actions taken during the reporting period.

5. Post-construction stormwater management in new development and development on prior developed lands.

a. Applicable oversight requirements. The operator shall address post-construction stormwater runoff that enters the MS4 from the following land-disturbing activities:

- (1) New development and development on prior developed lands that are defined as large construction activities or small construction activities in 4VAC50-60-10;
- (2) New development and development on prior developed lands that disturb greater than or equal to 2,500 square feet, but less than one acre, located in a Chesapeake Bay Preservation Area designated by a local government located in Tidewater, Virginia, as defined in § 10.1-2101 of the Code of Virginia; and
- (3) New development and development on prior developed lands where an applicable state regulation or local ordinance has designated a more stringent regulatory size threshold than that identified in subdivision (1) or (2) above.

b. Required design criteria for stormwater runoff controls. The operator shall utilize legal authority, such as ordinances, permits, orders, specific contract language, and interjurisdictional agreements, to require that activities identified in Section II B 5 a address stormwater runoff in such a manner that stormwater runoff controls are designed and installed:

- (1) In accordance with the appropriate water quality and water quantity design criteria as required in Part II (4VAC50-60-40 et seq.) of 4VAC50-60;
- (2) In accordance with any additional applicable state or local design criteria required at project initiation; and
- (3) Where applicable, in accordance with any department-approved annual standards and specifications.

Upon board approval of a Virginia Stormwater Management Program authority (VSMP Authority) as defined in § 10.1-603.2 of the Code of Virginia and reissuance of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Construction Activities, the operator shall require that stormwater management plans are approved by the appropriate VSMP Authority prior to land disturbance. In accordance with § 10.1-603.3 M of the Code of Virginia, VSMPs shall become effective July 1, 2014, unless otherwise specified by state law or by the board.

c. Inspection, operation, and maintenance verification of stormwater management facilities.

(1) For stormwater management facilities not owned by the MS4 operator, the following conditions apply:

- (a) The operator shall require adequate long-term operation and maintenance by the owner of the stormwater management facility by requiring the owner to develop a recorded inspection schedule and maintenance agreement to the extent allowable under state or local law or other legal mechanism;

(b) The operator or his designee shall implement a schedule designed to inspect all privately owned stormwater management facilities that discharge into the MS4 at least once every five years to document that maintenance is being conducted in such a manner to ensure long-term operation in accordance with the approved designs.

(c) The operator shall utilize its legal authority for enforcement of maintenance responsibilities if maintenance is neglected by the owner. The operator may develop and implement a progressive compliance and enforcement strategy provided that the strategy is included in the MS4 Program Plan.

(d) Beginning with the issuance of this state permit, the operator may utilize strategies other than maintenance agreements such as periodic inspections, homeowner outreach and education, and other methods targeted at promoting the long-term maintenance of stormwater control measures that are designed to treat stormwater runoff solely from the individual residential lot. Within 12 months of coverage under this permit, the operator shall develop and implement these alternative strategies and include them in the MS4 Program Plan.

(2) For stormwater management facilities owned by the MS4 operator, the following conditions apply:

(a) The operator shall provide for adequate long-term operation and maintenance of its stormwater management facilities in accordance with written inspection and maintenance procedures included in the MS4 Program Plan.

(b) The operator shall inspect these stormwater management facilities annually. The operator may choose to implement an alternative schedule to inspect these stormwater management facilities based on facility type and expected maintenance needs provided that the alternative schedule is included in the MS4 Program Plan.

(c) The operator shall conduct maintenance on its stormwater management facilities as necessary.

d. MS4 Program Plan requirements. The operator's MS4 Program Plan shall be updated in accordance with Table 1 in this section to include:

(1) A list of the applicable legal authorities such as ordinance, state and other permits, orders, specific contract language, and interjurisdictional agreements to ensure compliance with the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands;

(2) Written policies and procedures utilized to ensure that stormwater management facilities are designed and installed in accordance with Section II B 5 b;

(3) Written inspection policies and procedures utilized in conducting inspections;

(4) Written procedures for inspection, compliance and enforcement to ensure maintenance is conducted on private stormwater facilities to ensure long-term operation in accordance with approved design;

(5) Written procedures for inspection and maintenance of operator-owned stormwater management facilities;

(6) The roles and responsibilities of each of the operator's departments, divisions, or subdivisions in implementing the minimum control measure in Section II related to post-construction stormwater management in new development and development on prior developed lands. If the operator utilizes another entity to implement portions of the MS4 Program Plan, a copy of the written agreement must be retained in the MS4 Program Plan. Roles and responsibilities shall be updated as necessary.

e. Stormwater management facility tracking and reporting requirements. The operator shall maintain an updated electronic database of all known operator-owned and privately-owned stormwater management facilities that discharge into the MS4. The database shall include the following:

(1) The stormwater management facility type;

(2) A general description of the facility's location, including the address or latitude and longitude;

- (3) The acres treated by the facility, including total acres, as well as the breakdown of pervious and impervious acres;
 - (4) The date the facility was brought online (MM/YYYY). If the date is not known, the operator shall use June 30, 2005, as the date brought online for all previously existing stormwater management facilities;
 - (5) The sixth order hydrologic unit code (HUC) in which the stormwater management facility is located;
 - (6) The name of any impaired water segments within each HUC listed in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report to which the stormwater management facility discharges;
 - (7) Whether the stormwater management facility is operator-owned or privately-owned;
 - (8) Whether a maintenance agreement exists if the stormwater management facility is privately owned; and
 - (9) The date of the operator's most recent inspection of the stormwater management facility.
- In addition, the operator shall annually track and report the total number of inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.

The operator shall submit an electronic database or spreadsheet of all stormwater management facilities brought online during each reporting year with the appropriate annual report. Upon such time as the department provides the operators access to a statewide web-based reporting electronic database or spreadsheet, the operator shall utilize such database to complete the pertinent reporting requirements of this state permit.

6. Pollution prevention/good housekeeping for municipal operations.

a. Operations and maintenance activities. The MS4 Program Plan submitted with the registration statement shall be implemented by the operator until updated in accordance with this state permit. In accordance with Table 1 in this section, the operator shall develop and implement written procedures designed to minimize or prevent pollutant discharge from: (i) daily operations such as road, street, and parking lot maintenance; (ii) equipment maintenance; and (iii) the application, storage, transport, and disposal of pesticides, herbicides, and fertilizers. The written procedures shall be utilized as part of the employee training. At a minimum, the written procedures shall be designed to:

- (1) Prevent illicit discharges;
- (2) Ensure the proper disposal of waste materials, including landscape wastes;
- (3) Prevent the discharge of municipal vehicle wash water into the MS4 without authorization under a separate VPDES permit;
- (4) Prevent the discharge of wastewater into the MS4 without authorization under a separate VPDES permit;
- (5) Require implementation of best management practices when discharging water pumped from utility construction and maintenance activities;
- (6) Minimize the pollutants in stormwater runoff from bulk storage areas (e.g., salt storage, topsoil stockpiles) through the use of best management practices;
- (7) Prevent pollutant discharge into the MS4 from leaking municipal automobiles and equipment; and
- (8) Ensure that the application of materials, including fertilizers and pesticides, is conducted in accordance with the manufacturer's recommendations.

b. Municipal facility pollution prevention and good housekeeping.

(1) Within 12 months of state permit coverage, the operator shall identify all municipal high-priority facilities. These high-priority facilities shall include (i) composting facilities, (ii) equipment storage and maintenance facilities, (iii) materials storage yards, (iv) pesticide storage facilities, (v) public works yards, (vi) recycling facilities, (vii) salt storage facilities, (viii) solid waste handling and transfer facilities, and (ix) vehicle storage and maintenance yards.

(2) Within 12 months of state permit coverage, the operator shall identify which of the municipal high-priority facilities have a high potential of discharging pollutants. Municipal high-priority facilities that have a high potential for discharging pollutants are those facilities identified in subsection (1) above that are not covered under a separate VPDES permit and which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff:

- (a) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;
- (b) Materials or residuals on the ground or in stormwater inlets from spills or leaks;
- (c) Material handling equipment (except adequately maintained vehicles);
- (d) Materials or products that would be expected to be mobilized in stormwater runoff during loading/unloading or transporting activities (e.g., rock, salt, fill dirt);
- (e) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);
- (f) Materials or products that would be expected to be mobilized in stormwater runoff contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
- (g) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);
- (h) Application or disposal of process wastewater (unless otherwise permitted); or
- (i) Particulate matter or visible deposits of residuals from roof stacks, vents or both not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater runoff.

(3) The operator shall develop and implement specific stormwater pollution prevention plans for all high-priority facilities identified in subdivision 2 of this subsection. The operator shall complete SWPPP development and implementation shall be completed within 48 months of coverage under this state permit. Facilities covered under a separate VDPES permit shall adhere to the conditions established in that permit and are excluded from this requirement.

(4) Each SWPPP shall include:

- (a) A site description that includes a site map identifying all outfalls, direction of flows, existing source controls, and receiving water bodies;
- (b) A discussion and checklist of potential pollutants and pollutant sources;
- (c) A discussion of all potential nonstormwater discharges;
- (d) Written procedures designed to reduce and prevent pollutant discharge;
- (e) A description of the applicable training as required in Section II B 6 d;
- (f) Procedures to conduct an annual comprehensive site compliance evaluation;
- (g) An inspection and maintenance schedule for site specific source controls. The date of each inspection and associated findings and follow-up shall be logged in each SWPPP;
- (h) The contents of each SWPPP shall be evaluated and modified as necessary to accurately reflect any discharge, release, or spill from the high priority facility reported in accordance with Section III G. For each such discharge, release, or spill, the SWPPP must include the following information: date of incident; material discharged, released, or spilled; and quantity discharged, released or spilled; and
- (i) A copy of each SWPPP shall be kept at each facility and shall be kept updated and utilized as part of staff training required in Section II B 6 d.

c. Turf and Landscape management.

(1) The operator shall implement turf and landscape nutrient management plans that have been developed by a certified turf and landscape nutrient management planner in accordance with § 10.1-104.2 of the Code of Virginia on all lands owned or operated by the MS4 operator where nutrients are applied to a contiguous area greater than one acre. Implementation shall be in accordance with the following schedule:

- (a) Within 12 months of state permit coverage, the operator shall identify all applicable lands where nutrients are applied to a contiguous area of more than one acre. A latitude and longitude shall be provided for each such piece of land and reported in the annual report.
- (b) Within 60 months of state permit coverage, the operator shall implement turf and landscape nutrient management plans on all lands where nutrients are applied to a

contiguous area of more than one acre. The following measurable outcomes are established for the implementation of turf and landscape nutrient management plans: (i) within 24 months of permit coverage, not less than 15% of all identified acres will be covered by turf and landscape nutrient management plans; (ii) within 36 months of permit coverage, not less than 40% of all identified acres will be covered by turf and landscape nutrient management plans; and (iii) within 48 months of permit coverage, not less than 75% of all identified acres will be covered by turf and landscape nutrient management plans. The operator shall not fail to meet the measurable goals for two consecutive years.

(c) MS4 operators with lands regulated under § 10.1-104.4 of the Code of Virginia shall continue to implement turf and landscape nutrient management plans in accordance with this statutory requirement.

(2) Operators shall annually track the following:

(a) The total acreage of lands where turf and landscape nutrient management plans are required; and

(b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented.

(3) The operator shall not apply any deicing agent containing urea or other forms of nitrogen or phosphorus to parking lots, roadways, and sidewalks, or other paved surfaces.

d. Training. The operator shall conduct training for employees. The training requirements may be fulfilled, in total or in part, through regional training programs involving two or more MS4 localities provided; however, that each operator shall remain individually liable for its failure to comply with the training requirements in this permit. Training is not required if the topic is not applicable to the operator's operations and therefore does not have applicable personnel provided the lack of applicability is documented in the MS4 Program Plan. The operator shall determine and document the applicable employees or positions to receive each type of training. The operator shall develop an annual written training plan including a schedule of training events that ensures implementation of the training requirements as follows:

(1) The operator shall provide biennial training to applicable field personnel in the recognition and reporting of illicit discharges.

(2) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed during road, street, and parking lot maintenance.

(3) The operator shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around maintenance and public works facilities.

(4) The operator shall ensure that employees, and require that contractors, who apply pesticides and herbicides are properly trained or certified in accordance with the Virginia Pesticide Control Act (§3.2-3900 et seq. of the Code of Virginia).

(5) The operator shall ensure that employees and contractors serving as plan reviewers, inspectors, program administrators, and construction site operators obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(6) The operator shall ensure that applicable employees obtain the appropriate certifications as required under the Virginia Erosion and Sediment Control Law and its attendant regulations.

(7) The operators shall provide biennial training to applicable employees in good housekeeping and pollution prevention practices that are to be employed in and around recreational facilities.

(8) The appropriate emergency response employees shall have training in spill responses. A summary of the training or certification program provided to emergency response employees shall be included in the first annual report.

(9) The operator shall keep documentation on each training event including the training date, the number of employees attending the training, and the objective of the training event for a period of three years after each training event.

e. The operator shall require that municipal contractors use appropriate control measures and procedures for stormwater discharges to the MS4 system. Oversight procedures shall be described in the MS4 Program Plan.

f. At a minimum, the MS4 Program Plan shall contain:

- (1) The written protocols being used to satisfy the daily operations and maintenance requirements;
- (2) A list of all municipal high-priority facilities that identifies those facilities that have a high potential for chemicals or other materials to be discharged in stormwater and a schedule that identifies the year in which an individual SWPPP will be developed for those facilities required to have a SWPPP. Upon completion of a SWPPP, the SWPPP shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual SWPPP is located;
- (3) A list of lands where nutrients are applied to a contiguous area of more than one acre. Upon completion of a turf and landscape nutrient management plan, the turf and landscape nutrient management plan shall be part of the MS4 Program Plan. The MS4 Program Plan shall include the location in which the individual turf and landscape nutrient management plan is located; and
- (4) The annual written training plan for the next reporting cycle.

g. Annual reporting requirements.

- (1) A summary report on the development and implementation of the daily operational procedures;
- (2) A summary report on the development and implementation of the required SWPPPs;
- (3) A summary report on the development and implementation of the turf and landscape nutrient management plans that includes:
 - (a) The total acreage of lands where turf and landscape nutrient management plans are required; and
 - (b) The acreage of lands upon which turf and landscape nutrient management plans have been implemented; and
- (4) A summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.

C. If an existing program requires the implementation of one or more of the minimum control measures of Section II B, the operator, with the approval of the board, may follow that program's requirements rather than the requirements of Section II B. A program that may be considered includes, but is not limited to, a local, state or tribal program that imposes, at a minimum, the relevant requirements of Section II B.

The operator's MS4 Program Plan shall identify and fully describe any program that will be used to satisfy one or more of the minimum control measures of Section II B.

If the program the operator is using requires the approval of a third party, the program must be fully approved by the third party, or the operator must be working towards getting full approval. Documentation of the program's approval status, or the progress towards achieving full approval, must be included in the annual report required by Section II E 3. The operator remains responsible for compliance with the permit requirements if the other entity fails to implement the control measures (or component thereof).

D. The operator may rely on another entity to satisfy the state permit requirements to implement a minimum control measure if: (i) the other entity, in fact, implements the control measure; (ii) the particular control measure, or component thereof, is at least as stringent as the corresponding state permit requirement; and (iii) the other entity agrees to implement the control measure on behalf of the operator. The agreement between the parties must be documented in writing and retained by the operator with the MS4 Program Plan for the duration of this state permit.

In the annual reports that must be submitted under Section II E 3, the operator must specify that another entity is being relied on to satisfy some of the state permit requirements.

If the operator is relying on another governmental entity regulated under 4VAC50-60-380 to satisfy all of the state permit obligations, including the obligation to file periodic reports required by Section II E 3,

the operator must note that fact in the registration statement, but is not required to file the periodic reports.

The operator remains responsible for compliance with the state permit requirements if the other entity fails to implement the control measure (or component thereof).

E. Evaluation and assessment.

1. MS4 Program Evaluation. The operator must annually evaluate:
 - a. Program compliance;
 - b. The appropriateness of the identified BMPs (as part of this evaluation, the operator shall evaluate the effectiveness of BMPs in addressing discharges into waters that are identified as impaired in the 2010 § 305(b)/303(d) Water Quality Assessment Integrated Report); and
 - c. Progress towards achieving the identified measurable goals.
2. Recordkeeping. The operator must keep records required by the state permit for at least three years. These records must be submitted to the department only upon specific request. The operator must make the records, including a description of the stormwater management program, available to the public at reasonable times during regular business hours.
3. Annual reports. The operator must submit an annual report for the reporting period of July 1 through June 30 to the department by the following October 1 of that year. The reports shall include:
 - a. Background Information.
 - (1) The name and state permit number of the program submitting the annual report;
 - (2) The annual report permit year;
 - (3) Modifications to any operator's department's roles and responsibilities;
 - (4) Number of new MS4 outfalls and associated acreage by HUC added during the permit year; and
 - (5) Signed certification.
 - b. The status of compliance with state permit conditions, an assessment of the appropriateness of the identified best management practices and progress towards achieving the identified measurable goals for each of the minimum control measures;
 - c. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
 - d. A summary of the stormwater activities the operator plans to undertake during the next reporting cycle;
 - e. A change in any identified best management practices or measurable goals for any of the minimum control measures including steps to be taken to address any deficiencies;
 - f. Notice that the operator is relying on another government entity to satisfy some of the state permit obligations (if applicable);
 - g. The approval status of any programs pursuant to Section II C (if appropriate), or the progress towards achieving full approval of these programs; and
 - h. Information required for any applicable TMDL special condition contained in Section I.

F. Program Plan modifications.

1. Program modifications requested by the operator. Modifications to the MS4 Program are expected throughout the life of this state permit as part of the iterative process to reduce the pollutant loadings and to protect water quality. As such, modifications made in accordance with this state permit as a result of the iterative process do not require modification of this permit unless the department determines that the changes meet the criteria referenced in 4VAC50-60-630 or 4VAC50-60-650. Updates and modifications to the MS4 Program may be made during the life of this state permit in accordance with the following procedures:
 - a. Adding (but not eliminating or replacing) components, controls, or requirements to the MS4 Program may be made by the operator at any time. Additions shall be reported as part of the annual report.
 - b. Updates and modifications to specific standards and specifications, schedules, operating procedures, ordinances, manuals, checklists, and other documents routinely evaluated and

modified are permitted under this state permit provided that the updates and modifications are done in a manner that (i) is consistent with the conditions of this state permit, (ii) follow any public notice and participation requirements established in this state permit, and (iii) are documented in the annual report.

c. Replacing, or eliminating without replacement, any ineffective or infeasible strategies, policies, and BMPs specifically identified in this permit with alternate strategies, policies, and BMPs may be requested at any time. Such requests must be made in writing to the department and signed in accordance with 4VAC50-60-370, and include the following:

- (1) An analysis of how or why the BMPs, strategies, or policies are ineffective or infeasible, including information on whether the BMPs, strategies, or policies are cost prohibitive;
- (2) Expectations regarding the effectiveness of the replacement BMPs, strategies, or policies;
- (3) An analysis of how the replacement BMPs are expected to achieve the goals of the BMP's to be replaced;
- (4) A schedule for implementing the replacement BMPs, strategies, and policies; and
- (5) An analysis of how the replacement strategies and policies are expected to improve the operator's ability to meet the goals of the strategies and policies being replaced.

d. The operator follows the public involvement requirements identified in Section II B 2 (a).

2. MS4 Program updates requested by the department. In a manner and following procedures in accordance with the Virginia Administrative Process Act, the Virginia Stormwater Management regulations, and other applicable state law and regulations, the department may request changes to the MS4 Program to assure compliance with the statutory requirements of the Virginia Stormwater Management Act and its attendant regulations to:

- a. Address impacts on receiving water quality caused by discharges from the MS4;
- b. Include more stringent requirements necessary to comply with new state or federal laws or regulations; or
- c. Include such other conditions necessary to comply with state or federal law or regulation.

Proposed changes requested by the department shall be made in writing and set forth the basis for and objective of the modification as well as the proposed time schedule for the operator to develop and implement the modification. The operator may propose alternative program modifications or time schedules to meet the objective of the requested modification, but any such modifications are at the discretion of the department.

SECTION III

CONDITIONS APPLICABLE TO ALL STATE PERMITS

A. Monitoring.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 (2001) or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this state permit.
3. The operator shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records.

1. Monitoring records/reports shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.

2. The operator shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this state permit, and records of all data used to complete the registration statement for this state permit, for a period of at least three years from the date of the sample, measurement, report or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the operator, or as requested by the board.

C. Reporting monitoring results.

1. The operator shall submit the results of the monitoring required by this state permit with the annual report unless another reporting schedule is specified elsewhere in this state permit.
2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR); on forms provided, approved or specified by the department; or in any format provided the date, location, parameter, method, and result of the monitoring activity are included.
3. If the operator monitors any pollutant specifically addressed by this state permit more frequently than required by this state permit using test procedures approved under 40 CFR Part 136 (2001) or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this state permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the department.
4. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this state permit.

D. Duty to provide information. The operator shall furnish to the department, within a reasonable time, any information that the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this state permit or to determine compliance with this state permit. The board may require the operator to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of surface waters, or such other information as may be necessary to accomplish the purposes of the CWA and Virginia Stormwater Management Act. The operator shall also furnish to the department upon request, copies of records required to be kept by this permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this state permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized stormwater discharges. Pursuant to § 10.1-603.2:2 A of the Code of Virginia, except in compliance with a state permit issued by the board, it shall be unlawful to cause a stormwater discharge from a MS4.

G. Reports of unauthorized discharges. Any operator of a small MS4 who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110 (2002), 40 CFR Part 117 (2002) or 40 CFR Part 302 (2002) that occurs during a 24-hour period into or upon surface waters; or who discharges or causes or allows a discharge that may reasonably be expected to enter surface waters, shall notify the Department of Environmental Quality of the discharge immediately upon discovery of the discharge, but in no case later than within 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department of Environmental Quality and the Department of Conservation and Recreation, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;

6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this state permit.

Discharges reportable to the Department of Environmental Quality and the Department of Conservation and Recreation under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a "bypass" or "upset," as defined herein, should occur from a facility and the discharge enters or could be expected to enter surface waters, the operator shall promptly notify, in no case later than within 24 hours, the Department of Environmental Quality and the Department of Conservation and Recreation by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse effects on aquatic life and the known number of fish killed. The operator shall reduce the report to writing and shall submit it to the Department of Environmental Quality and the Department of Conservation and Recreation within five days of discovery of the discharge in accordance with Section III I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the facilities; and
4. Flooding or other acts of nature.

I. Reports of noncompliance. The operator shall report any noncompliance which may adversely affect surface waters or may endanger public health.

1. An oral report shall be provided within 24 hours to the Department of Environmental Quality and the Department of Conservation and Recreation from the time the operator becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass; and
- b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within five days and shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The board or its designee may waive the written report on a case-by-case basis for reports of noncompliance under Section III I if the oral report has been received within 24 hours and no adverse impact on surface waters has been reported.

3. The operator shall report all instances of noncompliance not reported under Sections III I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Section III I 2.

NOTE: The immediate (within 24 hours) reports required to be provided to the Department of Environmental Quality in Sections III G, H and I may be made to the appropriate Department of Environmental Quality's Regional Office Pollution Response Program as found at <http://deq.virginia.gov/Programs/PollutionResponsePreparedness.aspx>. Reports may be made by telephone or by fax. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. **For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.**

4. Where the operator becomes aware of a failure to submit any relevant facts, or submittal of incorrect information in any report to the department or the Department of Environmental Quality, it shall promptly submit such facts or correct information.

J. Notice of planned changes.

1. The operator shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The operator plans an alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:
 - (1) After promulgation of standards of performance under § 306 of the Clean Water Act that are applicable to such source; or
 - (2) After proposal of standards of performance in accordance with § 306 of the Clean Water Act that are applicable to such source, but only if the standards are promulgated in accordance with § 306 within 120 days of their proposal;
 - b. The operator plans alteration or addition that would significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this state permit; or
2. The operator shall give advance notice to the department of any planned changes in the permitted facility or activity; which may result in noncompliance with state permit requirements.

K. Signatory requirements.

1. Registration statement. All registration statements shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for state permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a public agency includes:
 - (1) The chief executive officer of the agency, or
 - (2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
2. Reports, etc. All reports required by state permits, and other information requested by the board shall be signed by a person described in Section III K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Section III K 1;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the operator. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. The written authorization is submitted to the department.
3. Changes to authorization. If an authorization under Section III K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Section III K 2 shall be submitted to the department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Sections III K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to comply. The operator shall comply with all conditions of this state permit. Any state permit noncompliance constitutes a violation of the Virginia Stormwater Management Act and the Clean Water Act, except that noncompliance with certain provisions of this state permit may constitute a violation of the Virginia Stormwater Management Act but not the Clean Water Act. State permit noncompliance is grounds for enforcement action; for state permit termination, revocation and reissuance, or modification; or denial of a state permit renewal application.

The operator shall comply with effluent standards or prohibitions established under § 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this state permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the operator wishes to continue an activity regulated by this state permit after the expiration date of this state permit, the operator shall submit a new registration statement at least 90 days before the expiration date of the existing state permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing state permit.

N. Effect of a state permit. This state permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State law. Nothing in this state permit shall be construed to preclude the institution of any legal action under, or relieve the operator from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by § 510 of the Clean Water Act. Except as provided in state permit conditions on "bypassing" (Section III U), and "upset" (Section III V) nothing in this state permit shall be construed to relieve the operator from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this state permit shall be construed to preclude the institution of any legal action or relieve the operator from any responsibilities, liabilities, or penalties to which the operator is or may be subject under §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law or § 311 of the Clean Water Act.

Q. Proper operation and maintenance. The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed or used by the operator to achieve compliance with the conditions of this state permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by the operator only when the operation is necessary to achieve compliance with the conditions of this state permit.

R. Disposal of solids or sludges. Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering surface waters.

S. Duty to mitigate. The operator shall take all reasonable steps to minimize or prevent any discharge in violation of this state permit that has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this state permit.

U. Bypass.

1. "Bypass," as defined in 4VAC50-60-10, means the intentional diversion of waste streams from any portion of a treatment facility. The operator may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Sections III U 2 and U 3.

2. Notice.

a. Anticipated bypass. If the operator knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least 10 days before the date of the bypass.

b. Unanticipated bypass. The operator shall submit notice of an unanticipated bypass as required in Section III I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the board or its designee may take enforcement action against an operator for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The operator submitted notices as required under Section III U 2.

b. The board or its designee may approve an anticipated bypass, after considering its adverse effects, if the board or its designee determines that it will meet the three conditions listed above in Section III U 3 a.

V. Upset.

1. An upset, as defined in 4VAC50-60-10, constitutes an affirmative defense to an action brought for noncompliance with technology based state permit effluent limitations if the requirements of Section III V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

3. An operator who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the operator can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The operator submitted notice of the upset as required in Section III I; and

d. The operator complied with any remedial measures required under Section III S.

4. In any enforcement proceeding the operator seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The operator shall allow the department as the board's designee, or an authorized representative (including an authorized contractor acting as a representative of the administrator), upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the operator's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this state permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this state permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this state permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring state permit compliance or as otherwise authorized by the Clean Water Act and the Virginia Stormwater Management Act, any substances or parameters at any location.

For purposes of this subsection, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. State permit actions. State permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the operator for a state permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any state permit condition.

Y. Transfer of state permits.

1. State permits are not transferable to any person except after notice to the department. Except as provided in Section III Y 2, a state permit may be transferred by the operator to a new owner or operator only if the state permit has been modified or revoked and reissued, or a minor modification made, to identify the new operator and incorporate such other requirements as may be necessary under the Virginia Stormwater Management Act and the Clean Water Act.

2. As an alternative to transfers under Section III Y 1, this state permit may be automatically transferred to a new operator if:

- a. The current operator notifies the department at least two days in advance of the proposed transfer of the title to the facility or property;
- b. The notice includes a written agreement between the existing and new operators containing a specific date for transfer of state permit responsibility, coverage, and liability between them; and
- c. The board does not notify the existing operator and the proposed new operator of its intent to modify or revoke and reissue the state permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Section III Y 2 b.

Z. Severability. The provisions of this state permit are severable, and if any provision of this state permit or the application of any provision of this state permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this state permit, shall not be affected thereby.



APPENDIX C

- C-1: BMP Inspection Forms**
- C-2: BMP Inspection Instructions**
- C-3: Construction Instructions**
- C-4: E&SC Instructions**
- C-5: Illegal Dumping Instructions**
- C-6: Nutrient Management – Oceana Stables**
- C-7: Post Construction Instruction**
- C-8: Spill Reporting and Documentation SOP**
- C-9: DoD EISA Implementation**
- C-10: DON LID Policy**

BEST MANAGEMENT PRACTICE (BMP) INSPECTION FORM BIORETENTION AREAS

General BMP Information		
BMP Inventory I.D.:	Installation:	Bldg / Area:
Inspector:	Date of Inspection:	Date of Last Inspection:
Facility Type <input type="checkbox"/> Conventional (Surface) <input type="checkbox"/> Manufactured (Underground)	Filtration Media <input type="checkbox"/> Engineered Soil Mixture <input type="checkbox"/> Sand <input type="checkbox"/> Peat <input type="checkbox"/> No Filtration Media (Dry Well) <input type="checkbox"/> Other:	Pretreatment Facilities <input type="checkbox"/> Sediment Forebay / Sedimentation Chamber <input type="checkbox"/> Grass Swale / Channel <input type="checkbox"/> w/ Check Dams <input type="checkbox"/> Grass Filter Strip <input type="checkbox"/> Stone Diaphragm <input type="checkbox"/> Other:
Structural Elements <input type="checkbox"/> Drop Inlet / Catch Basin / Overflow Control <input type="checkbox"/> Underdrain <input type="checkbox"/> Monitoring Well		

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Overall / Contributing Drainage Area	Maintenance access to facility			
	Poor condition or damage to structural components			
	Excessive trash/debris			
	Evidence of oil/chemical accumulation caused by activities within the drainage area			
	Evidence of standing water, excessive ponding, poor drainage or clogging			
	Bare soil or sediment sources are seen in the contributing drainage area			
Pretreatment	Excessive trash/debris/sediment			
	Evidence of erosion			
	Dead vegetation/exposed soil			
Inlets	Inlets provide stable, unobstructed conveyance into facility			
	Excessive trash/debris/sediment accumulating at inlet			
	Evidence of erosion at/around inlet			

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Side Slopes	Exposed soil or inadequate stabilization; flow channels, rills or gullies are forming			
	Side slopes are supporting nuisance animals (burrows or holes)			
Vegetation	Plants experience unsatisfactory growth or mortality, evidence of contamination			
	Invasive species contribute >10% of vegetation within facility			
	Vegetation is dead, dying or diseased			
	Plant composition is consistent with approved plans			
Filter Media	Filter media is too low, too compacted, or composition is inconsistent with design specs.			
	Mulch is older than 3 years or in poor condition			
	Sediments are greater than 20% of design depth			
	Filter bed is blocked or inadequately filled			
Outlet	Outlet provides stable conveyance out of BMP			
	Excessive trash/debris/sediment accumulating at outlet			
	Evidence of erosion at/around outlet			
	Evidence that underdrain is not delivering drainage as designed			
	Evidence of standing water and potential clogging of underdrain. Water ponds on surface of BMP for more than 48 hours after storm event.			

Additional notes or observations:

BEST MANAGEMENT PRACTICE (BMP) INSPECTION FORM DETENTION, RETENTION & WETLANDS

General BMP Information		
BMP Inventory I.D.:	Installation:	Bldg / Area:
Inspector:	Date of Inspection:	Date of Last Inspection:

Facility Type	Basin Features	Structural Elements	Pretreatment Facilities
<input type="checkbox"/> Extended Detention Basin <input type="checkbox"/> Retention Basin <input type="checkbox"/> Multiple Pond System <input type="checkbox"/> Pond with Wetland Plantings <input type="checkbox"/> Constructed Wetland	<input type="checkbox"/> Permanent pool sized for full Tv <input type="checkbox"/> Shallow wetland sized for full Tv <input type="checkbox"/> Micropool	<input type="checkbox"/> Inlet Structures <input type="checkbox"/> Riser Structure <input type="checkbox"/> Emergency Spillway	<input type="checkbox"/> Sediment Forebay / Sedimentation Chamber <input type="checkbox"/> Grass Filter Strip <input type="checkbox"/> Other:

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Contributing Drainage Area	Excessive trash/debris			
	Excessive landscape waste or yard clippings			
	Bare/exposed soil or sediment sources			
Pretreatment	Maintenance access to pretreatment facility			
	Excessive trash/debris/sediment accumulation			
	Evidence of clogging			
	Evidence of erosion			
	Dead vegetation/exposed soil			
Inflow	Inlets provide stable, unobstructed conveyance into facility			
	Excessive trash/debris/sediment accumulating at inlet			
	Evidence of erosion at/around inlet			
Hardened Pad	All or part of pad is worn or cracked			

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Outfall	Treated stormwater is not leaving the practice			
Forebay	Sediments are not properly filtering down			
	50% or more of forebay capacity is filled with sediment			
Overflow / Emergency Spillway	Excess stormwater does not drain properly from the facility			
	Undercut, eroded or bare soils areas; Evidence of insufficient armoring			
	Structural damage to spillway pad			
Side Slopes / Embankment	Exposed soil or inadequate stabilization or vegetation cover; flow channels, rills or gullies are forming			
	Presence of woody vegetation			
	Side slopes are supporting nuisance animals (burrows or holes)			
Vegetation	Plants experience unsatisfactory growth or mortality, evidence of contamination			
	Reinforcement planting recommended			
	Invasive species contribute >10% of vegetation within facility			
	Vegetation is dead, dying or diseased			
	Plant composition is consistent with approved plans			
Outlet / Riser Structure	Outlet provides stable conveyance out of BMP			
	Evidence of clogging of outlet orifices			
	Excessive trash/debris/sediment accumulating at outlet			
	Evidence of erosion at/around outlet			
	Maintenance access to riser			
	Structural damage to riser structure			
Safety Bench and Safety Features	Vegetation is overgrown			
	Area is disheveled			
	Abnormally high or low water levels			
	Fences are inadequate			

Additional notes or observations:

BEST MANAGEMENT PRACTICE (BMP) INSPECTION FORM GREEN ROOFS

General BMP Information		
BMP Inventory I.D.:	Installation:	Bldg / Area:
Inspector:	Date of Inspection:	Date of Last Inspection:

After construction, this practice should be inspected frequently (once a month) or as needed for plant establishment, leaks, and other functional or structural concerns. Maintenance may include watering and weeding, for which the greatest need occurs in the first two years, as plants become established.

The use of herbicides, insecticides, fungicides, and fertilizers should be avoided, since their presence could hasten degradation of the waterproof membrane. Irrigation and fertilization is only required during the first year as plants are established. After the first year, maintenance consists of **two** visits a year for weeding of invasive species, and membrane inspections.

Care must also be taken with certain activities near the green roof. Activities such as power-washing or use of cleaning agents, detergents, or other chemicals that may drift onto the green roof may harm the roof's plant communities.

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Vegetation	Plants or grass experience unsatisfactory growth or mortality or show evidence of contamination			
	Plants are wilting			
	Drought conditions are present			
	Invasive or nuisance plant species are present			
	Grasses have become overgrown or unruly			
	Water sufficient to assure plant establishment and do not exceed ¼ inch of water once every 3 days (first 3 years)			
	Water sufficient to assure plant establishment and do not exceed ¼ inch of water once every 14 days (After 3+ years)			
Structural Components	Waterproof membrane is leaking or cracked			

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Drainage Layer / Inlet Pipes	Soil substrate, vegetation, litter or debris are clogging the inlet pipe			
	Drain inlet pipe is in poor condition			
Soil Substrate / Growing Medium	Evidence of erosion from wind or water			
	Evidence of standing water/ponding, water stains			
Overall	Access to the green roof is unsafe or inefficient			
	Threat of spill from rooftop mechanical equipment is imminent			

Additional notes or observations:

BEST MANAGEMENT PRACTICE (BMP) INSPECTION FORM INFILTRATION PRACTICES

General BMP Information		
BMP Inventory I.D.:	Installation:	Bldg / Area:
Inspector:	Date of Inspection:	Date of Last Inspection:
Facility Type <input type="checkbox"/> Basin <input type="checkbox"/> Trench <input type="checkbox"/> Vegetated	Infiltration Media <input type="checkbox"/> Engineered Soil Mixture <input type="checkbox"/> Sand <input type="checkbox"/> Stone or Aggregate <input type="checkbox"/> Other:	Pretreatment Facilities <input type="checkbox"/> Sediment Forebay / Sedimentation Chamber <input type="checkbox"/> Grass Swale / Channel <input type="checkbox"/> w/ check dams <input type="checkbox"/> Grass Filter Strip <input type="checkbox"/> Stone Diaphragm <input type="checkbox"/> Other:
Structural Elements <input type="checkbox"/> Drop Inlet / Catch Basin / Overflow Control <input type="checkbox"/> Underdrain <input type="checkbox"/> Monitoring Well		

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Overall / Contributing Drainage Area	Maintenance access to facility			
	Poor condition or damage to structural components			
	Excessive trash/debris			
	Evidence of oil/chemical accumulation caused by activities within the drainage area			
	Evidence of standing water, excessive ponding, poor drainage or clogging			
	Bare soil or sediment sources are seen in the contributing drainage area			
Pretreatment	Excessive trash/debris			
	Evidence of erosion			
	Evidence of sediment build-up or clogging			
Inlets	Inlets provide stable, unobstructed conveyance into facility			
	Excessive trash/debris/sediment accumulating at inlet			
	Evidence of erosion at/around inlet			

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Embankment / Side Slopes	Exposed soil or inadequate stabilization; flow channels, rills or gullies are forming			
	Water is not retained within the BMP			
Vegetation	Plants or grass experience unsatisfactory growth or mortality, evidence of contamination			
	Vegetation is dead, dying or diseased			
	Plant composition is consistent with approved plans			
Infiltration Media	Weedy growth on rock surfaces might indicate sediment deposition or clogging.			
Overflow Outlet / Emergency Spillway	Outlets provide stable conveyance out of BMP			
	Excessive trash/debris/sediment accumulating at outlet			
	Evidence of erosion at/around outlet			
Underdrain (Every 5 years)	The drawdown rate should be measured at the observation well for 3 days following a storm event in excess of 0.5 inches in depth. If standing water is still observed after 48 hours, the underdrain may be clogged.			
Observation Well	Well is uncapped or in poor condition.			

Additional notes or observations:

BEST MANAGEMENT PRACTICE (BMP) INSPECTION FORM ROOFTOP DISCONNECTION

General BMP Information		
BMP Inventory I.D.:	Installation:	Bldg / Area:
Inspector:	Date of Inspection:	Date of Last Inspection:

Facility Type

- Foundation Planter
- Dry Well
- Other: _____

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Piping, Gutters & Drains	Sediment accumulation			
	Evidence of oil / chemical accumulation			
	Mosquito proliferation			
	Runoff is not entering pervious area			
Downstream Treatment	Stormwater discharge is ponding at point of disconnection			
	Evidence of erosion is evident within the practice			
	Evidence of clogging or poor drainage			
	Dead or dying vegetation; lack of adequate vegetation			

Additional notes or observations:

BEST MANAGEMENT PRACTICE (BMP) INSPECTION FORM SWALES, BIOSWALES AND CHANNELS

General BMP Information		
BMP Inventory I.D.:	Installation:	Bldg / Area:
Inspector:	Date of Inspection:	Date of Last Inspection:

Facility Type	Pretreatment Facility
<input type="checkbox"/> Grass Channel	<input type="checkbox"/> Sediment Forebay
<input type="checkbox"/> Wet Swale	<input type="checkbox"/> Grass Filter Strip
<input type="checkbox"/> Dry Swale	<input type="checkbox"/> Stone Diaphragm
<input type="checkbox"/> Bioswale	<input type="checkbox"/> Other: _____

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Contributing Drainage Area	Excessive trash/debris			
	Evidence of oil/chemical accumulation caused by activities within the drainage area			
	Evidence of standing water, excessive ponding, poor drainage or clogging			
	Bare / exposed soil, evidence of erosion			
Pretreatment	Excessive trash/debris/sediment accumulation			
	Evidence of clogging			
	Evidence of erosion			
	Dead vegetation/exposed soil			
Swale Inlet	Inlets provide stable, unobstructed conveyance into facility			
	Excessive trash/debris/sediment accumulating at inlet			
	Evidence of erosion at/around inlet			

Element of BMP:	Potential Problem	Satisfactory (Y/N)	N/A	Comments / Observations
Side Slopes / Embankment	Side slopes do not prevent erosion and introduce sediment into the swale			
	Evidence of rills / gullies present, poor embankment integrity			
	Side slopes are supporting nuisance animals (burrows or holes)			
Swale Bottom	Soil / sand has become compacted. Practice does not draw down within 48 hours after a rain event			
Swale Outlet	Outlet does not maintain sheet flow of water exiting swale (unless a collection drain is used).			
	Outlets provide stable conveyance out of BMP			
	Excessive trash/debris/sediment accumulation			
Vegetation	Plants experience unsatisfactory growth or mortality, evidence of contamination			
	Invasive species contribute >10% of vegetation within facility			
	Vegetation is dead, dying or diseased			
	Plant composition is consistent with approved plans			
Check Dams	Dam is not evenly controlling and distributing flow			
	Evidence of flow undercutting, side cutting or other erosion			
	Large buildup of sediment / debris			
	Overall condition of check dam			
Underdrain / Perforated Pipe	Practice does not dewater within 48 hours of significant rainfall event			
	Underdrain appears to be broken or clogged			

Additional notes or observations:

BMP Inspection Instructions

(1.) Stormwater BMP Inspections shall be performed within the timeframe identified in the MS4 Stormwater Program Plan.

(2.) The Date of inspection for each BMP shall be recorded in the "Inspection Date" column for each BMP identified in the SW BMP Inventory. The date of inspection shall be recorded in the Year-Month-Day format, ex. 20110101.

(3.) In the "Inspection Results" column the following convention shall be used to identify the BMP condition observed during inspection. Proper record keeping shall be performed as noted below.

"SAT" - Satisfactory

"UNSAT" - Unsatisfactory

"SAT / Notes" - Satisfactory with Notes

Satisfactory - There were no deficiencies requiring immediate corrective action identified during the BMP inspection. For record keeping purposes, the date of inspection must be recorded on the BMP inventory spreadsheet and "SAT" noted in the inspection results column.

Unsatisfactory - There were deficiencies identified during inspection which require immediate corrective action to ensure the BMP will function as designed. For record keeping purposes, the date of inspection must be recorded on the BMP inventory spreadsheet, "UNSAT" shall be noted in the inspection results column, and an inspection report shall be completed, distributed, and a copy retained on file.

Satisfactory with Notes - The BMP is properly functioning however the inspector observed areas of concern which may develop into a deficiency if routine maintenance is not performed. For record keeping purposes, the date of inspection shall be recorded on the BMP inventory spreadsheet, "SAT / Notes" shall be noted in the inspection results column, and all applicable notes from the inspection shall be recorded and retained on file.

COMNAVREG MIDLANT INSTRUCTION _____

From: Commander, Navy Region, Mid-Atlantic

Subj: VIRGINIA STORMWATER MANAGEMENT PROGRAM CONSTRUCTION
PERMIT INSTRUCTION

Ref: (a) 4 VAC 50-60 - Virginia Stormwater Management Program
(VSMP) Permit Regulations For Small Municipal
Separate Storm Sewer Systems (Effective 1 Jan 05)
(b) 40 CFR 122.26 - Stormwater Discharges (NPDES)

Encl: (1) Registration Statement
(2) Permit Application Fee Form
(3) SWPPP Template
(4) SWPPP Checklists
(5) SWPPP Amendment Template
(6) Inspection Report Template
(7) Notice of Termination Form

1. Purpose. To establish a procedure for obtaining coverage under the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities at installations and annexes under the purview of Commander, Navy Region, Mid-Atlantic (COMNAVREG MIDLANT) and located in the Hampton Roads area including the Norfolk Naval Shipyard (NAVSHIPYD Norfolk). The instruction applies to all construction activities that disturb greater than or equal to one acre of land, and construction activities that disturb less than one acre if the activities are part of a larger common plan of development. This instruction seeks to maintain compliance with state and federal environmental regulations (references (a) and (b)) through the following objectives:

a. Establish the criteria, procedures, and responsibilities for obtaining and terminating coverage under the VSMP General Permit from the Virginia Department of Conservation and Recreation (VDCR).

b. Establish a procedure for inspecting construction projects to verify compliance with the requirements of the VSMP permit, including Stormwater Pollution Prevention Plans (SWPPPs).

c. Establish a procedure for the receipt and consideration of comments and information submitted by the public regarding environmental concerns at construction projects.

2. Definitions

a. Best Management Practice (BMP) - Schedules of activities, prohibitions of structural or non-structural practices, maintenance procedures, and other management practices to prevent or reduce the pollution of surface waters and groundwater systems from the impacts of land-disturbing activities.

b. Final Stabilization - When all soil disturbing activities at the site have been completed and permanent vegetative cover has been established on denuded areas not otherwise permanently stabilized. Permanent vegetation is not be considered established until a ground cover is achieved that is uniform, mature enough to survive, and will inhibit erosion.

c. Land Disturbance - Means a manmade change to the land surface that potentially changes its runoff characteristics including but not limited to clearing, grading, excavating, transporting and filling of land.

d. Larger Common Plan of Development - Multiple separate and distinct construction activities that are planned to occur under one plan that can be linked together through documentation. For example, projects listed on the same 1391, NEPA documentation, design, contract, or Coastal Consistency Determination.

e. Operator - Any person associated with a construction project that meets either of the following two criteria: (i) the person who has direct operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (ii) the person who has day-to-day operational control of those

activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions.

f. Runoff or Stormwater Runoff - That portion of precipitation that is discharged across the land surface or through conveyances to one or more waterways.

g. Site - The parcel of land being developed, or a designated planning area in which the land development project is located.

h. Stormwater Discharge from Construction Activity - A discharge of pollutants in storm water runoff from construction activities where land disturbing activities, construction materials or equipment storage or maintenance, or other industrial stormwater discharges directly related to the construction process are located.

3. Policy. All construction activities that disturb greater than or equal to one acre of land, or less than one acre if the activities are part of a larger common plan of development, are required to obtain coverage under the VSMP General Permit for Discharges of Stormwater from Construction Activities. This policy does not apply to routine maintenance activity that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. For a construction activity that requires a permit, the following documents must be prepared and submitted for review and approval as follows.

a. Registration Statement and Fee. A Registration Statement must be completed by the prime construction contractor in accordance with reference (a), and submitted to VDCR prior to the commencement of construction activities. For stormwater discharges where the prime construction contractor changes after a Registration Statement has been submitted, the new prime contractor must submit a Registration Statement prior to commencing work on-site or assuming operational control over site specifications. The Registration Statement and instructions are provided as enclosure (1).

(1) The Registration Statement must be signed by both the Assistant Resident Officer in Charge of Construction (AROICC) and the prime construction contractor.

(2) If the ROICC office is not providing project oversight, then the Registration Statement must be signed by a responsible official of the command and the prime construction contractor.

(3) A fee form and check must be submitted to VDCR with the Registration Statement. The fee form is provided as enclosure (2).

(4) A copy of the Registration Statement must be forwarded to the Regional Environmental Water Program Manager or to Code 106 for NAVSHIPYD Norfolk projects. VDCR will review the Registration Statement and send a copy of the general permit to those who qualify. As long as the Registration Statement and fee are submitted to VDCR (postmarked) before construction begins, the project can commence before the general permit is received from VDCR. An advance copy of the permit can be obtained from the following website
<http://www.dcr.virginia.gov/sw/vsmp.htm#geninfo>.

NOTE: Item No. 6 on the Registration Statement should be completed for all projects. "Norfolk Naval Shipyard" should be entered as the MS4 operator for NAVSHIPYD Norfolk, and "Regional Environmental Group" entered for all other bases.

b. Stormwater Pollution Prevention Plan (SWPPP). The prime construction contractor is required to develop a site-specific SWPPP. The SWPPP must be prepared in accordance with good engineering practices.

(1) The SWPPP must be reviewed and approved by the review authority designated by the Regional Environmental Group. SWPPP approval must take place before the Registration Statement can be submitted.

(2) The SWPPP must contain all information required by reference (a). A SWPPP template is provided as enclosure (3), and SWPPP Implementation and Final Stabilization Checklists are provided in enclosure (4). The SWPPP certification must be signed by the prime contractor's project manager and an approving official designated by the Regional Environmental Group. The contractor's certification must be signed by all contractors identified in the SWPPP. The signed SWPPP and permit must be kept at the construction site that generates the stormwater discharge.

(3) The SWPPP must be amended whenever there is a change in design, construction, operation, or maintenance which has a significant effect on the potential for the discharge of pollutants to surface water bodies, or if the SWPPP proves to be ineffective in eliminating or minimizing pollutants. SWPPP amendment forms must be completed, signed and certified by the prime construction contractor, and added to the SWPPP. An amendment form template is provided as enclosure (5)

c. Inspections. A representative of the prime construction contractor who is familiar with the construction activity, the BMPs, and the SWPPP must inspect disturbed areas of the construction site that have not been finally stabilized. Inspections must include areas used for materials storage that are exposed to precipitation, erosion and sediment control measures, and locations where vehicles enter and exit the site. These inspections must be conducted at least once every 14 calendar days and within 48 hours of any runoff producing storm event. For areas that have been finally or temporarily stabilized, or where runoff is unlikely due to winter conditions, inspections must be conducted at least once a month until the project is completed.

(1) Following each site inspection, the site description and pollution prevention measures in the SWPPP must be amended within 7 calendar days, if necessary. If BMPs are found to be ineffective, or additional BMPs are needed, maintenance must be scheduled and performed before the next anticipated storm event.

(2) Reports must be prepared for each inspection and kept with the SWPPP. An inspection report template is provided as enclosure (6). All incidences of non-compliance and corrective actions must be documented on the inspection report. If a site is found to be in compliance during an inspection, the report must be signed and certified by the prime construction contractor.

(3) The group designated by the Regional Environmental Group must conduct and document monthly oversight inspections for the duration of construction projects to ensure contractors are complying with the SWPPP.

d. Notice of Termination (NOT). The prime construction contractor must submit a NOT when one or more of the following conditions exist:

(1) When a site has reached final stabilization and all stormwater discharges from construction activities that are authorized by the permit are eliminated.

(2) When the prime construction contractor of the site has changed.

(3) When coverage under another Virginia Pollutant Discharge Elimination System (VPDES) or VSMP permit is obtained.

The prime construction contractor must submit a NOT in accordance with reference (a) to VDCR within 30 days of one of the above conditions being met. The NOT must be signed by both a prime contractor principal and the AROICC or other responsible official. The review authority designated by the Regional Environmental Group must forward a copy of the NOT to the Regional Environmental Water Program Manager or Code 106 for NAVSHIPYD Norfolk projects. Coverage under the permit will be deemed terminated seven days after the contractor submits the NOT to VDCR. The NOT form is provided as enclosure (7).

Upon completion of a project, the AROICC or responsible official must submit the SWPPP, inspection reports, and all other stormwater paperwork kept on site to Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC MIDLANT) EV or to Code 106 for NAVSHIPYD Norfolk projects.

e. Public Comments. All comments and information submitted by the public regarding environmental concerns at construction projects must be directed to the AROICC. If no AROICC is involved in the project, comments must be directed to the responsible official. The AROICC or responsible official must document any comments, implement corrective actions if warranted, and forward this information to the Regional Environmental Water Program Manager, or Code 106 for NAVSHIPYD Norfolk projects.

4. Enforcement. Any activity that violates this instruction may be subject to enforcement actions under the Clean Water Act and VSMP Permit Regulations (4 VAC 50-60); including Warning Letters, Notices of Violation, fines, and penalties from the Environmental Protection Agency, the VDCR, and the Virginia Department of Environmental Quality (VDEQ). The party that causes the violation will be responsible for all required

corrective actions and will have to provide a written description of why the violation occurred to the Regional Environmental Group.

5. Responsibilities

a. Regional Environmental Group Water Program Manager. The Regional Environmental Group Water Program Manager has the authority to determine which construction projects require coverage under the VSMP General Permit. The Water Program Manager acts as liaison between the Navy and all regulatory agencies, and must be notified about and present at all regulatory inspections. The Water Program Manager is the main point of contact within the Navy for any issues involving water permits, and must be informed of any permit violations. Since the Water Program Manager must ensure compliance with the installations' VPDES permits, they reserve the right to implement stricter controls if water quality concerns at a particular construction project are not being adequately addressed.

The Regional Environmental Group will designate appropriate groups to review SWPPPS and conduct over-site inspections.

b. Norfolk Naval Shipyard (NAVSHIPYD Norfolk) Code 106. Code 106 has the authority to determine which construction projects require coverage under the VSMP General Permit for projects at NAVSHIPYD Norfolk. Code 106 acts as the liaison between the Navy and all regulatory agencies, and must be notified about and present at all regulatory inspections. Code 106 is the main point of contact for NAVSHIPYD Norfolk for any issues involving water permits, and must be informed of any permit violations. Since Code 106 must ensure compliance with the installation's VPDES permit, they reserve the right to implement stricter controls if water quality concerns at a particular construction project are not being adequately addressed.

c. Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC MIDLANT)

(1) NAVFAC MIDLANT Contracts Department or Other Contracting Official. Contracts Department will ensure that appropriate language is included in the contract so that the Registration Statement, fee form and check, SWPPP, and NOT are prepared, submitted, and approved in accordance with this instruction.

(2) AROICC or Responsible Official. The AROICC or other responsible official must ensure that contractors obtain permits when required, and comply with all contract requirements, the SWPPP, and the permit. The AROICC or responsible official must sign the Registration Statement and NOT, and send copies to the Regional Environmental Group. Upon completion of a project, the AROICC or responsible official must submit the SWPPP, inspection reports, and all other storm water paperwork kept on site to Code 106 for NAVSHIPYD Norfolk projects, and the Regional Environmental Group for all other bases. The AROICC or responsible official must forward all information regarding public comments and follow-up actions to the Regional Environmental Water Program Manager or Code 106.

For NAVSHIPYD Norfolk, the Portsmouth ROICC Office is responsible for reviewing and approving SWPPPs, signing the SWPPP certification, conducting oversight inspections for permitted projects to ensure contractors are in compliance with their VSMP permits, and forwarding copies of Registration Statements and NOTs to Code 106.

d. Prime Construction Contractor. The prime construction contractor is responsible for completing, signing, and submitting the Registration Statement, fee form and check, and NOT to VDCR. The prime contractor must also prepare and sign the SWPPP. The prime contractor is responsible for conducting inspections, complying with the SWPPP, construction permit and the VSMP permit, and will be held accountable for any violations.

6. Review Authority. The Regional Environmental Group Water Program Manager is responsible for reviewing and updating this instruction.

S. A. TURCOTTE

Distribution: www.cnrma.mil

COMNAVREG MIDLANT INSTRUCTION _____

From: Commander, Navy Region, Mid-Atlantic

Subj: EROSION AND SEDIMENT CONTROL INSTRUCTION

Ref: (a) 4 VAC 50-60 - Virginia Stormwater Management Program (VSMP) Permit Regulations For Small Municipal Separate Storm Sewer Systems (effective 1 Jan 05)
(b) 4 VAC 50-30 - Virginia Erosion and Sediment Control Regulations
(c) Virginia Erosion and Sediment Control Handbook
(d) COMNAVREG MIDLANT Virginia Stormwater Management Program Construction Permit Instruction

Encl: (1) Minimum Criteria, Techniques, and Methods

1. Purpose. To establish minimum standards for the effective control of soil erosion, sediment deposition and non-agricultural runoff from land disturbing activities at installations and annexes under the purview of Commander, Navy Region, Mid-Atlantic (COMNAVREG MIDLANT) and located in the Hampton Roads area, including Norfolk Naval Shipyard (NAVSHIPYD Norfolk). This instruction applies to all land disturbing activities greater than or equal to 10,000 square feet in size. This instruction seeks to maintain compliance with references (a) and (b) through the following objectives:

a. Establish the criteria, procedures, and responsibilities for preparing and complying with Erosion and Sediment Control Plans for land disturbing activities.

b. Establish a procedure for inspecting land disturbing activities and their associated erosion and sediment controls.

2. Definitions

a. Erosion and Sediment Control Plan - A document that describes the minimum measures required to minimize the erosion and sediment runoff at a site during land disturbing activities.

b. Final Stabilization - Final Stabilization is reached when all soil disturbing activities at the site have been completed and permanent vegetative cover has been established on denuded areas not otherwise permanently stabilized. Permanent vegetation is not be considered established until a ground cover is achieved that is uniform, mature enough to survive, and will inhibit erosion.

c. Land-Disturbing Activity - A manmade change to the land surface that potentially changes its runoff characteristics including but not limited to clearing, grading, excavating, transporting, and filling of land.

d. Operator - Any person associated with a construction project that meets either of the following two criteria:

(1) The person who has direct operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(2) The person who has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWPPP) for the site or other permit conditions.

3. Policy. References (a) and (b) require the establishment of an enforceable policy that requires erosion and sediment control for land-disturbing activities greater than or equal to 10,000 square feet. Reference (c) provides guidance and lists the 19 minimum control measures that must be considered when providing erosion and sediment control. Reference (d) describes the requirements for erosion and sediment control when a Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities is required.

a. An Erosion and Sediment Control Plan must be prepared for all land disturbing activities covered by this instruction. The plan must contain sufficient information to ensure that problems of erosion and sedimentation have been adequately addressed. The length and complexity of the plan will correspond with the size of the project, the severity of site conditions, and the potential for off-site damage. Reference (c) will be used to the maximum extent practicable in the preparation of an Erosion and Sediment Control Plan. This will ensure for the effective control of soil erosion and sediment deposition to prevent the unreasonable degradation of properties, stream channels, waters and other natural resources.

b. The Erosion and Sediment Control Plan shall be consistent with the criteria, techniques and methods specified in enclosure (1) and include the following:

(1) A map identifying the natural resources, disturbed areas and erosion and sediment control measures at the site.

(2) A sequence of construction, including stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, areas of clearing, installation of temporary erosion and sediment control measures, and establishment of permanent vegetation.

(3) All erosion and sediment control measures necessary to control soil movement to the point where there is only minimal loss throughout all phases of construction and after completion of construction and final stabilization.

(4) The minimum inspection requirements for all erosion and sediment control measures.

(5) Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures.

c. Erosion and sediment controls may be included as part of SWPPP for projects with land-disturbing activity equal to or greater than one (1) acre, as specified in reference (d).

d. All Erosion and Sediment Control Plans shall be submitted to the authority designated by Regional Environmental for review and approval at least 30 days prior to the start of any construction.

4. Inspections

a. The Operator shall conduct inspections of all erosion and sediment control measures to determine the overall effectiveness of the plan and the need for additional control measures. Inspections shall be conducted as specified in the contract, but at a minimum frequency of: immediately after the initial installation of erosion and sediment controls; at least once

every 14 calendar days; within 48 hours following any runoff producing storm event; and at the completion of the project. All inspections shall be documented in writing and kept on-site.

b. Upon determination of a violation of the requirements of this instruction or non-compliance with the Erosion and Sediment Control Plan, the installation ROICC office may issue an order requiring that all or part of the land disturbing activities be stopped until appropriate corrective actions have been taken. This includes activities where non-compliance is causing, or is in imminent danger of causing, harmful erosion of lands or sediment deposition in waters within the watersheds of the installation, or where the land-disturbing activities have commenced without any required permits.

5. Enforcement. Any activity that violates this instruction may be subject to enforcement actions under the Clean Water Act; including Warning Letters, Notices of Violation, fines, and penalties from the Environmental Protection Agency, the Virginia Department of Conservation and Recreation, and the Virginia Department of Environmental Quality. The party that causes the violation will be responsible for all required corrective actions and will have to provide a written description of why the violation occurred to the Regional Environmental Group.

6. Responsibilities

a. Regional Environmental Group Water Program Manager

(1) The Regional Environmental Group Water Program Manager will oversee the Erosion and Sediment Control program to verify that Erosion and Sediment Control Plans are prepared, submitted, and approved in accordance with this instruction.

(2) The Regional Environmental Group Water Program Manager will determine when erosion and sediment controls are required for projects that are less than 10,000 square feet.

(3) The Regional Environmental Group Water Program Manager will designate appropriate groups to review E&S Control Plans and conduct over site inspections.

b. NAVSHIPYARD Norfolk Code 106

(1) Code 106 will oversee the Erosion and Sediment Control program to verify that Erosion and Sediment Control Plans

are prepared, submitted and approved in accordance with this instruction, for Norfolk Naval Shipyard.

(2) Code 106 will determine when erosion and sediment controls are required for projects that are less than 10,000 square feet at NAVSHIPYD Norfolk.

c. Naval Facilities Engineering Command, Mid-Atlantic (NAVFAC MIDLANT). NAVFAC MIDLANT will determine the amount of disturbed area for a project and ensure that the appropriate language is included in the contract to ensure that erosion and sediment controls are included and followed in accordance with this instruction.

d. Operator. The Operator is responsible for preparing and complying with the Erosion and Sediment Control Plan, maintaining the control devices, and conducting inspections.

7. Review Authority. The Regional Environmental Group Water Program Manager is responsible for reviewing and updating this instruction.

S. A. TURCOTTE

Distribution: www.cnrma.mil

MINIMUM CRITERIA, TECHNIQUES, AND METHODS
FOR EROSION AND SEDIMENT CONTROL PLANS

All erosion and sediment control plans must be consistent with the following criteria, techniques, and methods:

1. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

2. During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.

3. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive, and will inhibit erosion.

4. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.

5. Stabilization measures shall be applied to earthen structures such as dams, dikes, and diversions immediately after installation.

6. Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.

a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.

b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage

capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.

7. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

8. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume, or slope drain structure.

9. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

10. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

11. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

12. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport, and stabilize the work area to the greatest extent possible during construction. Non-erodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by non-erodible cover materials.

13. When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of non-erodible material shall be provided.

14. All applicable federal, state, and local regulations pertaining to working in or crossing live watercourses shall be met.

15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

a. No more than 500 linear feet of trench may be opened at one time.

b. Excavated material shall be placed on the uphill side of trenches.

c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.

e. Restabilization shall be accomplished in accordance with these regulations.

f. Applicable safety regulations shall be complied with.

17. Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.

18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of

stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria:

a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe, or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.

b. Adequacy of all channels and pipes shall be verified in the following manner:

(1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or

(2) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks; and

(3) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

(4) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

(1) Improve the channel to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to the channel bed or banks; or

(2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances; or

(3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the

pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

(4) Provide a combination of channel improvement, stormwater detention, or other measures which is satisfactory to the plan-approving authority to prevent downstream erosion.

d. The applicant shall provide evidence of permission to make the improvements.

e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development of the subject project.

f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the locality of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

h. All on-site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

j. In applying these stormwater runoff criteria, individual lots or parcels in a residential, commercial, or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

k. All measures used to protect properties and waterways shall be employed in a manner that minimizes impacts on the physical, chemical, and biological integrity of rivers, streams, and other waters of the state.

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COMNAVREG MIDLANT INSTRUCTION

Subj: ILLEGAL DISCHARGE AND ILLEGAL DUMPING INSTRUCTION

Ref: (a) 4 VAC 50-60 - Virginia Stormwater Management Program (VSMP) Permit Regulations for Small Municipal Separate Storm Sewer Systems (Effective January 1, 2005)
(b) COMNAVREG MIDLANT INSTRUCTION 5090.3 - Prevention, Reporting, Response and Cleanup of Oil and Hazardous Substance Spills for Hampton Roads Installations

1. Purpose. To prevent illegal discharges and illegal dumping into the storm drainage systems located at installations and annexes under the purview of Commander, Navy Region, Mid-Atlantic (COMNAVREG MIDLANT) and located in the Hampton Roads area, with the exception of the Norfolk Naval Shipyard.

2. Definitions.

a. **Best Management Practices (BMPs)** Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

b. **Clean Water Act** The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

c. **Hazardous Materials** Any material, including any substance, waste, or combination thereof, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause or significantly contribute to a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

d. **Illegal Discharge** Any direct or indirect non-stormwater discharge of liquids to the storm drainage system, except as exempted by this instruction.

DRAFT #5

e. **Illegal Dumping** Any dumping of solid materials that are allowed to enter the storm drainage system.

f. **Illicit Connection** An illicit connection is defined as either of the following:

(1) Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drainage system and any connections to the storm drainage system from indoor drains and sinks or,

(2) Any drain or conveyance connected from a commercial or industrial land use to the storm drainage system that has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

g. **Non-Stormwater Discharge** Any discharge to the storm drainage system that is not composed entirely of stormwater, that causes or contributes to pollution. Pollutants may include, but are not limited to: hazardous materials such as paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes such as garbage, yard wastes or other discarded or abandoned objects; ordnance; pesticides, herbicides, and fertilizers; sewage; dissolved and particulate metals; animal wastes; wastes and residues that result from construction; and noxious or offensive matter of any kind. Illegal discharges, illegal dumping, and illicit connections can result in non-stormwater discharges.

i. **Storm Drainage System** Facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and man-made or altered drainage channels, reservoirs, and other drainage structures.

j. **Stormwater** Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

k. **Uncontaminated Groundwater** Groundwater that does not contain pollutants including but not limited to sediment, petroleum or other known or suspected contaminants.

l. **Virginia Pollutant Discharge Elimination System (VPDES) Stormwater Discharge Permit** A permit issued by the State of Virginia that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

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m. **Wastewater** Any water or other liquid, other than uncontaminated stormwater.

n. **Waterways** Includes all bodies of water not limited to rivers, lakes, bays, oceans, streams, wetlands and drainage ditches.

3. Policy. Reference (a) requires the establishment of an enforceable policy that prohibits non-stormwater discharges. Reference (b) describes the procedure for reporting incidents of illegal discharges and illegal dumping.

a. No person shall discharge or cause to be discharged into an installation's storm drainage system or local waterways any unauthorized materials (liquid or solid).

b. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

c. The following are prohibited from entering an installation's storm drainage system:

- (1) Non-stormwater discharges unless allowed by a VPDES permit issued by the State of Virginia;
- (2) Discharges from connections of the sanitary sewer to the storm drainage system, including sewage and sewage sludge;
- (3) Discharge of any polluted household wastewater, such as, but not limited to, laundry wash water and dishwater;
- (4) Commercial, industrial or public vehicle wash discharge;
- (5) Trash and other debris;
- (6) Animal fecal waste;
- (7) Sediment including sand, dirt and concrete;
- (8) Chemical waste and hazardous waste;

d. Discharges from the following activities are allowed unless the Regional Environmental Group Water Program Manager identifies them as significant contributors of pollutants:

- (1) Any activity authorized by a valid VPDES permit.
- (2) Water line flushing;
- (3) Landscape irrigation;
- (4) Diverted stream flows;
- (5) Rising ground waters;
- (6) Infiltration of uncontaminated groundwater;
- (7) Pumping of uncontaminated groundwater;

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(8) Discharges from potable water sources, foundation drains, air conditioning condensation, irrigation waters, or springs;

(9) Water from crawl spaces, footing drains, or lawn watering;

(10) Individual residential car washing;

(11) Car washing at specifically designated locations for fund raising activities;

(12) Flows from riparian habitats and wetlands;

(13) Dechlorinated swimming pool discharges;

(14) Street washing;

(15) Any water resulting from firefighting;

(16) Non-toxic dye testing; requires a verbal notification to CNRMA Regional Environmental Group prior to the time of the test.

(17) Other discharges approved by the Regional Environmental Water Program Manager on a case-by-case basis.

4. Inspections. Periodic inspections will be performed to detect illicit connections and discharges. If a person or command is found to have failed to meet a requirement of this instruction, the Regional Environmental Group may require the tenant command to immediately prevent further discharges from occurring. The tenant command will be responsible for funding clean-up, construction measures or BMPs necessary to permanently remove the prohibited discharge.

5. Reporting. As soon as any person has information of any known or suspected release of materials that result or may result in illegal discharges to the storm drainage system or waterways, they must immediately notify the installation's Emergency Control Center in accordance with reference (b).

Emergency Control Center Numbers:

NNSY, Southgate Annex, Scott Center Annex	396-3333	Ykt / CAX	887-4333	NAVSTA	444-3333
St. Js	396-3333	LCreek	462-4444	NSA	444-3333
St. Helena	494-4370	Ykt Fuels	877-4911	Dam Neck	492-6911
Craney Is	322-9911	Oceana	433-9111	Northwest	421-8244

❖ If the discharge is headed off base, or actually occurs off base, also call the CNRMA Regional Operations Center 322-2607.

6. Enforcement. Any activity that violates this instruction may be subject to enforcement actions under the Clean Water Act; including Warning Letters, Notices of Violation, and penalties from the Environmental Protection Agency, the

DRAFT #5

Virginia Department of Conservation and Recreation and the Virginia Department of Environmental Quality. The party that causes the violation will be responsible for all required corrective actions and will have to provide a written description of why the violation occurred to the Regional Environmental Group.

7. Responsibilities

a. Regional Environmental Group

(1) Water Program Manager. The Regional Environmental Group Water Program Manager must administer and implement the provisions of this instruction. Any powers granted or duties imposed upon the Regional Environmental Group may be delegated to other departments.

(2) Environmental Protection Specialists. The Installation Environmental Compliance Department Environmental Protection Specialists must conduct periodic inspections throughout their installations. If during those inspections, an illicit connection or evidence of illegal discharge or dumping is noted, written and verbal notification must be made to the Water Program Manager. Written documentation must be retained at the installation.

b. Installation Emergency Control Center. As stated in ref (b) the installation's Emergency Control Center (ECC) will take incoming calls about illegal discharges and dumping. The ECC will make the appropriate notifications and dispatch the appropriate response personnel in accordance with ref (b).

8. Review Authority. The Regional Environmental Group Water Program Manager is responsible for the reviewing and updating of this instruction.

NUTRIENT MANAGEMENT PLAN IDENTIFICATION

Operator

Oceana Stables \ Aylson Miller
5742 Maryland Avenue
Norfolk, VA 23511
757-444-3009

Integrator:None

Farm Coordinates

Easting: 180409987, Northing: 4074413, zone: 18

Watershed Summary

watershed: AS14
county: Virginia Beach

Nutrient Management Planner

Ed Joyner
1548-A Holland Road
Suite #210
Suffolk, VA 23434

Certification Code: 189

Acreage Use Summary

Total Acreage in this plan: 153.9
Cropland: 0.
Hayland: 0.
Pasture: 153.9
Specialty: 0.

Livestock Summary

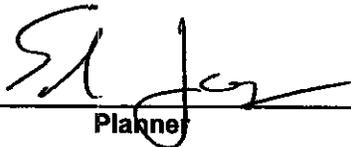
Beef Cattle 0
Dairy Cattle 0
Poultry 0
Swine 0
Other 70

Manure Production Balance

	Imported	Produced	Exported	Used	Net
kgals	0.	0.	0.	0.	0.
tons	0.	287.4	0.	307.8	-20.4

Plan written 6/8/2009
Valid until 6/8/2012

Signature: _____


Planner

6/8/09

date

Application Summary Report

2009: Orchard grass/fescue pastures<=25% legume, maint.

Tract	Field	Acres	Manure Rate and Type (Season)	Broadcast Commercial	Banded Commercial	Topdress Commercial	Lime (tons)
Oceana	BLVD1	11.1		50-0-0(Fa)			0.8 (Fa)
	CUBA1	10.8		50-0-80(Fa)			
	FAT1	3.2		50-0-0(Fa)			
	FCMR1	4.8		50-0-30(Fa)			
	FCMR2	5.5		50-0-0(Fa)			
	Fulls	5.0		50-0-80(Fa)			
	GOV11	30.4		50-0-0(Fa)			2.0 (Fa)
	PAG1	7.3		50-0-0(Fa)			
	PBG1	19.2		50-0-30(Fa)			
	PBM1	11.7		50-0-0(Fa)			0.8 (Fa)
	SBGNO	10.4		50-0-0(Fa)			
	SBGSO	6.6		50-0-80(Fa)			0.8 (Fa)
	SBMAR	15.2		50-0-80(Fa)			
	XCONN	6.3		50-0-0(Fa)			
	YCONN	6.4		50-0-40(Fa)			

2010: Orchard grass/fescue pastures<=25% legume, maint.

Tract	Field	Acres	Manure Rate and Type (Season)	Broadcast Commercial	Banded Commercial	Topdress Commercial	Lime (tons)
Oceana	BLVD1	11.1	2.0t Horse(Sp)	50-0-0(Fa)			
	CUBA1	10.8	2.0t Horse(Sp)	50-0-70(Fa)			
	FAT1	3.2	2.0t Horse(Sp)	50-0-0(Fa)			
	FCMR1	4.8	2.0t Horse(Sp)	50-0-20(Fa)			
	FCMR2	5.5	2.0t Horse(Sp)	50-0-0(Fa)			
	Fulls	5.0	2.0t Horse(Sp)	50-0-70(Fa)			
	GOV11	30.4	2.0t Horse(Sp)	50-0-0(Fa)			
	PAG1	7.3	2.0t Horse(Sp)	50-0-0(Fa)			
	PBG1	19.2	2.0t Horse(Sp)	50-0-20(Fa)			
	PBM1	11.7	2.0t Horse(Sp)	50-0-0(Fa)			
	SBGNO	10.4	2.0t Horse(Sp)	50-0-0(Fa)			
	SBGSO	6.6	2.0t Horse(Sp)	50-0-70(Fa)			
	SBMAR	15.2	2.0t Horse(Sp)	50-0-70(Fa)			
	XCONN	6.3	2.0t Horse(Sp)	50-0-0(Fa)			
	YCONN	6.4	2.0t Horse(Sp)	50-0-30(Fa)			

2011: Orchard grass/fescue pastures<=25% legume, maint.

Tract	Field	Acres	Manure Rate and Type (Season)	Broadcast Commercial	Banded Commercial	Topdress Commercial	Lime (tons)
Oceana	BLVD1	11.1	2.0t Horse(Sp)	50-0-0(Fa)			
	CUBA1	10.8	2.0t Horse(Sp)	50-0-70(Fa)			
	FAT1	3.2	2.0t Horse(Sp)	50-0-0(Fa)			
	FCMR1	4.8	2.0t Horse(Sp)	50-0-20(Fa)			
	FCMR2	5.5	2.0t Horse(Sp)	50-0-0(Fa)			
	Fulls	5.0	2.0t Horse(Sp)	50-0-70(Fa)			
	GOV11	30.4	2.0t Horse(Sp)	50-0-0(Fa)			
	PAG1	7.3	2.0t Horse(Sp)	50-0-0(Fa)			
	PBG1	19.2	2.0t Horse(Sp)	50-0-20(Fa)			
	PBM1	11.7	2.0t Horse(Sp)	50-0-0(Fa)			
	SBGNO	10.4	2.0t Horse(Sp)	50-0-0(Fa)			
	SBGSO	6.6	2.0t Horse(Sp)	50-0-70(Fa)			
	SBMAR	15.2	2.0t Horse(Sp)	50-0-70(Fa)			
	XCONN	6.3	2.0t Horse(Sp)	50-0-0(Fa)			
	YCONN	6.4	2.0t Horse(Sp)	50-0-30(Fa)			

2012: Orchard grass/fescue pastures<=25% legume, maint.

Tract	Field	Acres	Manure Rate and Type (Season)	Broadcast Commercial	Banded Commercial	Topdress Commercial	Lime (tons)
Oceana	BLVD1	11.1	2.0t Horse(Sp)	45-0-0(Fa)			
	CUBA1	10.8	2.0t Horse(Sp)	45-0-70(Fa)			
	FAT1	3.2	2.0t Horse(Sp)	45-0-0(Fa)			
	FCMR1	4.8	2.0t Horse(Sp)	45-0-20(Fa)			
	FCMR2	5.5	2.0t Horse(Sp)	45-0-0(Fa)			
	Fulls	5.0	2.0t Horse(Sp)	45-0-70(Fa)			
	GOV11	30.4	2.0t Horse(Sp)	45-0-0(Fa)			
	PAG1	7.3	2.0t Horse(Sp)	45-0-0(Fa)			
	PBG1	19.2	2.0t Horse(Sp)	45-0-20(Fa)			
	PBM1	11.7	2.0t Horse(Sp)	45-0-0(Fa)			
	SBGNO	10.4	2.0t Horse(Sp)	45-0-0(Fa)			
	SBGSO	6.6	2.0t Horse(Sp)	45-0-70(Fa)			
	SBMAR	15.2	2.0t Horse(Sp)	45-0-70(Fa)			
	XCONN	6.3	2.0t Horse(Sp)	45-0-0(Fa)			
	YCONN	6.4	2.0t Horse(Sp)	45-0-30(Fa)			

Conservation Plan

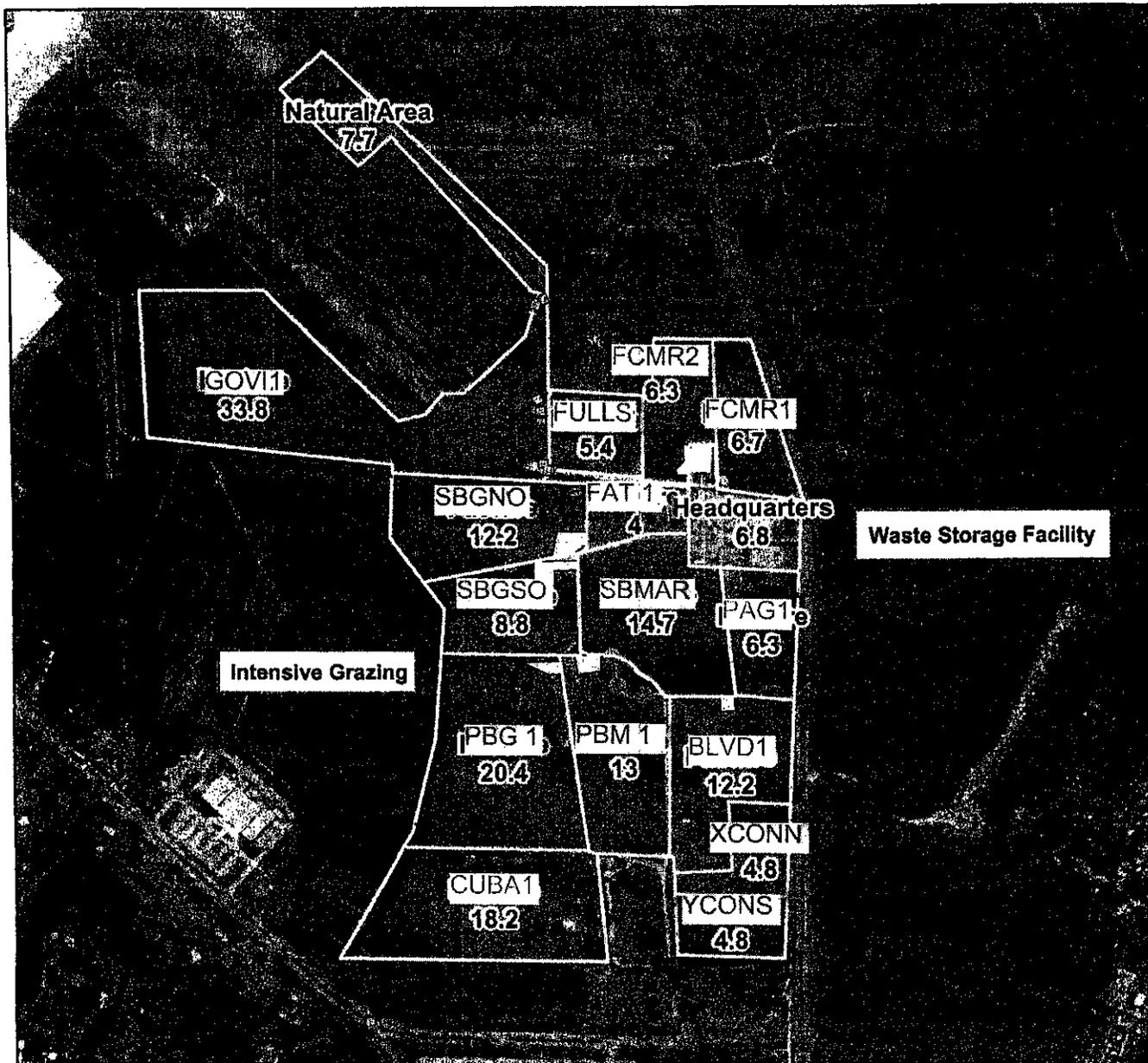
Date: 3/30/2009

Customer(s): OCEANA STABLES

Field Office: CHESAPEAKE SERVICE CENTER

District: VIRGINIA DARE SOIL & WATER CONSERVATION DISTRICT

Assisted By: Luncsford, Bernadette

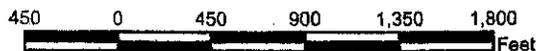


Legend

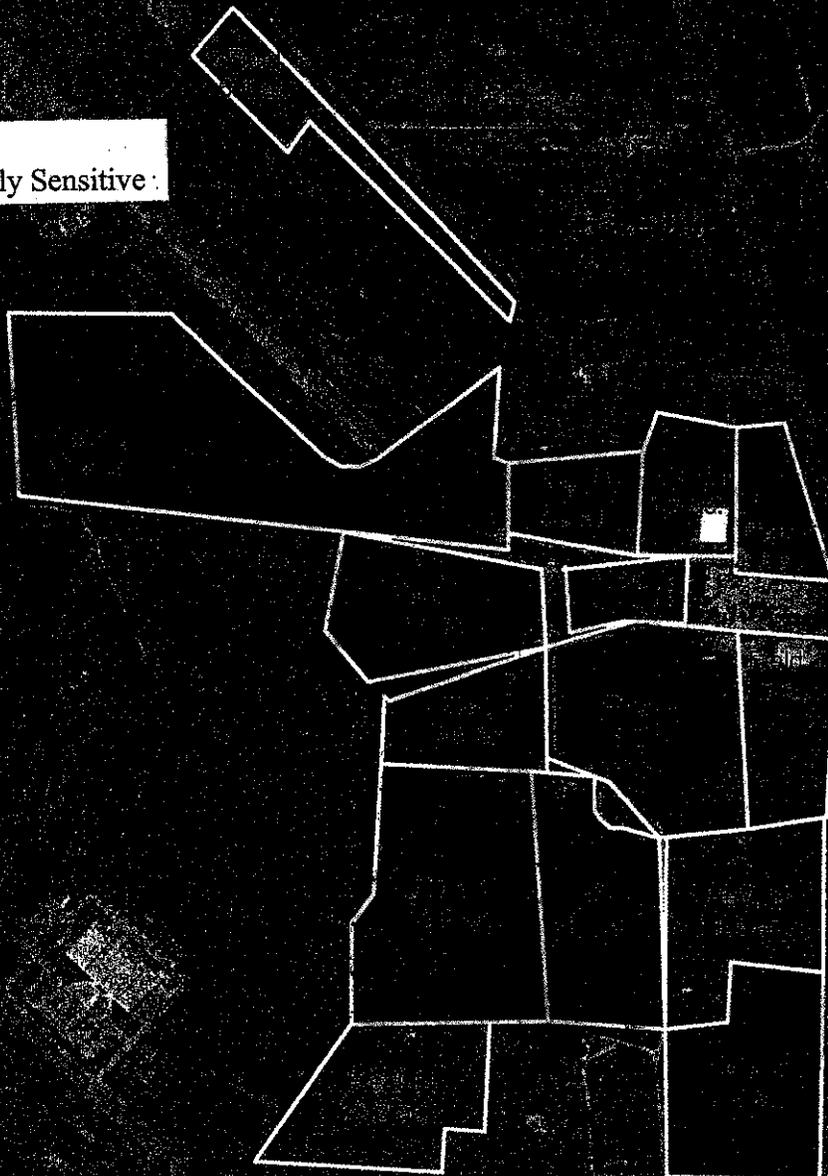
- Access Road
- Conservation Plan
- Critical Area Seeding
- Drainage or Exclusion Fencing



Environmentally Sensitive



Environmentally Sensitive



Oceana Stables Narrative

Oceana Naval Air Station in Virginia Beach has approximately 140 horses at Oceana. The horses are stabled and pastured at the east side of the Air Base. There are approximately 70 horses that are stabled for around 12 hours per day, this manure is collected and spread on 147 acres of Bermuda grass pasture. The purpose of this plan is to assist in the timing and application rates of manure to the pastures. A list of Special Conditions used for dairy/beef is enclosed in this plan. The Special Conditions are for dairy/beef but the spreading dates, storage sites, sampling criteria, setback areas, and calibration data are very useful for as a guide for this nutrient plan. The Special Conditions are a guide for assisting in this plan and not mandatory for this plan. Ms. Alyson Miller with the NAVY requested this plan.

This plan contains 15 fields and all the fields are environmentally sensitive except for fields BLVD1, CUBA1, and PAG1. Nutrient management practices should be intense on environmentally sensitive sites.

1. Efficient timing of nitrogen applications using split applications. Significant nitrogen applications (greater than 50 pounds) should be applied just prior to the crop's maximum nitrogen uptake.
2. Liquid or solid manure and sludge applied using ground spreaders should be delayed until just prior to crop planting. If applied through the irrigation system, the majority of applications should occur after cover is established and crop nutrient uptake is significant.
3. Manure or sludge applications on slopes greater than 15% should be avoided, but if applied, should not exceed crop removal needs for phosphorus over the rotation.
4. Timely planted winter cereal grains are recommended to trap available soil nitrogen in the fall and winter following crops which leave residual nitrogen in an available form.

This plan was developed using actual soil tests results, soil survey information, and the Virginia Agricultural Land Use Evaluation Systems (VALUES) productivity system to determine nutrient requirements.

Nutrient Management Plan Special Conditions for Voluntary Nutrient Management Plans Developed for Non-permitted Operations

May 2006

The following management practices will be utilized for dairy/beef operations not requiring a VPA or VPDES permit:

1. Soil samples for manure application fields should be analyzed at least once every three (3) years for pH, phosphorus, potassium, calcium, and magnesium in order to maximize the efficient utilization of nutrients. A representative soil sample of each field will be comprised of at least 20 cores randomly sampled throughout the field. Soil sampling core depth will be from 0 – 4 inches for land which has not been tilled within the past three years, or 0 – 6 inches for land that has been tilled within the past three years. Soil pH should be maintained at appropriate agronomic levels to promote optimum crop growth and nutrient utilization.
2. Soil test analysis will be performed by one of the laboratories listed below. Soil phosphorus levels must be determined using the Mehlich I or Mehlich III procedure.
 - A&L Agricultural Laboratories
 - Brookside Laboratories
 - Spectrum Analytical Laboratories
 - Virginia Tech Soil Testing Lab
 - Waters Agricultural Laboratories
3. Representative manure samples should be analyzed at a minimum of once per year for the following: total nitrogen or total Kjeldahl nitrogen, ammonia-nitrogen, total phosphorus, total potassium, calcium, magnesium, and percent moisture. All manure analyses shall be performed using laboratory methods consistent with Recommended Methods of Manure Analysis, publication A3769, University of Wisconsin, 2003 or other methods approved by the Department of Conservation and Recreation. Manure analysis results will be used to determine actual manure rates that do not exceed the nitrogen and phosphorus application rates specified in the nutrient management plan using either the most recent manure analysis results (not greater than 1 year old) or the facilities average results based on actual manure analysis.
4. All crops should be planted and harvested in a timely manner using commercially acceptable management practices.
5. Make manure applications at or near planting or to existing actively growing crops to assure that nutrients are properly utilized. Utilize the spreading schedule contained in the nutrient management plan to determine appropriate manure

application times and rates. Additional commercial fertilizer applications (especially nitrogen) should be made as a split application separate from the manure application, either as a sidedress or topdress application.

For permanent hay or pasture, an adequate stand of hay and/or pasture crop species should be established prior to land application of manure. Commercially acceptable stands of the listed species should be maintained and other weeds and grasses controlled. All hay crops should be harvested in a timely and regular manner, removed from fields, and utilized for a suitable purpose.

6. Manure should be applied to application sites in a uniform manner.

7. Do not spread manure within the following buffer areas:

- 100 feet from wells or springs
- 50 feet from surface waters (25 feet if injected or incorporated)
- 50 feet from sinkholes*
- 50 feet from limestone rock outcrops
- 25 feet from other rock outcrops
- 10 feet from agricultural drainage ditches (5 feet if injected)

* Waste shall not be applied in areas subject to concentrated flow generated by runoff

from storm events such that it would discharge into sinkholes in the area.

8. To avoid manure runoff from application fields.*

- Do not spread manure on soils that are saturated.
- Do not apply liquid manure (above 85.5% moisture content) or commercial fertilizers to frozen, ice or snow covered ground.

* If runoff is observed, reduce the application rate immediately to prevent overland flow, which reaches buffer areas or accumulates in low-lying areas.

9. For odor control and to reduce drift, avoid spreading on windy days.

10. Liquid irrigation systems should be operated in a manner to prevent runoff into buffered areas and low-lying areas. Use a liquid application rate at or below the specified maximum hydraulic application rate for each field per application. Traveling guns used for irrigation of effluent should be operated in a full circle pattern whenever possible to allow for maximum infiltration. A small wedge shaped area may be left dry ahead of the gun to reduce soil compaction.

11. Spreader calibration is extremely critical to ensure proper application rates. Calibration of equipment or verification of actual equipment application rates

should occur at a minimum of once per year.

12. New waste storage facilities should be designed, constructed and operated in accordance with the USDA-NRCS Field Office Technical Guide and other appropriate NRCS design criteria.

Earthen waste storage structures should be regularly inspected and repaired if leaks, slope failures, excessive embankment settlement, eroded banks, or burrowing animals are detected. A protective cover of appropriate vegetation should be established and maintained on all disturbed areas (lagoon & storage pit embankments, berms, pipe runs, etc.). Vegetation such as trees, shrubs, and other woody species are limited to areas considered to be appropriate such as wind breaks or visual screens, and are not to be present on lagoon & storage pit embankments, berms, pipe runs, or hay and pasture fields.

13. State water control law does not allow discharge of waste to state waters (ground or surface) except as specifically authorized by a permit issued by DEQ. To minimize the risk of waste discharge, and fully utilize this nutrient management plan, it is recommended that 120 – 180 days of waste storage capacity be installed in most situations.
14. Waste handling structures, piping, pumps, etc. should be inspected on a regular basis to prevent breakdowns, leaks, and spills.
15. Composting of animal mortalities should be conducted in accordance with the latest guidance developed by Virginia Cooperative Extension.
16. This nutrient management plan should be amended or modified if:
 - animal numbers increase above the level specified in the plan;
 - animal types including intended market weights are changed;
 - additional imported manure, biosolids, or industrial waste that was not identified in the existing plan is applied to fields under the control of the operator;
 - available land area for the utilization of manure decreases below the level necessary to utilize manure in the plan;
 - or cropping systems, rotations, or fields are changed where phosphorus will be applied at levels greater than crop nutrient needs based on soil analysis.
17. Nutrient management plans that contain fields in which row crops will be grown, should be revised at least once every three (3) years. Nutrient management plans that contain only hay or pasture fields should be revised at least once every five (5) years.

6. Manure spreading schedule.

DAIRY/BEEF MANURE SPREADING SCHEDULE*

CROP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Alfalfa												
Bermudagrass												
Corn												
Hay**												
Pasture**												
Sorghum/Millet												
Small Grain												

*Do not spread liquid manure, dry or semi solid manure, or parlor effluent on soils that are saturated.

*Do not spread liquid manure/effluent (above 85.5% moisture content) to frozen, ice or snow covered ground.

*Application of dry or semi solid manure (85.5% moisture content or less) should be avoided on frozen, ice or snow covered ground. If necessary applications may be made to fields that have: (i) slopes not greater than 6.0%, (ii) 60% uniform ground cover from crop residue or an existing actively growing crop such as a small grain or tall fescue with an exposed plant height of > 3", (iii) a minimum 200-foot vegetated or adequate crop residue buffer between the application area and all surface water courses, and (iv) soils characterized by USDA as "well drained".

** Cool season grasses only, Fescue and or Orchardgrass

 Spread liquid manure, dry or semi solid manure, and parlor effluent at the rates and times specified in the nutrient management plan

 Do not spread liquid manure, dry or semi solid manure, and parlor effluent during these shaded months.

 Manure applications will not be made earlier than 30 days prior to planting on environmentally sensitive sites. On fields not listed as environmentally sensitive:

- Liquid manure applications will not occur more than 60 days prior to spring planting.
- Applications of semi-solid beef manure (85.5% moisture content or less) or semi-solid dairy manure (85.5% moisture content or less) for operations using straw or sawdust (not sand) bedding will not occur more than 90 days prior to spring planting on fields having (i) slopes less than 7% throughout the application area or (ii) having at least 60% uniform ground cover from crop residue.

 Manure applications are not recommended during this period (late fall-winter). If necessary uniformly apply a maximum of 3,000 gallons per acre per application. If using an irrigation system apply up to a maximum of a 1/4 inch per acre per hour. Do not exceed 40 pounds of plant available nitrogen per acre during this entire period. Allow sufficient drying time between applications. Fields must have greater than 60% uniform live cover with plant height greater than three (3) inches.

Nutrient Management Plan Balance Sheet
(Fall, 2009-Winter, 2012)
Oceana Stables
Planner: Ed Joyner (cert. No. 189)

Tract: Oceana		Location: Virginia Beach		Net = No P allowed											
Field CFSA No./Name	Size (ac) Total/Used	Yr.	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosolid Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes			
13/BLVD1(N)	11/11	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			
14/CUBA1(N)	11/11	2009	Grass Pasture	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-80	N/A	50-0-80(br)				
		2010	.....	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-70	N/A	50-0-70(br)			
		2011	.....	50-0-80	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-70	N/A	50-0-70(br)			
		2012	.....	50-0-80	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-70	N/A	45-0-70(br)			
7/FAT1(N)	3/3	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			
5/FCMR1(N)	5/5	2009	Grass Pasture	50-0-30	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-30	N/A	50-0-30(br)				
		2010	.....	50-0-30	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-20	N/A	50-0-20(br)			
		2011	.....	50-0-30	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-20	N/A	50-0-20(br)			
		2012	.....	50-0-30	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-20	N/A	45-0-20(br)			
4/FCMR2(N)	6/6	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			
3/Fulls(N)	5/5	2009	Grass Pasture	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-80	N/A	50-0-80(br)				
		2010	.....	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-70	N/A	50-0-70(br)			
		2011	.....	50-0-80	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-70	N/A	50-0-70(br)			
		2012	.....	50-0-80	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-70	N/A	45-0-70(br)			
2/GOV11(N)	30/30	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			
10/PAG1(N)	7/7	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			
11/PBG1(N)	19/19	2009	Grass Pasture	50-0-30	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-30	N/A	50-0-30(br)				
		2010	.....	50-0-30	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-20	N/A	50-0-20(br)			
		2011	.....	50-0-30	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-20	N/A	50-0-20(br)			
		2012	.....	50-0-30	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-20	N/A	45-0-20(br)			
12/PBM1(N)	12/12	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			
6/SBGNO(N)	10/10	2009	Grass Pasture	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)				
		2010	.....	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)			
		2011	.....	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-(20)	N/A	50-0-0(br)			
		2012	.....	50-0-0	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)			

8/SBGSO(N)	7/7	2009	Grass Pasture	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-80	N/A	50-0-80(br)	
		2010	...	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-70	N/A	50-0-70(br)	
		2011	...	50-0-80	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-70	N/A	50-0-70(br)	
9/SBMAR(N)	15/15	2009	Grass Pasture	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-80	N/A	50-0-80(br)	
		2010	...	50-0-80	0/0	2.t Horses(Sp)	>7	0-18-10	50-(20)-70	N/A	50-0-70(br)	
		2011	...	50-0-80	0/2	2.t Horses(Sp)	>7	0-18-10	50-(40)-70	N/A	50-0-70(br)	
15/XCONN(N)	6/6	2009	Grass Pasture	50-0-80	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-70	N/A	45-0-70(br)	
		2010	...	50-0-0	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-0	N/A	50-0-0(br)	
		2011	...	50-0-0	0/2	2.t Horses(Sp)	>7	0-18-10	50-(20)-(10)	N/A	50-0-0(br)	
15/YCONN(N)	6/6	2009	Grass Pasture	50-0-40	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-(30)	N/A	45-0-0(br)	
		2010	...	50-0-40	0/0	2.t Horses(Sp)	>7	0-18-10	50-0-40	N/A	50-0-40(br)	
		2011	...	50-0-40	0/2	2.t Horses(Sp)	>7	0-18-10	50-(20)-30	N/A	50-0-30(br)	
		2012	...	50-0-40	0/3	2.t Horses(Sp)	>7	0-18-10	45-(60)-30	N/A	45-0-30(br)	

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Manure Spreading Summary

Season	Manure	Rate/ac	Tract	Field	Acres	Crop	Total in Field	Running Total
2010Sp	Horses	2.0 tons	Oceana	BLVD1	11	Orchard grass/fescue past	22 tons	22 tons
		2.0 tons	Oceana	CUBA1	11	Orchard grass/fescue past	22 tons	44 tons
		2.0 tons	Oceana	FAT1	3	Orchard grass/fescue past	6 tons	50 tons
		2.0 tons	Oceana	FCMR1	5	Orchard grass/fescue past	10 tons	60 tons
		2.0 tons	Oceana	FCMR2	6	Orchard grass/fescue past	11 tons	71 tons
		2.0 tons	Oceana	Fulls	5	Orchard grass/fescue past	10 tons	81 tons
		2.0 tons	Oceana	GOV11	30	Orchard grass/fescue past	61 tons	142 tons
		2.0 tons	Oceana	PAG1	7	Orchard grass/fescue past	15 tons	156 tons
		2.0 tons	Oceana	PBG1	19	Orchard grass/fescue past	38 tons	195 tons
		2.0 tons	Oceana	PBM1	12	Orchard grass/fescue past	23 tons	218 tons
		2.0 tons	Oceana	SBGNO	10	Orchard grass/fescue past	21 tons	239 tons
		2.0 tons	Oceana	SBGSO	7	Orchard grass/fescue past	13 tons	252 tons
		2.0 tons	Oceana	SBMAR	15	Orchard grass/fescue past	30 tons	282 tons
		2.0 tons	Oceana	XCONN	6	Orchard grass/fescue past	13 tons	295 tons
		2.0 tons	Oceana	YCONN	6	Orchard grass/fescue past	13 tons	308 tons

Season	Manure	Rate/ac	Tract	Field	Acres	Crop	Total in Field	Running Total
2011Sp	Horses	2.0 tons	Oceana	BLVD1	11	Orchard grass/fescue past	22 tons	22 tons
		2.0 tons	Oceana	CUBA1	11	Orchard grass/fescue past	22 tons	44 tons
		2.0 tons	Oceana	FAT1	3	Orchard grass/fescue past	6 tons	50 tons
		2.0 tons	Oceana	FCMR1	5	Orchard grass/fescue past	10 tons	60 tons
		2.0 tons	Oceana	FCMR2	6	Orchard grass/fescue past	11 tons	71 tons
		2.0 tons	Oceana	Fulls	5	Orchard grass/fescue past	10 tons	81 tons
		2.0 tons	Oceana	GOV11	30	Orchard grass/fescue past	61 tons	142 tons
		2.0 tons	Oceana	PAG1	7	Orchard grass/fescue past	15 tons	156 tons
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		2.0 tons	Oceana	XCONN	6	Orchard grass/fescue past	13 tons	295 tons
		2.0 tons	Oceana	YCONN	6	Orchard grass/fescue past	13 tons	308 tons

Season	Manure	Rate/ac	Tract	Field	Acres	Crop	Total in Field	Running Total
2012Sp	Horses	2.0 tons	Oceana	BLVD1	11	Orchard grass/fescue past	22 tons	22 tons
		2.0 tons	Oceana	CUBA1	11	Orchard grass/fescue past	22 tons	44 tons
		2.0 tons	Oceana	FAT1	3	Orchard grass/fescue past	6 tons	50 tons
		2.0 tons	Oceana	FCMR1	5	Orchard grass/fescue past	10 tons	60 tons
		2.0 tons	Oceana	FCMR2	6	Orchard grass/fescue past	11 tons	71 tons
		2.0 tons	Oceana	Fulls	5	Orchard grass/fescue past	10 tons	81 tons
		2.0 tons	Oceana	GOV11	30	Orchard grass/fescue past	61 tons	142 tons
		2.0 tons	Oceana	PAG1	7	Orchard grass/fescue past	15 tons	156 tons
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		2.0 tons	Oceana	PBM1	12	Orchard grass/fescue past	23 tons	218 tons
		2.0 tons	Oceana	SBGNO	10	Orchard grass/fescue past	21 tons	239 tons
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		2.0 tons	Oceana	XCONN	6	Orchard grass/fescue past	13 tons	295 tons
		2.0 tons	Oceana	YCONN	6	Orchard grass/fescue past	13 tons	308 tons

Soil Test Summary

Tract	Field	Acre	Date	P205	K20	Lab	Soil pH	Lime Date	rec. lime tons/Ac
Oceana	BLVD1	11	2009-Sp	VH (133 P lbs/acre)	H (224 K lbs/acre)	Virginia Tech	6.	2009Fa	0.75
Oceana	CUBA1	11	2009-Sp	VH (117 P lbs/acre)	M (104 K lbs/acre)	Virginia Tech	6.3		
Oceana	FAT1	3	2009-Sp	H+ (100 P lbs/acre)	H (219 K lbs/acre)	Virginia Tech	6.4		
Oceana	FCMR1	5	2009-Sp	VH (191 P lbs/acre)	M+ (167 K lbs/acre)	Virginia Tech	6.4		
Oceana	FCMR2	6	2009-Sp	VH (174 P lbs/acre)	H- (208 K lbs/acre)	Virginia Tech	6.2		
Oceana	Fulls	5	2009-Sp	VH (157 P lbs/acre)	M (126 K lbs/acre)	Virginia Tech	6.3		
Oceana	GOV11	30	2009-Sp	VH (113 P lbs/acre)	H- (191 K lbs/acre)	Virginia Tech	5.8	2009Fa	2.
Oceana	PAG1	7	2009-Sp	VH (148 P lbs/acre)	H (235 K lbs/acre)	Virginia Tech	6.2		
Oceana	PBG1	19	2009-Sp	VH (114 P lbs/acre)	M+ (162 K lbs/acre)	Virginia Tech	6.3		
Oceana	PBM1	12	2009-Sp	VH (135 P lbs/acre)	H (260 K lbs/acre)	Virginia Tech	5.9	2009Fa	0.75
Oceana	SBGNO	10	2009-Sp	VH (138 P lbs/acre)	VH (334 K lbs/acre)	Virginia Tech	6.3		
Oceana	SBGSO	7	2009-Sp	H- (52 P lbs/acre)	M (120 K lbs/acre)	Virginia Tech	5.7	2009Fa	0.75
Oceana	SBMAR	15	2009-Sp	VH (120 P lbs/acre)	M (134 K lbs/acre)	Virginia Tech	6.5		
Oceana	XCONN	6	2009-Sp	VH (208 P lbs/acre)	H- (204 K lbs/acre)	Virginia Tech	6.1		
Oceana	YCONN	6	2009-Sp	VH (233 P lbs/acre)	M+ (170 K lbs/acre)	Virginia Tech	6.3		

Manure Production Summary

Manure Name: Horses

Animal Summary

Other: 70

Manure Storage Capacity: 0. tons

Manure Analysis:

TKN: 9.62

P2O5: 8.76

NH4: .2

K2O: 4.81

Plant Available Nutrients:

Immediate Incorporation:

.18 lbs N

8.76 lbs P2O5

4.81 lbs K2O

Surface Applied:

.10 lbs N

8.76 lbs P2O5

4.81 lbs K2O

Residual N:

yr 1: 1.13 lbs

yr 2: .47 lbs

yr 3: .19 lbs

Manure Production

Dec-Feb 72

Mar-May 72

Jun-Aug 72

Sep-Nov 72

Total Produced: 287

Manure Sold/yr: 0

Manure purch./yr: 0

Solid Manure Production Calculation Details

Production [tons/yr] = (# confined)[animals] * (avg. wt) [animal-lbs/animal] * (prod factor)[lbs-manure/day/K-animal-lbs] * (0.001)[K-animal-lbs/animal-lb] * (365)[days/yr] * (1/2000)[tons/lbs-manure]

Group Name	Animal	%(#) confined	avg wt	prod factor	produced
Horses	Other	50(35)	1000.	45.	287

ANIMAL WASTE ANALYSIS REPORT

Agricultural Service Laboratory

Clemson University

LAB No. 40776

MILLER, ALYSON
5742 MARYLAND AVENUE
NORFOLK VA 23511

ACCOUNT 1001703
DATE 04/14/2009
EDWARD.JOYNER@DCR.VIRGINIA.GOV
CONSULTANT ED JOYNER

SAMPLE NO. OCSTAB-1

MANURE: OTHER INTEGRATOR: STORAGE: UNCOVERED

-----RESULTS REPORTED ON AN AS-SAMPLED BASIS-----

ANALYST				lbs/ton
pj	Ammonium Nitrogen	0.01	%	0.20
pj	Total Nitrogen	0.48	%	9.62

dw/km	Phosphorus as P2O5	0.44	%	8.76
dw/km	Potassium as K2O	0.24	%	4.81
dw/km	Calcium	0.23	%	4.51
dw/km	Magnesium	0.11	%	2.28
	Sulfur	0.06	%	1.20
	Zinc	63.35	ppm	0.13
	Copper	17.69	ppm	0.04
	Manganese	73.91	ppm	0.15
	Sodium	725.40	ppm	1.45
	Aluminum	565.88	ppm	1.13

jp Moisture 71.46 %

All of the potash in the animal waste should be plant available in the first year of application. Although not all of the phosphorous is available in the first year, its availability should be comparable to that in commercial fertilizers.

The rate of animal waste to apply for crop production is dependent on the nutrient content of the waste, method of application and incorporation, soil test, crop to be grown, and previous manure applications. In most cases, the plant available nitrogen content of the waste is used to determine the rate of application.

APPROVED BY _____

Analysis performed in accordance with Clemson Laboratory Manure Analysis procedures, February, 2004.

Manure analysis in Virginia is funded by the Dept. of Conservation and, Recreation, Div. of Soil and Water Conservation. The Agricultural Service Laboratory is a public service of Clemson University, an equal opportunity educational institution: <http://www.clemson.edu/agrvlb>

Field Productivities for Major Crops

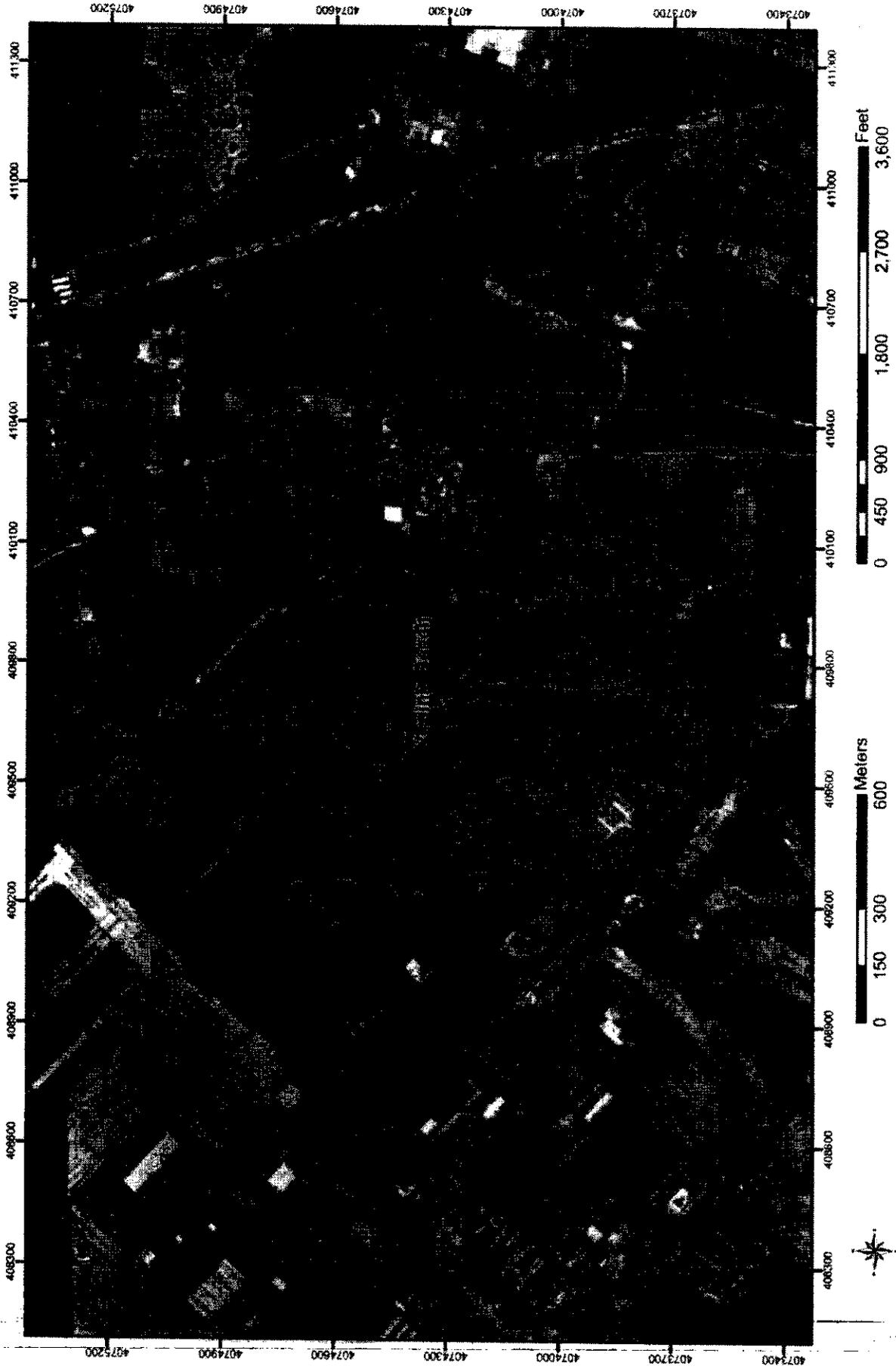
Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
Oceana	Oceana/1 3	BLVD1	11	Munden	Ila	I	III	II	
	Oceana/1 4	CUBA1	11	Dragston	Ila	I	Not Suited	II	
	Oceana/7	FAT1*	3	Nimmo	Ila	I	Not Suited	II	Poor Drainage
	Oceana/5	FCMR1*	5	Bojac2	IIlb	II	Not Suited	III	High Leaching
	Oceana/4	FCMR2*	6	Bojac2	IIlb	II	Not Suited	III	High Leaching
	Oceana/3	Fulls*	5	Nimmo	Ila	I	Not Suited	II	Poor Drainage
	Oceana/2	GOV11*	30	Acredale	Ib	II	Not Suited	I	Poor Drainage, Tile Drain
	Oceana/1 0	PAG1	7	Munden	Ila	I	III	II	
	Oceana/1 1	PBG1*	19	Bojac2	IIla	II	Not Suited	III	High Leaching
	Oceana/1 2	PBM1*	12	Bojac2	IIb	I	III	II	High Leaching
	Oceana/6	SBGNO*	10	Nimmo	Ila	I	Not Suited	II	Poor Drainage
	Oceana/8	SBGSO*	7	Munden	IIb	I	Not Suited	II	High Leaching, Poor Drain
	Oceana/9	SBMAR*	15	Munden	IIb	I	III	II	High Leaching, Poor Drain
	Oceana/1 5	XCONN*	6	Munden	IIb	I	III	II	High Leaching
	Oceana/1 5	YCONN*	6	Bojac2	IIb	I	III	II	High Leaching

* Do not apply manure or biosolids more than 30 days prior to planting. Apply commercial fertilizer nitrogen to row crops in split spring applications.

Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std. Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
I	>170	>80	>64	>6	>4.0
II	150-170	70-80	56-64	4-6	3.5-4.0
III	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

SOIL SURVEY OF CITY OF VIRGINIA BEACH, VIRGINIA



Nutrient Management Plan Special Conditions for Virginia Pollution Abatement (VPA) Permits

1. Soil samples for wastewater application fields will be analyzed at least once every three (3) years for pH, phosphorus, potassium, calcium, and magnesium in order to maximize the efficient utilization of nutrients. A representative soil sample of each field will be comprised of at least 20 cores randomly sampled throughout the field. Soil sampling core depth will be from 0 – 4 inches for land which has not been tilled within the past three years, or 0 – 6 inches for land that has been tilled within the past three years. Soil pH will be maintained at appropriate agronomic levels to promote optimum crop growth and nutrient utilization.
2. Soil test analysis will be performed by one of the laboratories listed below. Soil phosphorus levels must be determined using the Mehlich I or Mehlich III procedure.
 - A&L Agricultural Laboratories
 - Brookside Laboratories
 - Spectrum Analytical Laboratories
 - Virginia Tech Soil Testing Lab
 - Waters Agricultural Laboratories
3. Make wastewater applications at or near planting or to existing actively growing crops to assure that nutrients are properly utilized.
4. Liquid irrigation systems will be operated in a manner to prevent runoff into buffered areas and low-lying areas. Use a liquid application rate at or below the specified maximum hydraulic application rate for each field per application. Traveling guns used for irrigation of effluent should be operated in a full circle pattern whenever possible to allow for maximum infiltration. A small wedge shaped area may be left dry ahead of the gun to reduce soil compaction.
5. Do not spread wastewater within the following setback areas:
 - 100 feet from wells or springs
 - 35 feet from surface waters if the entire setback is a permanent perennial vegetated buffer
 - OR
 - 100 feet from surface waters if there is not a permanent perennial vegetated buffer of at least 35 feet in width
 - 50 feet from sinkholes*
 - 50 feet from limestone rock outcrops
 - 25 feet from other rock outcrops
 - 10 feet from agricultural drainage ditches (5 feet if injected)
 - 200 feet from occupied dwellings (unless waived in writing by the occupant)

* Waste shall not be applied in areas subject to concentrated flow generated by runoff from storm events such that it would discharge into sinkholes in the area.

6. To avoid wastewater runoff from application fields.*
 - Do not spread wastewater on soils that are saturated.
 - Do not apply wastewater to frozen, ice or snow covered ground.

* If runoff is observed, reduce the application rate immediately to prevent overland flow, which reaches buffer areas or accumulates in low-lying areas.

7. For odor control and to reduce drift, avoid spreading on windy days.
8. All crops will be planted and harvested in a timely manner using agronomically acceptable management practices.
9. For permanent hay or pasture, an adequate stand of hay and/or pasture crop species will be established prior to land application of wastewater. Commercially acceptable stands of the listed species will be maintained and other weeds and grasses controlled. All hay crops will be harvested in a timely and regular manner, removed from fields, and utilized for a suitable purpose.
10. This nutrient management plan will be revised at least once every three (3) years to make adjustments for crop rotations, nutrient analysis, and soil test information or prior to any waste application to additional land that is purchased, leased, etc.
11. These conditions do not override any local or county ordinances that may be more restrictive.

COMNAVREG MIDLANT INSTRUCTION _____

From: Commander, Navy Region, Mid-Atlantic

Subj: POST CONSTRUCTION STORMWATER RUNOFF MANAGEMENT INSTRUCTION

Ref: (a) 4 VAC 50-60 - Virginia Stormwater Management Program
(VSMP) Permit Regulations For Small Municipal Separate
Storm Sewer Systems (Effective 1 Jan 05)
(b) Virginia Stormwater Management Handbook
(c) COMNAVREG MIDLANT Erosion and Sediment Control
Instruction
(d) Unified Facilities Criteria; Low Impact Development
Manual

1. Purpose. To require minimum post-construction stormwater best management practices at installations and annexes under the purview of Commander, Navy Region, Mid-Atlantic (COMNAVREG MIDLANT) and located in the Hampton Roads area. This instruction applies to all development and redevelopment activities greater than or equal to one acre in size. The instruction also applies to land development activities that are smaller than one acre if the activities are part of a larger common plan of development. In cases where the Regional Environmental Water Program Manager determines that a project less than one acre in size will have a significant water quality impact, the instruction may also apply. This instruction seeks to maintain compliance with state and federal environmental regulations through the following objectives:

a. Require that the after-development runoff from land development and redevelopment activities is maintained as nearly as practicable to the pre-development runoff characteristics in order to reduce flooding, siltation, stream bank erosion, and property damage;

b. Establish minimum design criteria for the protection of properties and aquatic resources downstream from land development and redevelopment activities to prevent damages due to increases in volume, velocity, frequency, duration, and peak flow rate of stormwater runoff;

c. Establish minimum design criteria for measures to minimize non-point source pollution from stormwater runoff, which would otherwise degrade water quality;

d. Establish provisions for the long-term maintenance of stormwater management control devices and other techniques specified to manage the quality and quantity of runoff; and

e. Establish administrative procedures for the submission, review, approval, and disapproval of stormwater plans, and the inspection of approved projects.

2. Definitions

a. Average Land Cover Condition - A measure of the average amount of impervious surfaces within a facility.

FACILITY	AVERAGE LAND COVER
Naval Station, Norfolk (including NSA and SDA)	42.2%
Naval Amphibious Base, Little Creek	34.1%
Saint Juliens Creek Annex	37.7%
Scott Center Annex	41.3%
Saint Helena Annex	78.7%
Southgate Annex	74.3%
Naval Weapons Station, Yorktown	20.4%
Cheatham Annex	24%
Yorktown Fuels	16%
Craney Island	28.5%
Naval Air Station, Oceana	28.8%
Dam Neck Annex	24.6%
Naval Auxiliary Landing Field, Fentress	18.7%
Northwest Annex	16.6%
Lafayette River Annex	42%

b. Best Management Practice (BMP) - The use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates.

c. Erosion and Sediment Control Plan - A document that is designed to minimize the erosion and sediment runoff at a site during land disturbing activities.

d. Flooding - A volume of water that is too great to be confined within the banks or walls of the stream, water body or conveyance system, and that overflows onto adjacent lands, causing or threatening damage.

e. Hotspot - An area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

f. Hydrologic Soil Group (HSG) - A Natural Resource Conservation Service classification system in which soils are categorized into four runoff potential groups. The groups range from A soils, with high permeability and little runoff production, to D soils, which have low permeability rates and produce higher runoff.

g. Impervious Cover - A surface composed of any material that significantly impedes or prevents natural infiltration of water into soil. Impervious surfaces include, but are not limited to, roofs, buildings, streets, parking areas, and any concrete, asphalt, or compacted gravel surface.

h. Infiltration - The process of stormwater percolating into the subsoil.

i. Jurisdictional Wetland - An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation, these wetlands receive regulatory review by the U. S. Army Corps of Engineers (ACOE), the Virginia Department of Environmental Quality (VDEQ), and local wetland boards.

j. Larger Common Plan of Development - Multiple separate and distinct construction activities that are planned to occur under one plan that can be linked together through documentation. For example, projects listed on the same 1391, NEPA documentation, design, contract, or Coastal Consistency Determination.

k. Linear Development Project - A land development project that is linear in nature such as, but not limited to, (i) the construction of electric and telephone utility lines, and natural gas pipelines; (ii) construction of tracks, rights-of-way, bridges, communication facilities and other related structures of a railroad company; and (iii) highway construction projects.

l. Non-point Source (NPS) Pollution - Pollution from any source other than from any discernible, confined, and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, silvicultural, mining, construction, subsurface disposal, and urban runoff sources.

m. Non-point Source Pollutant Runoff Load or Pollutant Discharge - The average amount of a particular pollutant measured in pounds per year, delivered in a diffuse manner by stormwater runoff.

n. Percent Impervious - The impervious area within the site divided by the total area of the site multiplied by 100.

o. Post-development - Conditions that reasonably may be expected or anticipated to exist after completion of the land development activity on a specific site or tract of land.

p. Pre-development - Conditions that exist at the time that plans for the land development of a tract of land are approved by the plan approving authority. Where phased development or plan approval occurs (preliminary grading, roads, utilities, etc.), the existing conditions at the time *prior to* the first item being approved or permitted shall establish pre-development conditions.

q. Redevelopment - The process of developing land that is or has been previously developed.

r. Runoff or Stormwater Runoff - That portion of precipitation that is discharged across the land surface or through conveyances to one or more waterways.

s. Site - The parcel of land being developed, or a designated planning area in which the land development project is located.

t. State Waters - All waters on the surface and under the ground wholly or partially within or bordering the Commonwealth or within its jurisdiction.

u. Stormwater Management Facility - A device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release, and the velocity of flow.

v. Stormwater Management Plan or Plan - A document containing material for describing how existing runoff characteristics will be affected by a land development project

and methods for complying with the requirements of the Stormwater Management Program.

w. Water Quality Volume (WQV) - The volume equal to the first one-half inch of runoff multiplied by the impervious surface of the land development project.

x. Watershed - A defined land area drained by a river, stream, drainage ways or system of connecting rivers, streams, or drainage ways such that all surface water within the area flows through a single outlet.

3. Guidance. The criteria and information, including specifications and standards, of the Virginia Stormwater Handbook will be used for the proper implementation of this instruction. The Handbook includes a list of acceptable stormwater treatment practices, including the specific design criteria for each. All references to the Virginia Stormwater Management Handbook are presumed to be the "latest edition" as defined on the Virginia Department of Conservation and Recreation website (www.dcr.state.va.us). The Low Impact Development Techniques identified in the Unified Facilities Criteria; Low Impact Development Manual may also be used as a source of alternative BMPs to manage and treat stormwater runoff.

4. Policy. The following criteria must be addressed for stormwater management:

a. Land development and redevelopment projects greater than or equal to one acre in size or projects that are part of a larger common plan of development; must be evaluated in accordance with the water quality Performance-based or Technology-based criteria listed below. If a stormwater management BMP is required for a project, then the appropriate Stormwater Management Plans must be prepared and submitted in accordance with Section 5.

(1) Performance-Based Criteria. For land development, the calculated post-development non-point source pollutant runoff load must be compared to the calculated pre-development load based upon the average land cover condition (see average land cover definition). A BMP must be designed, constructed and maintained to achieve the target pollutant removal efficiencies specified in Table 1 to effectively reduce the pollutant load to the required level based upon the following four applicable land development situations for which the performance criteria apply:

(a) Situation 1 consists of land development where the existing percent impervious cover is less than or equal to the average land cover condition (see definition 2.a) and the proposed improvements will create a total percent impervious cover which is less than the average land cover condition (see definition 2.a).

Requirement: No reduction in the after-development pollutant discharge is required.

(b) Situation 2 consists of land development where the existing percent impervious cover is less than or equal to the average land cover condition (see definition 2.a) and the proposed improvements will create a total percent impervious cover which is greater than the average land cover condition (see definition 2.a).

Requirement: The pollutant discharge after development must not exceed the existing pollutant discharge based on the average land cover condition.

(c) Situation 3 consists of land development where the existing percent impervious cover is greater than the average land cover condition (see definition 2.a).

Requirement: The pollutant discharge after development must not exceed (i) the pollutant discharge based on existing conditions less 10 percent or (ii) the pollutant discharge based on the average land cover condition (see definition 2.a), whichever is greater.

(d) Situation 4 consists of land development where the existing percent impervious cover is served by an existing stormwater management BMP that addresses water quality.

Requirement: The pollutant discharge after development must not exceed the existing pollutant discharge based on the existing percent impervious cover while served by the existing BMP. The existing BMP must be shown to have been designed and constructed in accordance with proper design standards and specifications, and to be in proper functioning condition.

(2) Technology-Based Criteria. For land development, the post-development stormwater runoff from the impervious cover must be treated by an appropriate BMP as required by the post-developed condition percent impervious cover as specified in

Table 1. The selected BMP must be designed, constructed, and maintained to perform at the target pollutant removal efficiency specified in Table 1. Design standards and specifications for the BMPs in Table 1, which meet the required target pollutant removal efficiency, must be consistent with those provided in the Virginia Stormwater Management Handbook.

TABLE 1*

WATER QUALITY BMP	TARGET PHOSPHORUS REMOVAL EFFICIENCY	PERCENT IMPERVIOUS COVER
Vegetated filter strip	10%	16-21%
Grassed swale	15%	
Constructed wetlands	30%	22-37%
Extended detention (2 x WQ Vol)	35%	
Retention basin I (3 x WQ Vol)	40%	
Bioretention basin	50%	38-66%
Bioretention filter	50%	
Extended detention-enhanced	50%	
Retention basin II (4 x WQ Vol)	50%	
Infiltration (1x WQ Vol)	50%	
Sand filter	65%	67-100%
Infiltration (2 x WQ Vol)	65%	
Retention basin III (4 x WQ Vol with aquatic bench)	65%	
	65%	

*Innovative or alternative BMPs not included in this table may be allowed at the discretion of the Regional Environmental Water Program Manager. Innovative or alternate BMPs not included in this table which target appropriate non-point source pollution other than phosphorous (such as petroleum, hydrocarbons, sediment, etc.) may be allowed at the discretion of the Regional Environmental Water Program Manager. BMPs that have the potential to cause Bird Air Strike Hazards (BASH) will not be allowed in the vicinity of runways or taxiways. If a decision must be made between two BMPs, preference will be given to the BMP that is less costly and maintenance intensive.

b. General Requirements

(1) Stormwater runoff generated from regulated land development and redevelopment projects must not be discharged into a jurisdictional wetland or local water body without adequate treatment. Where such discharges are proposed, the

impact of the proposal on wetland functions must be assessed using an acceptable method. In no case shall the impact on functions be any less than allowed by the ACOE or the VDEQ.

(2) Stormwater discharges to critical areas with sensitive resources (i.e., shellfish beds, swimming beaches, water supply reservoirs) may be subject to additional criteria, or may need to utilize or restrict certain stormwater management practices.

(3) Stormwater discharges from land uses or activities with higher potential pollutant loadings, known as "hotspots," may require the use of specific structural BMPs and pollution prevention practices.

(4) All stormwater management practices must be designed for a 24-hour duration; a 2-year design storm is required for a discharge to a natural channel and a 10-year design storm is required for a discharge to a manmade channel. Pre-development and post-development runoff rates must be verified by calculations that are consistent with good engineering practices.

(5) For purposes of computing runoff, all pervious lands at the site must be assumed to be in good condition (if the lands are pastures, lawns, or parks) prior to development, 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.

(6) Construction of stormwater management facilities or modifications to channels must comply with all applicable laws and regulations, including all necessary permits, such as ACOE and VDEQ Wetland Permits, Virginia Department of Conservation and Recreation Virginia Stormwater Management Program Permits, etc.

(7) Impounding structures that are not covered by the Impounding Structure Regulations (4VAC 50-20) must be engineered for structural integrity and designed according to the 100-year storm event.

(8) Pre-development and post-development runoff rates must be verified by calculations that are consistent with good engineering practices.

(9) Outflows from a stormwater management facility must be discharged to an adequate channel.

(10) Natural channel characteristics must be preserved to the maximum extent practicable.

(11) Use of Non-Structural BMPs are encouraged to reduce the amount of stormwater runoff that must be managed. This will help to minimize the reliance on structural practices, which require ongoing maintenance in order to be effective.

(12) Runoff from parking lots must be treated to remove oil, grease, and sediment before it enters receiving waters.

(13) The use of natural drainage systems and vegetated buffer zones as open space and conservation areas shall be encouraged.

(14) Stormwater management BMPs for a site must be chosen based on the physical conditions of the site. Designers must consult the Virginia Stormwater Management Handbook for guidance on the factors that determine site design feasibility when selecting a stormwater management BMP.

(15) All stormwater management practices must be designed to allow for the maximum removal of pollutants and reduction in flow velocities. The Virginia Stormwater Management Handbook provides detailed guidance on the requirements for conveyance for each of the approved stormwater management practices.

(16) Stormwater infiltration practices, or practices having an infiltration component, as specified in the Virginia Stormwater Management Handbook, are prohibited, even with pretreatment, in the following circumstances:

(a) Where stormwater is generated from highly contaminated source areas known as "hotspots".

(b) Where stormwater is carried in a conveyance system that also carries contaminated, non-stormwater discharges.

(17) Prior to design, the Regional Environmental Group should be consulted to determine if the project will be subject to additional stormwater design requirements.

c. Stream Channel Erosion. To protect stream channels from degradation, specific channel protection criteria must be provided as prescribed in the Virginia Stormwater Management Handbook and Virginia Erosion and Sediment Control Handbook.

(1) Properties and receiving waterways downstream of any land development project must be protected from erosion and damage due to increases in volume, velocity and frequency of peak flow rate of stormwater runoff in accordance with Standard 19 of the Erosion and Sediment Control Instruction.

d. Flooding. The calculations for determining peak flows as found in the Virginia Stormwater Management Handbook must be used for sizing all stormwater management practices.

(1) Downstream properties and waterways must be protected from damages from localized flooding due to increases in volume, velocity, and peak flow rate of stormwater runoff in accordance with the minimum design standards set out in this subsection.

(2) The 10-year post-developed peak rate of runoff from the development site must not exceed the 10-year pre-developed peak rate of runoff.

(3) Linear development projects shall not be required to control post-developed stormwater runoff for flooding.

5. Stormwater Management Plans. A stormwater management plan must be developed for each project to ensure adequate planning for the management of stormwater runoff. The plan must be written in accordance with the criteria established in this section.

Work cannot commence until the plan has been reviewed and approved by the appropriate Regional Environmental Group Water Program Manager.

a. Stormwater Management Plan. The stormwater management plan must be submitted for approval at or before the time of the 90 percent design submittal. For design-build projects, Regional Water Program Manager must approve the plan prior to construction. The stormwater management plan must include the following information:

(1) Contact Information. The name, address, and telephone number of the Assistant Resident Officer in Charge of Construction (AROICC) and Project Manager.

(2) A map (or maps) indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural stormwater management and sediment control facilities.

The map(s) will also clearly show pre-construction and post-construction land cover (pervious and impervious) with a tabulation of the percentage of surface area to be changed; drainage patterns; locations of utilities, roads and easements; the limits of clearing and grading; a written description of the site plan; and justification of proposed changes in natural conditions may also be required.

(3) A written or graphic inventory of the natural resources environmentally sensitive features at the site and surrounding area that provide particular opportunities or constraints for development.

(4) A description of proposed, post-construction stormwater management measures including sufficient engineering analysis to show that the proposed stormwater management measures control runoff from the site in compliance with this instruction and the specifications of the Virginia Stormwater Management Handbook.

(5) Calculations. Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this instruction (24-hour duration, 2-year or 10-year). Such calculations must include (i) description of the design storm frequency, intensity and duration, (ii) time of concentration, (iii) Soil Curve Numbers or runoff coefficients, (iv) peak runoff rates and total runoff volumes for each watershed area, (v) infiltration rates, where applicable, (vi) culvert capacities, (vii) flow velocities, (viii) data on the increase in rate and volume of runoff for the specified design storms, and (ix) documentation of sources for all computation methods and field test results.

(6) Maintenance Plan. The design and planning of all stormwater management facilities must include detailed maintenance procedures to ensure their continued function. These plans will identify the parts or components of a stormwater management BMP that need to be maintained and the equipment and skills or training necessary to maintain them. Estimates for annual maintenance costs and frequency must also be included.

(7) Landscaping Plan. The plan must include a detailed landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater BMP. The landscaping plan must also describe how vegetation should be maintained. This plan must be prepared by a qualified individual familiar with the selection of emergent and upland vegetation appropriate for the selected BMP.

6. Maintenance Inspection and Repair of Stormwater Facilities.

All stormwater management facilities must undergo inspections to document maintenance and repair needs and ensure compliance with the requirements of this instruction and accomplishment of its purposes. These needs may include: removal of silt, litter, and other debris from all catch basins, inlets, and drainage pipes; grass cutting and vegetation removal; necessary replacement of landscape vegetation; and any repair or replacement of structural features.

At a minimum, a stormwater management facility must be inspected on an annual basis by the Regional Environmental Group Water Program Manager. In the event that the stormwater management facility has not been maintained and/or becomes a danger to public safety or public health, the Regional Environmental Group Water Program Manager shall notify the Public Works Office, Facilities Maintenance Specialist responsible for the site maintenance. The notice will specify the measures needed to comply with the plan and must specify the time within which such measures must be completed.

7. Waivers. Every applicant must provide for stormwater management as required by this instruction, unless a written request is filed to waive this requirement. Requests to waive the stormwater management requirements must be submitted to the Regional Environmental Group Water Program Manager for approval.

The minimum requirements for stormwater management may be waived in whole or in part, provided that at least one of the following conditions applies:

a. It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this instruction.

b. The Regional Environmental Group Water Program Manager agrees that meeting the minimum on-site management requirements is not feasible due to the natural or existing physical characteristics of a site and no other feasible site location is available.

c. Non-structural practices will be used on the site that reduce:

(1) The generation of stormwater from the site;

(2) The size and cost of stormwater storage; and

(3) The pollutants generated at the site.

In instances where one of the conditions above applies, the Regional Environmental Group may grant a waiver from strict compliance with the stormwater management provisions.

8. Enforcement. Any activity that violates this instruction may be subject to enforcement actions under the Clean Water Act and Virginia Stormwater Management Law; including Warning Letters, Notices of Violation, fines, and penalties from the Virginia Department of Conservation and Recreation. The party that causes the violation will be responsible for all required corrective actions and will have to provide a written description of why the violation occurred to the Regional Environmental Group.

9. Responsibilities

a. Regional Environmental Group

(1) Water Program Manager. The Water Program Managers are responsible for reviewing and approving Stormwater Management Plans; ensuring the required stormwater management BMPs are installed and maintained as required by all applicable environmental laws and regulations; and granting waivers where appropriate. The Water Program Managers will perform annual inspections of all BMPs in their area of responsibilities (AORs) to determine maintenance requirements and costs for the next year. Inspections will be completed during the third quarter of the fiscal year.

(2) Natural Resources Manager. The Natural Resources Managers are responsible for reviewing the suitability of proposed BMPs; including landscaping plans, wetlands issues, as well as any other issues deemed appropriate by the Water Program Manager.

b. Public Works Office. Public Works Office (Facilities Maintenance Group) will be responsible for funding and maintaining all installed stormwater management BMPs.

c. Designers. Designers, both in-house and A&E firms, will be responsible for developing and submitting Stormwater Management Plans in accordance with this instruction.

10. Review Authority. The Regional Environmental Group Water Program Manager is responsible for reviewing and updating this instruction.

S. A. TURCOTTE

Distribution: www.cnrma.mil

DOCUMENT NO.:

SOP-Spills-Regional-01

TITLE:

Hampton Roads Naval Installation Spill Reporting and Documentation Standard Operating Procedure

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MIDLANT Spill Program Manager

AUTHORIZED BY: NAVFAC MIDLANT
EV Compliance Director

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4	6/8/2011	REVISION
5	8/23/2011	REVISION
6	1/3/2012	REVISION
7	3/1/2012	REVISION
8	8/7/2012	REVISION
9	9/5/2012	REVISION
10	9/13/2012	APPROVAL SIGNATURE: Sean Heaney, PE-EV1- 

Form EMS 1 (Revision A)

Revised: August 13, 2012

Page 1 of 11

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HAMPTON ROADS NAVAL INSTALLATION SPILL REPORTING AND DOCUMENTATION STANDARD OPERATING PROCEDURE

1) Purpose:

This Standard Operating Procedure (SOP) was created by NAVFAC MIDLANT Environmental and provides the reporting and documentation actions that must be taken in response to a spill/ release of oil, sewage, hazardous, or non-hazardous substance (solid or liquid) from a building, vessel, aircraft, etc. at any Hampton Roads Naval installation or annex. In this SOP, the term “spill” also includes gaseous releases of hazardous substances to the air, but does not pertain to radiological or infectious waste incidents as outlined in CNRMA Regional Instruction 5090.3.

This SOP will be updated August 7, 2013 by NAVFAC MIDLANT Environmental. For updates contact the Hampton Roads Spill Program Manager at 757-341-0390.

2) References:

- (a) COMNAVREG MIDLANT INST 5090.3, Prevention, Reporting, Response, and Cleanup of Oil and Hazardous Substance spills for Hampton Roads Installations. 30 Apr 2004.
- (b) OPNAVINST 5090.1C- Navy Environmental and Natural Resources Program Manual. 30 Oct 2007.
- (c) OPNAVINST 3100.6H, Special Incident Reporting (OPREP 3, Navy Blue and Unit SITREP) Procedures; (NOTAL). (date unknown)
- (d) COMNAVREGMIDLANT/SOP (ADMIN) HRINST 5400.1A DRAFT SUPGROUP 5090 REVISION. DRAFT SEP 2010
- (e) COMNAVREG MIDLANT INST 5090.1, Response to Major Oil and Hazardous Substance Incidents within Commander, Navy Region, Mid-Atlantic Area of Responsibility. 25 Oct 2001.

3) Procedures and Responsibilities:

The following section outlines the responsibilities of the Responsible Party and/or the party who discovers the spill. Subsequent sections outline the responsibilities of Environmental staff.

The responsible party is the activity/ command that caused the spill.

a) **Responsible Party's Duties**

- i) When a release is detected, secure all activities related to the release.
- ii) Determine the source of the release and secure if safe to do so.
- iii) If possible and safe to do so, prevent spills from entering storm drains or waterways. This can be accomplished by covering storm drains or pier drains or by diverting the spill using dikes or man-made berms.
- iv) **Immediately following (or during)** initial spill response actions, the spill must be reported to the Emergency Communications Center (ECC), or applicable Emergency Service by the Responsible Party (RP) or the party that discovered the spill. **Contact information for each installation is listed in Table 1.**

Note: The ECC contacts the base Fire Department, Command Duty Officer (CDO) or General Duty Supervisor (after hours), and Base Environmental (EV). If required, the

National Response Center (NRC) and Navy On-Scene Coordinator (NOSC) are also contacted.

Responsible Party must immediately report the spill to the ECC in the following

Instances:

- (1) If the spill was a result of any operation conducted on base (including military personnel, contractors, tenants, civilians, etc.) outside or inside of a building and has reached utility drains or the environment (air, land, water, pavement) or provides a significant threat to reach utility drains or the environment, or is a threat to human health.
 - (2) If the spill is greater than or equal to 1 gallon and is contained within a building (i.e., has not entered utility drains or has not escaped the building footprint).
- v) **Navy Message-** The Responsible Party or reporting party (if responsible party has not been determined) has 24 hours to generate a Navy Spill Message if any the following occurs per **Reference (b)**:
- (1) The NRC or any state or local authority was contacted by the ECC or EV.
 - (2) Any discharge of oil has reached the water or storm drain.
 - (3) Any oil or HS spill that may endanger critical water areas, has the potential to generate public concern, become the focus of an enforcement action, or pose a threat to public health or welfare that warrants an OPREP-3 special incident report as per **Reference (c)**.
 - (4) Sewage spills or other pollutants which endanger critical water areas, have the potential to generate public concern, become the focus of enforcement action, or pose a threat to public health or welfare shall be reported by OPREP-3 NAVY BLUE or OPREP-3 NAVY UNIT SITREP in accordance with **Reference (c)**. Spills of oil and hazardous substances shall be reported in accordance with the requirements in **Reference (b)** Chapter 12, using formats in Appendices H or I. Additional addresses outlined in **Reference (d)** are also required on all spill messages.
 - (5) If original spill information differs as per **Reference (b)** 12-5.4b or if spilled amount differs by more than 50% of original Message, then an updated Message must be generated.

The following section outlines the duties of Environmental personnel:

b) **EV Responsibilities**

- i) Once release (or threat of a release) is determined, ECC is immediately contacted by the Responsible Party or discoverer of spill. If spill is discovered by environmental staff, the environmental staff member places the notification call to ECC. If EV was contacted in lieu of ECC, the person discovering the spill will be directed to contact ECC with the pertinent information.
- ii) Once an Environmental Protection Specialist (EPS) receives notification of a spill from ECC the EPS will contact the caller who made the spill report and/or reports to the scene of the spill. If needed, CDO and NOSC (if applicable) also respond to spill scene.
- iii) EPS, in conjunction with CDO, conducts preliminary investigation as to the extent and cause of the spill. When appropriate, Hampton Roads Spill Manager (SM) along with Installation Environmental Program Manager (IEPM) conducts a more in-depth investigation.
- iv) Using the acquired spill information, the EPS determines the reporting and documentation

- requirements for the spill utilizing the matrix presented later in this SOP. An explanation/discussion of the reporting requirements and documentation is listed in the matrix (**Attachment 1**).
- v) EPS notifies SM of all reportable spills and any hazardous materials spills (**see Attachment 1**).
 - vi) EPS notifies the state/local regulatory authorities and the applicable installation Media Manager(s) (MM). If the reporting/notification requirements are unclear, EPS is to contact the SM and together they will ensure each regulatory agency's reporting requirements are being met. The proper communication channels will be followed to ensure the various MMs fulfill additional regulatory reporting requirements not identified in the matrix below.
 - vii) EPS provides on-site guidance for spill clean-up when necessary. EPS, CDO, or a General Duty Foreman determines if additional assistance from Environmental Services or other resources are needed to clean up the spill. CDO or Duty Foreman contacts the Environmental Service Desk as needed (757-341-0412). The Service Desk dispatches NAVFAC Oil Recovery or Hazmat personnel, as appropriate. If oil spill is >100 gallons and NOSC is not on-site or was obviously not contacted by the ECC, the EPS or CDO should contact the NOSC immediately at 757-636-4378.
 - viii) Upon commencement of any oil recovery activities, Oil Recovery will supply an initial incident and cost logistics report to the Oil Recovery Commodity Manager as soon as practicable or within six hours of discovery of spill, if feasible. The Commodity Manager will then supply information to the Installation Environmental Program Manager (IEPM) and SM as soon as practicable. This initial report may include such summarized information as: spill discovery timeline, estimated volume spilled, any completed and ongoing recovery operations, and estimated clean-up costs to date. During ongoing recovery efforts, a daily summary will also be provided at the end of each day with updated/additional information. At the conclusion of the recovery activities, a final spill summary will be provided (through the chain of command, as noted), which shall contain the final amount of recovered product, final clean-up costs, and any updated or additional observed information. ***CNRMA Hazardous Waste disposal JON shall NOT be used for spill clean-up billing.**
 - ix) If the spill is reportable, EPS informs the RP of their obligation to generate a Navy Spill Message in proper format within 24 hours (see Message Formats in Responsible Party's Duties). In the event that the RP cannot be determined, EPS informs the CDO or Pier SOPA (**Reference a**) of their responsibility to submit the Navy Spill Message. EPS will communicate to the Message generator the estimated clean-up costs and recovered volume (if available) so the Message will be as complete as possible. If specifics are unknown, the initial Message must not be delayed and an updated Message may be released as additional information becomes available.
 - x) IEPD, EPS, and SM should follow up with CDO or Pier SOPA to ensure they have released initial Navy Message within 24 hours of discovery. Installation EV staff will inform RP to use proper message format. Additionally, it is the IEPM's responsibility to inform the Message author if an updated Message is required. If original spill information differs as per (**Reference b**) or if spilled amount differs by more than 50% of original Message, then an updated Message must be generated.
 - xi) EPS is to make initial notifications to appropriate regulators (except HRSD) as per the agency's preferred reporting method within 24 hours of the discovery of the spill. Initial notifications should include other agency incident numbers (such as NRC numbers) for cross-referencing by the regulators. See **Spill Reporting** section for important reporting procedures.
 - xii) EPS must draft the DEQ 5-day spill report and submit to the IEPM for review, finalization, signatures, and distribution to the appropriate regulatory agencies within by the established deadline. Impacted MM for the installation where the spill occurred is responsible for all

- communication with HRSD and for follow-up regulatory reporting regarding releases to the sanitary sewer system.
- xiii) Pollution Prevention/Emergency Planning and Community Right-to-Know Act (EPCRA) program manager (PM) is responsible for providing support to the installation environmental staff for reportable quantity (RQ) calculations and necessary EPCRA and LEPC reporting. Any correspondence of this nature should be forwarded to the SM and P2 EPCRA program manager.

 - xiv) SM and MMs will continue regulatory communications as appropriate and provide updated information when/if it becomes available.
 - xv) If regulatory enforcement action is imposed, SM and MMs will comply with communication requirements.
 - xvi) EPS files all spill documents together in the appropriate reportable or non-reportable spills folder.

Table 1			
INSTALLATION	Emergency Contact	CDO	Environmental
NWS Yorktown Cheatham Annex Yorktown Fuels	757-887-4911 (ECC)	757-268-6250	757-887-4086 or 757-887-4881 or 757-636-4494 or 757-887-4095
Naval Air Station Oceana Dam Neck Annex Naval Auxiliary Landing Field Fentress	911 (ECC)	757-433-2366	757-433-3435 or 757-433-3437 or 757-433-3439 757-433-2131 after hours: 757-328-4673 or 757-943-0991
Dare County Bombing Range	911 (Local Emergency Services)	757-433-2366	757-421-8114 757-433-3435 or 757-433-3437 or 757-433-2131 after hours: 757-636-4256 or 757-943-0991
Defense Fuel Support Point Craney Island (see DFSP Craney Island's 'Red Plan')	757-396-3333 (NNSY ECC)	757-322-2365	757-635-5740 or 757-341-0523
Joint Expeditionary Base Little Creek	757-462-4444 (ECC)	757-462-7385 or 757-438-3930	757-462-5350 or 757-462-5361 or 757-462-5355 757-462-5356
Joint Expeditionary Base Fort Story	757-422-7141 (ECC)	757-462-7385 or 757-438-3930	757-422-7344 ext 225 or 757-462-5353 or 757-462-5361
Naval Station Norfolk	757-444-3333 (ECC)	757-438-3860	757-341-0523 or 757-341-0516
Naval Support Activity Hampton Roads	757-444-3333 (ECC)	757-438-3402	757-836-1862
Norfolk Naval Shipyard St. Juliens Creek Annex Scott Center Annex Southgate Annex	757-396-3333 (NNSY ECC)	757-396-3222	757-396-8270
St. Helena Annex	911 (Local Emergency Services)	757-396-3222	757-396-8270
Naval Support Activity Northwest	911 (Chesapeake Emergency Services)	757-438-3503	757-421-8114 or 757-650-7286 after hours: 757-636-4256 or 757-943-0991
ROTHR New Kent	757-887-4911 (ECC)	757-268-6250	757-887-4086 or 757-887-4881
Naval Medical Center Portsmouth	757-396-3333	757-396-3222	757-396-8270

Attachment 1

REPORTING/DOCUMENTATION MATRIX

Material Spilled: Sewage/Grey-Water				
Spill Caused By	Area Affected	Volume Spilled	EV Reporting Requirements	Navy Documentation
All Cases	State Waters Storm Drains	Any Quantity	DEQ Reporting DCR Reporting VDH Reporting	Navy Message Logbook Spill Folder
All Cases	Land	≥25 Gallons	DEQ Reporting DCR Reporting VDH Reporting	Navy Message Logbook Spill Folder
All Cases	Land	< 25 Gallons	None	Logbook Spill Folder
Material Spilled: Oil				
Spill Caused By	Area Affected	Volume Spilled	EV Reporting Requirements	Navy Documentation
All Cases	State Waters Storm Drains	Any Quantity	DEQ Reporting DCR Reporting NRC Reporting	Navy Message Logbook Spill Folder
POV	Land	<25 Gallons	None	None
Navy	Land	<25 Gallons	None	Navy Message Logbook Spill Folder
All Cases	Land	≥25 Gallons	DEQ Reporting DCR Reporting NRC Reporting	Navy Message Logbook Spill Folder
Note: All oil spills greater than 100 gallons require Navy On-Scene Coordinator notification.				
Air Releases				
Spill Caused By	Area Affected	Volume Spilled	EV Reporting Requirements	Navy Documentation
Air Releases of Refrigerants or Halons	Air	Any Quantity	Air Program Manager	Logbook
Air Releases of Ammonia	Air	Any Quantity	Air Program Manager & EPCRA Manager	Logbook
Air Releases of Hazardous Substance	Air	≥Reportable Quantity	Air Program Manager & EPCRA Program Manager	Logbook
Excess Air Emissions	Air	1 Hour or More	DEQ Air Manager	Logbook

Attachment 1

Material Spilled: AFFF				
Spill Caused By	Area Affected	Volume Spilled	EV Reporting Requirements	Navy Documentation
All Cases	State Waters Storm Drains	Any Quantity	DEQ Reporting DCR Reporting	Navy Message Logbook Spill Folder
All Cases	Sanitary Sewer	Any Quantity	Water Program Manager (WPM) HRSD (reporting by WPM)	Navy Message Logbook Spill Folder
All Cases	Land	Any Quantity	DEQ Reporting	Navy Message Logbook Spill Folder

Material spilled : Hazardous Substance/Hazardous Waste				
Spill Caused By	Area Affected	Volume Spilled	EV Reporting Requirements	Navy Documentation
All Cases	State Waters Storm Drains	Any Quantity	DEQ Reporting DCR Reporting NRC Reporting NOSC	Navy Message Logbook Spill Folder
All Cases	Sanitary Sewer	Any Quantity	Water Program Manager HRSD	Navy Message Logbook Spill Folder
All Cases	Land	≥Reportable Quantity (for spilled substance)	DEQ Reporting DCR Reporting NRC Reporting LEPC NOSC	Navy Message Logbook Spill Folder
All Cases	Land	<Reportable Quantity (for spilled substance)	Environmental	Logbook Spill Folder
Hazardous Waste	All Cases	Any Quantity	HW Media Manager (DEQ Reporting) *If ≥ Reportable Quantity: DCR Reporting NRC Reporting	Navy Message Logbook Spill Folder
CERCLA Haz Substances, EPCRA Toxic Chemicals, and EPCRA Extremely Haz Substances	All Cases	≥Reportable Quantity* (for spilled substance)	DEQ Reporting DCR Reporting NRC Reporting LEPC NREMD NOSC	Navy Message Logbook Spill Folder

Note 1: DEQ Reporting = 24 hour initial notification and follow up 5-Day Letter

Note 2: DCR reporting is only necessary for installations covered under the regional MS4 Phase II Permit

Note 3: NRC reporting must occur **immediately** upon discovery of spill

Attachment 1

*Reportable Quantity (RQ)

The reportable quantity is the federally determined amount of a hazardous substance that is used to determine when spills have to be reported; any spill involving an amount of a hazardous substance greater than or equal to its reportable quantity value must be reported. The P2-EPCRA PM is responsible for providing support to the installation environmental staff for RQ calculations and necessary EPCRA and LEPC reporting. Any correspondence of this nature should be forwarded to the SM and P2-EPCRA PM.

Navy Message

EPS is to notify Responsible Party of their duty to generate a Navy Message regarding the spill incident in proper format within 24 hours (see Message Formats in Responsible Party's Duties). In the event that the Responsible Party can not be determined, EPS informs the CDO or Pier SOPA (as applicable) of their responsibility to deliver the Message. EPS will communicate the estimated clean-up costs and recovered volume (if available) so the Message will be complete. If specifics are unknown, the initial Message must not be delayed and an updated Message may be released as additional information becomes available.

IEPM and SM are to ensure that the responsible party releases initial Navy Message within 24 hours of discovery of spill and in proper format. Additionally, it is their responsibility to inform the Message author if an updated Message is required. If original spill information differs significantly (i.e., spilled amount differs by more than 50% of original Message), then an updated Message must be submitted.

A copy of the Navy Message should be made for environmental recordkeeping and to ensure that the correct format has been used per **References (b) and (d)**. Also see previous section on Navy Messaging.

Spill Reporting

EPS is to provide spill reporting to Virginia Department of Environmental Quality (DEQ) and Virginia Department of Conservation and Recreation (DCR). Spill reporting includes both an initial report of the spill within 24 hours of spill discovery (which presents awareness of the spill) and a 5-day Spill Letter (which documents specific details).

Initial spill report can be made within 24 hours of the spill discovery on the DEQ Reporting Website. Once the report is submitted, a WEB Reference ID Number (not the same as an Incident Report number) will be populated and must be recorded as proof of notification (recommend printing this page to an electronic file). Following incident submittal, an Incident Report number (IR#) will be generated by the DEQ. The IR# or Web Reference number should be used in all remaining correspondence pertaining to that incident.

In certain situations for oil spills <150 gallons, but >25 gallons the DEQ may not generate an IR# and may not require a follow-up 5-day Spill Letter. In this instance, EPS is to keep a hardcopy of the ruling or request something in writing for EV documentation.

If a 5-Day Spill Letter is required, it must be submitted within 5 business days of discovery of the spill (weekends and holidays falling on weekdays are not business days). These letters should contain a brief explanation of the following:

→Date of Release/Discovery	→Quantity Released
→Time of Release/Discovery	→Quantity Recovered
→Location	→Receiving Waterway
→Substance Released	→Cause of Release
→NRC # (if applicable)	→Cleanup Actions Taken

Attachment 1

The preferred method of delivery to the DEQ is electronic. An email attachment of the document to troprep@deq.virginia.gov will suffice and no paper copy is required for follow-up. Original signatures are not required by DEQ, although digital signatures are to be used at the discretion of NAVFAC. The point of contact (POC) information for state regulatory spill reporting is shown below:

ARTICLE I. Agency	Agent	Article II. Contact Name:	Contact Phone	Article III. Contact Phone	Article IV. Contact Email:
DEQ		•Website		---	http://www.deq.virginia.gov/prep_ext/
		•Email Reporting		---	
		•John Settle (POC)	757-518-2179		troprep@deq.virginia.gov
		•Tammy Snell (POC)	757-518-2177		john.settle@deq.virginia.gov tammy.snell@deq.virginia.gov
DCR VDH		Doug Fritz		804-371-7330	Doug.Fritz@dcv.virginia.gov
		•Website			http://www.vdh.virginia.gov/lhd/
		•Office of Drinking Water		757-683-2000	<div style="border: 1px solid black; padding: 2px;"> WASTEWATER http://www.deq.virginia.gov/wastewater/reportingspills.html </div>
		•Div. of Shellfish Sanitation		757-683-2700	

Note: This contact information is subject to change at any time, and should be updated as needed.

Sewage Reporting-Virginia Department of Health

When reporting sewage spills to VDH, EPS is to contact the Division of Shellfish Sanitation by telephone. DEQ makes the remaining contacts.

National Response Center (NRC)

The NRC is the federal agency that collects information on oil spills that enter waterways and storm drains. The NRC must be notified immediately upon discovery of spill by phone:

1-800-424-8802

The ECC will report all applicable spills to the NRC prior to sending EV a spill report.

Each spill that is reported to the NRC is assigned a unique NRC spill number; this NRC number is recorded on the spill notification form that the ECC will fax to EV. The presence of this number can therefore be used as a confirmation that the NRC has received a spill report. **This number should also be noted in the initial 24-hour spill report to the DEQ as well as the Navy Spill Message.** If the NRC spill number is not present, the EPS is to contact the ECC to verify if the NRC was notified. If they have not been notified, EPS should ensure that the NRC is notified immediately.

Logbook

A hand-written spill logbook is kept at each installation to quickly reference spills and to ensure all necessary actions are taken for each spill. This logbook is used to track both reportable and non-reportable spills. The EPS is to enter spill information into the logbook as it is obtained so that the logbook can be used as a checklist to ensure that all necessary spill response actions are taken for all spills.

Local Emergency Planning Committees (LEPCs)

LEPCs are groups of local officials from various disciplines formed to enforce the requirements of EPCRA, or the Emergency Planning and Community Right-to-Know Act. LEPC develop local emergency response plans based on local activities, business, etc.



OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION,
TECHNOLOGY
AND LOGISTICS

JAN 19 2010

MEMORANDUM FOR ACTING ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS AND ENVIRONMENT)
ACTING ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS AND ENVIRONMENT)
ACTING ASSISTANT SECRETARY OF THE AIR
FORCE (INSTALLATIONS, LOGISTICS, AND
ENVIRONMENT)

SUBJECT: DoD Implementation of Storm Water Requirements under Section 438 of
the Energy Independence and Security Act (EISA)

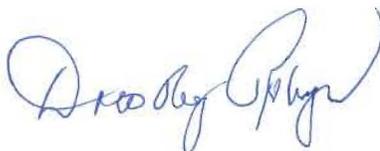
Reducing the impacts of storm water runoff associated with new construction helps to sustain our water resources. In October 2004, DoD issued Unified Facilities Criteria on Low Impact Development (LID) (UFC 3-210-10), a storm water management strategy designed to maintain the hydrologic functions of a site and mitigate the adverse impacts of storm water runoff from DoD construction projects. Using LID techniques on DoD facility projects can also assist in fulfilling environmental regulatory requirements under the Clean Water Act. Since 2004, DoD has implemented LID techniques for controlling storm water runoff on a number of projects.

EISA Section 438 (Title 42, US Code, Section 17094) establishes into law new storm water design requirements for Federal development and redevelopment projects. Under these requirements, Federal facility projects over 5,000 square feet must “maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.” Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* (October 5, 2009), directed the U.S. Environmental Protection Agency (EPA) to issue EISA Section 438 guidance. DoD shall implement EISA Section 438 and the EPA *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act*, using LID techniques in accordance with the policy outlined in the attachment.

EISA Section 438 requirements are independent of storm water requirements under the Clean Water Act and should not be included in permits for storm water unless a State (or EPA) has promulgated regulations for certain EISA Section 438

requirements (i.e., temperature/heat criteria) that are applicable to all regulated entities under its Clean Water Act authority.

The attached policy will be incorporated into applicable DoD Unified Facilities Criteria within six months. My points of contact are Thadd Buzan at (703) 571-9079 and Ed Miller at (703) 604-1765.

A handwritten signature in blue ink, appearing to read "Dorothy Robyn".

Dorothy Robyn
Deputy Under Secretary of Defense
(Installations and Environment)

Attachment:
As stated

DoD Policy on Implementing Section 438 of the Energy Independence and Security Act (EISA)

1. EISA Section 438 requirements apply to projects that construct facilities with a footprint greater than 5,000 gross square feet, or expand the footprint of existing facilities by more than 5,000 gross square feet. The project footprint consists of all horizontal hard surfaces and disturbed areas associated with the project development, including both building area and pavements (such as roads, parking, and sidewalks). These requirements do not apply to internal renovations, maintenance, or resurfacing of existing pavements.

2. The overall design objective for each project is to maintain predevelopment hydrology and prevent any net increase in storm water runoff. DoD defines “predevelopment hydrology” as the pre-project hydrologic conditions of temperature, rate, volume, and duration of storm water flow from the project site. The analysis of the predevelopment hydrology must include site-specific factors (such as soil type, ground cover, and ground slope) and use modeling or other recognized tools to establish the design objective for the water volume to be managed from the project site.

3. Project site design options shall be evaluated to achieve the design objective to the maximum extent technically feasible. The “maximum extent technically feasible” criterion requires full employment of accepted and reasonable storm water retention and reuse technologies (e.g., bio-retention areas, permeable pavements, cisterns/recycling, and green roofs), subject to site and applicable regulatory constraints (e.g., site size, soil types, vegetation, demand for recycled water, existing structural limitations, state or local prohibitions on water collection). All site-specific technical constraints that limit the full attainment of the design objective shall be documented. If the design objective cannot be met within the project footprint, LID measures may be applied at nearby locations on DoD property (e.g., downstream from the project) within available resources.

4. Prior to finalizing the design for a redevelopment project, DoD Components shall also consider whether natural hydrological conditions of the property can be restored, to the extent practical.

5. Estimated design and construction costs for implementing EISA Section 438 shall be documented in the project cost estimate as a separate line item. Final implementation costs will be documented as part of the project historical file. Post-construction analysis shall also be conducted to validate the effectiveness of as-built storm water features.

The following flowchart illustrates the DoD implementation process for EISA Section 438, consistent with the U.S. Environmental Protection Agency’s *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (December 2009) (<http://www.epa.gov/owow/nps/lid/section438/>).

Flowchart for EISA §438 Implementation

1. Determine applicability

Requirement: apply to all Federal projects with a footprint greater than 5,000 square feet

2. Establish design objective

Requirement: maintain or restore predevelopment hydrology

OPTIONS

1

Total volume of rainfall from 95th percentile storm is to be managed on-site.

2

Determine predevelopment hydrology based on site-specific conditions and local meteorology by using continuous simulation modeling techniques, published data, studies, or other established tools. Determine water volume to be managed onsite.

Design water volume
(to be retained)

3. Evaluate design options

Design water volume
(to be retained)

Requirement: meet design objective to maximum extent technically feasible (METF)

TYPICAL ON-SITE DESIGN OPTIONS

Bio-retention areas

Permeable pavements

Cisterns / recycling

Green roofs

Use any combination of on-site options to achieve the design objective to the METF. Document site-specific constraints.

Selected on-site design options

remaining water volume?

OFF-SITE OPTIONS
(optional)

Selected off-site design options

TECHNICAL CONSTRAINT EXAMPLES

- Retaining storm water on site would adversely impact receiving water flows
- Site has shallow bedrock, contaminated soils, high groundwater, underground facilities or utilities
- Soil infiltration capacity is limited
- Site is too small to infiltrate significant volume
- Non-potable water demand (for irrigation, toilets, wash-water, etc.) is too small to warrant water harvesting and reuse systems
- Structural, plumbing, or other modifications to existing buildings to manage storm water are infeasible
- State or local requirements restrict water harvesting
- State or local requirements restrict the use of green infrastructure/LID

4. Finalize design and estimate cost



DEPARTMENT OF THE NAVY
THE ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS AND ENVIRONMENT)
1000 NAVY PENTAGON
WASHINGTON, D.C. 20350-1000

NOV 16 2007

MEMORANDUM FOR DEPUTY CHIEF OF NAVAL OPERATIONS
(FLEET READINESS AND LOGISTICS)
DEPUTY COMMANDANT OF THE MARINE CORPS
(INSTALLATIONS AND LOGISTICS)

SUBJECT: Department of the Navy Low Impact Development (LID) Policy for Storm Water Management

- References: (a) 33 United States Code 1251 (Clean Water Act)
(b) Title 40 Code of Federal Regulations 122, 130
(c) Department of Defense Unified Facilities Criteria '3-210-10 Design for Low Impact Development, October 2004
(d) Executive Order 13423 "Strengthening Federal Environmental, Energy, and Transportation Management", January 2007
(e) OPNAVINST 5090.1C, Clean Water Ashore Requirement, October 2007
(f) MCO P5090.2A, Water Quality Management, July 1998

BRAC 05 implementation, Department of Defense (DoD) Grow the Force Initiatives, and ongoing installation sustainment and modernization, have resulted in significant construction activity on Department of the Navy (DON) installations. New construction results in loss of natural vegetation cover and drainage capacity and increased storm water runoff. Conventional storm water collection and conveyance systems and storm water treatment options do not and can not replicate natural systems, thus increasing the volume and flow of storm water as well as sediment and nutrient loadings to streams, wetlands, and other receiving water bodies. Because of continuing water quality problems, States and the US Environmental Protection Agency are considering mandatory treatment and control of storm water. Conversely, low impact development (LID) techniques offer a suite of Best Management Practices that maintain or restore predevelopment hydrology. It mitigates the adverse effects of construction projects on water quality by cost effectively reducing the volume and pollutant loading of storm water before it reaches the receiving water bodies. LID utilizes strategies that infiltrate, filter, store, evaporate, and/or retain runoff close to its source. LID further reduces installation reliance on aging storm water management infrastructure. References (a) thru (f) provide requirements and guidance for LID.

This DON policy sets a goal of no net increase in storm water volume and sediment or nutrient loading from major renovation and construction projects¹. In order to support this goal, as well as reduce reliance on conventional storm water collection systems and treatment options, this policy directs that LID be considered in the design for all projects that have a storm water management element. LID will be implemented where possible to assist DON installations in complying with references (a) and (b), as well as all applicable State and Federal requirements for sustainable development. In those infrequent situations where LID is not appropriate given the characteristics of the site, the Navy and Marine Corps are authorized to establish a waiver process that, if used, would include regional engineer level review and approval.

The Navy and Marine Corps are directed to immediately plan, program, and budget to meet the requirements of this policy starting in FY 2011. All efforts shall be made to incorporate LID practices in the fiscal years 08, 09, and 2010. The services are further directed to submit to my office an annual report that summarizes all projects that have a storm water component and identify how LID was implemented or waived. If waived, the report must identify the approving official. Naval Facilities Engineering Command, as the Department's expert in acquisition, construction, and environmental management, shall assist Navy and Marine Corps installations in meeting these policies. My point of contact for this matter is CAPT Robin Brake, robin.brake@navy.mil, (703) 693-2931.


BJ Penn

¹ Major renovation projects are defined as having a storm water component and exceeding \$5 million when initially approved by DASN (I&F). Major construction projects are defined as those exceeding \$750K.



APPENDIX D

Registration Statement and Supporting Attachments



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION, MID-ATLANTIC
1510 GILBERT ST.
NORFOLK, VA 23511-2737

IN REPLY REFER TO:
5090
EV14/09/RE303
JUN 12 2013

Mr. J. Mason Harper
MS4 Stormwater Permitting
Department of Conservation and Recreation
203 Governor Street, Suite 206
Richmond, VA 23219-2094

Dear Mr. Harper:

SUBJECT: VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) MS4
PERMIT REGISTRATION STATEMENT

As requested per correspondence received June 5, 2013, enclosed is the Navy's revised registration statement for the uninterrupted continuation of regional permit coverage under the VSMP General Permit for Discharges from Small Municipal Separate Storm Sewer Systems.

If you have any questions or comments, please contact Mr. Phillip Winslow at (757) 341-0382 or phillip.winslow@navy.mil.

Sincerely,

A handwritten signature in cursive script that reads "Kristen C. Bass".

KRISTEN C. BASS
Director, Water and
Wastewater Compliance
By direction of the Commander

Enclosure



Department of Conservation & Recreation
 CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

VSMP GENERAL PERMIT REGISTRATION STATEMENT FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS [VAR04]

(Please Type or Print All Information)

(The applicable fee specified in Form DCR 199-145 must additionally be submitted to the address given in that form to obtain coverage)

1. Regulated Small MS4

Name: US Navy - Consolidated MS4s (Refer to Attachment 1 for installations)

Type: City County Incorporated Town Unincorporated Town College or University
 Local School Board Military Installation Transport System Federal or State Facility Other

Location (County or City): Refer to Attachment 1

2. Regulated Small MS4 Operator

Name: Department of the Navy, Commander, Navy Region, Mid-Atlantic

Address: 1510 Gilbert St.

City: Norfolk State: VA Zip: 23511

3. Hydrologic Unit Code(s) as identified in the most recent version of Virginia's 6th Order National Watershed Boundary Dataset currently receiving discharges or that have potential to receive discharges from the regulated small MS4:
Refer to Attachment 1

4. Attach a description of the estimated drainage area, in acres, served by the regulated small MS4 discharging to any impaired receiving surface waters listed in the most recent Virginia 305(b)/303(d) Water Quality Assessment Integrated Report, and a description of the land use of each such drainage area.

5. Any TMDL waste loads allocated to the regulated small MS4 (this information may be found at <http://www.deq.state.va.us/tmdl/develop.html>): Refer to Attachment 1

6. The name(s) of any regulated physically interconnected MS4s to which the regulated small MS4 discharges.
City of Virginia Beach, City of Norfolk, City of Portsmouth, Virginia Department of Transportation (VDOT)

7. A copy of the MS4 Program Plan that includes:

a. A list of BMPs that the operator proposes to implement for each of the stormwater minimum control measures and their associated measurable goals pursuant to 4VAC50-60-1240, Section II B; that includes:

i. A list of the existing policies, ordinances, schedules, inspection forms, written procedures, and other documents necessary for BMP implementation; and

ii. The individual, department, division, or unit responsible for implementing the BMP;

b. The objective and expected results of each BMP in meeting the measurable goals of the stormwater minimum control measures;

c. The implementation schedule including any interim milestones for the implementation of a proposed new BMP; and

d. The method that will be utilized to determine the effectiveness of each BMP and the program as a whole.

8. List all existing signed agreements between the operator and any applicable third parties where the operator has entered into an agreement in order to implement minimum control measures or portions of minimum control measures.

NONE

9. The name, address, telephone number and e-mail address of either the principal executive officer or ranking elected official as defined in 4VAC50-60-370.

Elizabeth Nashold, Environmental Program Manager (CNRMA related issues)

9742 Maryland Ave, Norfolk VA 23511

(757) 341-0360 elizabeth.nashold@navy.mil

10. The name, position title, address, telephone number and e-mail address of any duly authorized representative as defined in 4VAC50-60-370.

Sean Heaney, Director of Environmental Compliance, 9742 Maryland Ave, Norfolk, VA 23511

(757) 341-0370 sean.heaney@navy.mil and Kristen Bass, Director Water/Wastewater Compliance

9742 Maryland Ave, Norfolk VA 23511, (757) 341-0420 kristen.bass@navy.mil

11. **Certification:** "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Print Name: Elizabeth Nashold

Title: Environmental Program Manager

Signature: Elizabeth A. Nashold

Date: June 10th 2013

For Department of Conservation and Recreation Use Only

Accepted/Not Accepted by: _____ Date: _____

Basin _____ Stream Class _____ Section _____ Special Standards _____



Attachment 1: CNRMA Regional MS4 Facilities VSMP Data

<u>Facility/ Activity Name</u> (#1 in Registration Statement)	<u>Location</u> (#1 in Registration Statement)	<u>Name of Receiving Waters</u>	<u>Name of Impaired Receiving Waters</u> (#4 in Registration Statement)	<u>Hydrologic Unit Codes</u> (#3 in Registration Statement)	<u>TMDL WLA</u> (#5 in Registration Statement)	<u>Estimated Drainage Area to Impaired Waters (acres)</u> (#4 in Registration Statement)	<u>Impaired Waters Drainage Area Land Use Description</u> (#4 in the Registration Statement)
Naval Station Norfolk	Norfolk	Elizabeth River, Willoughby Bay, Mason's Creek, and Bousch Creek	Elizabeth River, Willoughby Bay	JL57	No	3620	Urban: 92% Forest: 3% Wetlands: 5%
Naval Support Activity, Hampton Roads (excluding NSA Northwest)	Norfolk	Elizabeth River	Elizabeth River	JL56, JL57	No	645	Urban: 99% Wetlands: 1%
Joint Expeditionary Base, Little Creek	Virginia Beach	Little Creek Cove, Desert Cove, Little Creek, Northwest Branch of Little Creek Chanel, and Little Creek Channel	Little Creek Cove, Desert Cove, Little Creek, Northwest Branch of Little Creek Chanel, Little Creek Channel	CB26	No	1078	Urban: 93% Beach and Dunes: 2% Forest: 3% Maintained Open: 1% Wetlands: 1%

Notes:

- Values were obtained from various sources including VDEQ's website, Google Maps, NAVFAC GIS, and National Land Cover Data 2006. Storm sewer shed data was used to estimate the drainage area to impaired waters.

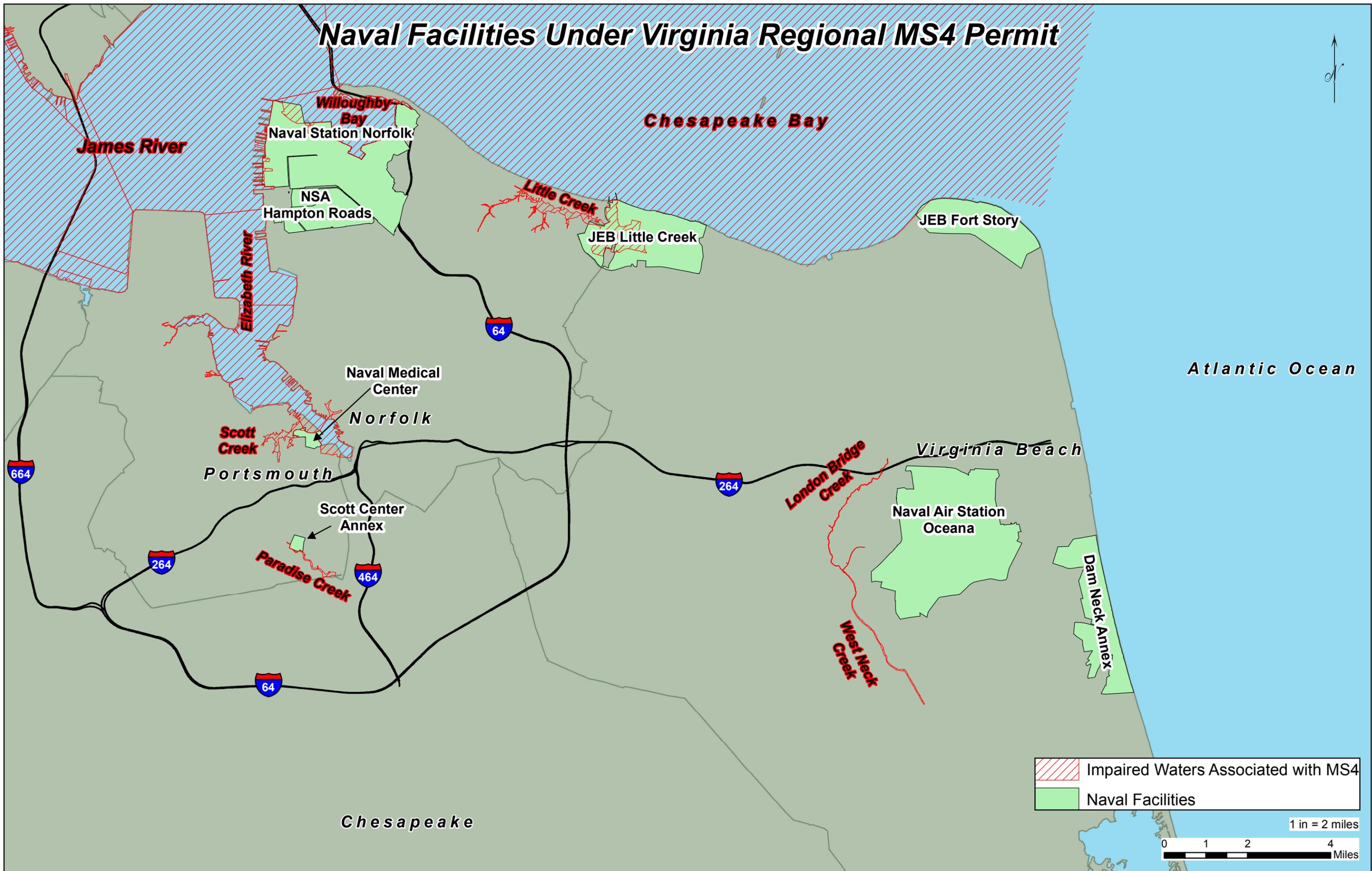


<u>Facility/ Activity Name</u> (#1 in Registration Statement)	<u>Location</u> (#1 in Registration Statement)	<u>Name of Receiving Waters</u>	<u>Name of Impaired Receiving Waters</u> (#4 in Registration Statement)	<u>Hydrologic Unit Codes</u> (#3 in Registration Statement)	<u>TMDL WLA</u> (#5 in Registration Statement)	<u>Estimated Drainage Area to Impaired Waters (acres)</u> (#4 in Registration Statement)	<u>Impaired Waters Drainage Area Land Use Description</u> (#4 in the Registration Statement)
Joint Expeditionary Base, Fort Story	Virginia Beach	Chesapeake Bay	Chesapeake Bay	CB25, AS14, AS18, AO23	No	227	Urban: 96% Beach and Dunes: 2% Forest: 2%
Naval Air Station Oceana	Virginia Beach	West Neck Creek, London Bridge Creek, Wolfsnare Creek, Great Neck Creek, and Redwing Lake	London Bridge Creek, West Neck Creek	CB25, AS14, AS18	Yes (West Neck Creek)	3927	Urban: 68% Forest: 7% Maintained Open: 2% Agriculture: 6% Wetlands: 17%
Dam Neck Annex	Virginia Beach	Redwing Lake, Lake Tecumseh	None	AS18	No	N/A	N/A
Naval Medical Center Portsmouth	Portsmouth	Scott Creek, Elizabeth River	Elizabeth River, Scott Creek	JL56	Yes (Elizabeth River)	92	Urban: 97% Maintained Open: 2% Wetlands: 1%
Scott Center Annex	Portsmouth	Paradise Creek	Paradise Creek	JL53	Yes (Paradise Creek)	51	Urban: 95% Maintained Open: 5%

Notes:

- Values were obtained from various sources including VDEQ's website, Google Maps, NAVFAC GIS, and National Land Cover Data 2006. Storm sewer shed data was used to estimate the drainage area to impaired waters.

Naval Facilities Under Virginia Regional MS4 Permit



	Impaired Waters Associated with MS4
	Naval Facilities

1 in = 2 miles



REGIONAL PHASE II STORMWATER PROGRAM PLAN

For

Virginia General Permit for Small Municipal Separate Storm Sewer
Systems; Permit #VAR040114



Revised: August 2011

Submitted By:
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Commander, Navy Region Mid-Atlantic
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