



# **VDOT's Stormwater Program**

*May 9, 2011*

*Roy T. Mills*

*State Stormwater Program Administrator*

# Program Administration

- **Stormwater Policy Committee**
- **Stormwater Technical Committee**

# Stormwater Policy Committee

- **Mohammad Mirshahi – Chairman – L&D Division**
- **Other Members**
  - ✓ **C.O. Division Administrators**
  - ✓ **District Administrator**

# Stormwater Policy Committee

## ➤ **ROLE:**

- **Provide guidance in the policy area of VDOT's SW program**
- **Act on SW Technical Committee recommendations for policy changes.**

# Stormwater Technical Committee

- **Roy Mills - Chairman - L&D Division**
- **Other Members - Representatives of:**
  - ✓ **C.O. Divisions**
  - ✓ **District Construction**
  - ✓ **Residency**
  - ✓ **Capital Outlay**

# Stormwater Technical Committee

## ➤ Role:

- Provide guidance in the technical area of VDOT's SW program
- Develop\revise technical criteria and procedures to promote compliance
- Recommend policy changes to SW Policy Committee
- Coordinate with other stakeholders (DCR, DEQ, etc.)

# Program Components

- **Virginia Stormwater Management Program (VSMP) Permits**
  - **Small Municipal Separate Storm Sewer Systems (MS-4) General Permit**
  - **General Construction Permit**
- **Erosion and Sediment Control (ESC) Program**
- **Stormwater Management (SWM) Program (Post Construction)**

# VSMP General Construction Permit Program

- **Authorized by CWA**
- **National program administered by EPA**
- **State program authorized through the VSMP Law and Regulations and administered By DCR's Division of Soil & Water**
- **Five year permit cycle**
- **Current permit issued 07/01/2009 & expires 06/30/2014**
- **VDOT Guidance – IIM – LD-242**

➤ **Applicable for all Regulated Land Disturbance Activities (RLDA) undertaken by or for VDOT including, but not limited to projects and activities developed under the following plan processes:**

➤ **RAAP**

➤ **SAPP**

➤ **Minimum**

➤ **No Plan**

➤ **PPTA**

➤ **Design Build**

➤ **Capital Outlay**

➤ **Rural Rustic**

➤ **Non Routine/Routine Maintenance Activities \***

- **All routine maintenance activities exempted by 2011 G.A. changes to the VSMP Law (Section 10.1-603.8)**

- **Required for all land disturbing activities (construction or maintenance) that equal or exceed the following land disturbance threshold amounts:**
- **All activities *except* Routine Maintenance**
  - **Designated Chesapeake Bay Preservation Areas – 2,500 square feet. \*\***
  - **All other areas – 1 Acre.**
- **Routine Maintenance**
  - **To maintain original line and grade, hydraulic capacity or original construction of facility**
  - **5 Acres\***

**\*Acreage threshold eliminated by 2011 G.A. changes to the VSMP Law (Section 10.1-603.8)**

**\*\* Will be eliminated by proposed changes to the VSMP Regulations**

# Land Disturbance (as defined in the VSMP Regulations):

- **A manmade change to the land surface that potentially changes its runoff characteristics including any clearing, grading or excavation associated with the proposed activity**
  - **Grading of gravel surfaces to maintain travel way generally exempt \***
  - **Pavement milling and/or overlay generally exempt \***

**\* Changes by the 2011 G.A to the VSMP Law (Section 10.1-603.8) classifies paving an impervious surface and the associated shoulder and ditch restoration as routine maintenance activities and, therefore, exempt from VSMP Regulation requirements.**

➤ **VSMP Construction Permit Requires RLDA To Have A Project Specific:**

➤ **Erosion and Sediment Control Plan**

➤ **Post Construction Stormwater Management Plan (As Applicable)**

➤ **Stormwater Pollution Prevention Plan (SWPPP)**

# Erosion and Sediment Control (ESC) Program

- **Required by Virginia Erosion and Sediment Control Law and Regulations**
- **Administered By DCR**
- **VDOT Guidance – IIM-LD-11**

➤ **Applicable for all Regulated Land Disturbance Activities (RLDA) undertaken by or for VDOT including, but not limited to projects and activities developed under the following plan processes:**

➤ **RAAP**

➤ **SAPP**

➤ **Minimum**

➤ **No Plan**

➤ **PPTA**

➤ **Design Build**

➤ **Capital Outlay**

➤ **Rural Rustic**

➤ **Non Routine/Routine Maintenance Activities**

- **Required for all land disturbing activities (construction or maintenance) that equal or exceed the following land disturbance threshold amounts:**
  - **Localities designated in the CBP Act as Tidewater, Virginia – 2,500 square feet**
  - **All other areas – 10,000 square feet**

# Land Disturbance (as defined in the ESC Regulations):

- Any land change that may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands in the Commonwealth, including, but not limited to, clearing, grading, excavation, transporting and filling of land
  - Includes grading of gravel surfaces (roadway and shoulder)
  - Includes shoulder and ditch restoration

- **VDOT Central Office staff will generally serve to develop program-wide policies and procedures, including implementation, training, reporting, and assessment tools.**
- **District staffs will generally be responsible for program implementation on specific construction and maintenance field activities.**

# Stormwater Management (SWM) Program (Post Construction)

- **Required by Virginia Stormwater Management Program Law and Regulations**
- **Administered By DCR**
- **VDOT Guidance – IIM-LD-195**

## Land Disturbance (as defined in the VSMP Regulations):

- **A manmade change to the land surface that potentially changes its runoff characteristics including any clearing, grading or excavation associated with the proposed activity**

- **Grading of gravel surfaces to maintain travel way generally exempt \***

- **Pavement milling and/or overlay generally exempt \***

**\* Changes by the 2011 G.A to the VSMP Law (Section 10.1-603.8) classifies paving an impervious surface and the associated shoulder and ditch restoration as routine maintenance activities and, therefore, exempt from VSMP Regulation requirements.**

➤ **Applicable for all Regulated Land Disturbance Activities (RLDA) undertaken by or for VDOT (unless otherwise exempted) including, but not limited to projects and activities developed under the following plan processes:**

➤ **RAAP**

➤ **SAPP**

➤ **Minimum**

➤ **No Plan**

➤ **PPTA**

➤ **Design Build**

➤ **Capital Outlay**

➤ **Rural Rustic**

➤ **Non Routine/Routine Maintenance Activities \***

**\* All routine maintenance activities exempted by 2011 G.A. changes to the VSMP Law (Section 10.1-603.8)**

- **Applicable to any land disturbing activity (construction or maintenance) that requires coverage under the VSMP Construction Permit (i.e., disturbs an area equal to or greater than the following):**
  - **Routine Maintenance Activities – 5 Acres \***
  - **Areas in a designated CB Preservation Area – 2,500 square feet**
  - **All other areas – 1 Acre**

**\*Acreage threshold eliminated by 2011 G.A. changes to the VSMP Law (Section 10.1-603.8)**

- Special exemption for linear development projects (i.e., highway **construction** projects) where **all** the following conditions are met:
  - **Less than one acre will be disturbed per outfall or watershed.**
  - **There will be insignificant increases in peak flow rates downstream of the discharge point.**
  - **There is no existing or anticipated erosion problems downstream of the discharge point.**
  - **There is no existing or anticipated flooding problems downstream of the discharge point.**
- Typically applied on an outfall by outfall basis

- **VDOT Central Office staff will generally serve to develop program-wide policies and procedures, including implementation, training, reporting, and assessment tools.**
- **District staffs will generally be responsible for program implementation on specific construction and maintenance field activities.**

# STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

# SWPPP

- **A Stormwater Pollution Prevention Plan (SWPPP) identifies potential sources of pollutants which may reasonably be expected to affect the stormwater discharges from the construction site and any off site support areas and describes and ensures implementation of practices which will be used to reduce pollutants in such discharges.**

# Required for all Land Disturbing Activities

- **Needing VSMP Construction Permit Coverage (VSMP Law and Regulations)**
- **Needing ESC Plan (R&B Specification 107.16(e))**
- **VDOT Guidance – IIM-LD-246**

## ➤ **VSMP MS-4 General Permit Program**

- **Required For The Discharge From Small Municipal Separate Storm Sewer Systems (MS4) in the 13 Census Urbanized Areas Of Virginia**

## ➤ **MS-4 General Permit:**

- **Authorized by CWA**
- **National program administered by EPA**
- **State program authorized through the VSMP Law and Regulations & administered by DCR's Division of Soil and Water**
- **Five year permit cycle**
- **Current State permit issued July 1, 2008 and expires June 30, 2013**
- **Requires Annual Progress Reports**

# The 13 Urbanized Areas

## ➤ The 13 Urbanized Areas within VDOT District Boundaries:

- **Bristol District**
  - **Bristol**
  - **Kingsport**
- **Culpeper District**
  - **Charlottesville**
- **Fredericksburg District**
  - **Fredericksburg**
- **Hampton Roads District**
  - **Hampton Roads**
- **Lynchburg District**
  - **Danville**
  - **Lynchburg**

# The 13 Urbanized Areas (Cont.)

## ➤ The 13 Urbanized Areas within VDOT District Boundaries:

### ➤ Northern Virginia District

#### ➤ Northern Virginia

### ➤ Richmond District

#### ➤ Richmond

### ➤ Salem District

#### ➤ Blacksburg

#### ➤ Roanoke

### ➤ Staunton District

#### ➤ Harrisonburg

#### ➤ Winchester

# MS4 General Permit

- **MS4 General Permit Contains Six Minimum Control Measures that must be addressed in the Permittee's Implementation Plan**

## **1. Public Education and Outreach on Stormwater Impacts**

- ***Requirement:* Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater runoff on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.**
- **VDOT MS4 web site at:**  
[http://www.virginiadot.org/programs/stormwater\\_management.asp](http://www.virginiadot.org/programs/stormwater_management.asp)

# MS4 General Permit (Cont.)

## 2. Public Involvement/Participation

- **Requirement:** Comply with State public notice requirements when developing a stormwater management plan. Promote programs for public participation in helping to prevent/reduce pollution in stormwater runoff.

## 3. Illicit Discharge Detection and Elimination

- **Requirement:** Develop, implement, and enforce a program to detect and eliminate illicit discharges into VDOT's storm sewer system.
- Includes mapping of storm sewer outfalls.

# MS4 General Permit (Cont.)

## 4. Construction Site Stormwater Run-Off Control

- **Requirement:** Develop, implement and enforce a program to reduce pollutants in storm water runoff from construction activities. (ESC Plans)

## 5. Post Construction Stormwater Management

- **Requirement:** Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects. (Post Development SWM Plans)

# MS4 General Permit (Cont.)

## 6. Pollution Prevention/Good Housekeeping for Municipal Operations

- **Requirement:** Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations, such as asset management activities, fleet and building maintenance, new construction, and stormwater system maintenance.

# MS4 Steering Committee

- **Roy Mills – Chairman – L&D Division**
- **Other Members - Representatives of:**
  - ✓ **Contract and Scheduling Division**
  - ✓ **Environmental Division**
  - ✓ **Learning Center**
  - ✓ **Location and Design Division**
  - ✓ **Maintenance Division**
  - ✓ **Public Affairs Division**
  - ✓ **Traffic Engineering Division**
  - ✓ **Transportation and Mobility Planning Division**

# Roles and Responsibilities

- **VDOT Central Office staff will serve to develop program-wide policies and procedures, including implementation, reporting, and assessment tools.**
- **VDOT Central Office staff will provide ongoing support to the Districts, including appropriate training, and the development of the required annual reports.**
- **District staffs will generally be responsible for implementation of various components of the program within their specific Urbanized Areas.**

# Things on the Horizon

# New VSMP Regulations (DCR)

## Items Impacting VDOT Projects

- ✓ **New water quality requirements**
- ✓ **New BMP facilities**
- ✓ **New water quantity requirements for channel erosion and flooding (replaces MS19)**
- ✓ **Projects with allocated funds in Six Year Program grandfathered until 7/1/2019**

# Effluent Limitation Guidelines (EPA)

- For Construction Site Run-off.
- Implemented by EPA November 2009
- Requires best available BMP's for land disturbances less than 20 acres initially, then less than 10 acres.
- Requires numeric turbidity limits to be met for construction site runoff from land disturbances 20 acres or greater initially, then 10 acres or greater.
- Requires monitoring to demonstrate compliance with numeric limits.

# Effluent Limitation Guidelines (EPA) (Cont.)

- **Home Builders Association challenged EPA in court on numeric limit values.**
- **EPA delayed implementation of numeric limitations until further study (18 months).**
- **ELGs will have to be included by DCR in VSMP General Construction Permit before they are required on land disturbance activities in Virginia. Current General Construction Permit expires on June 30, 2014.**

## TMDL Plans for Impaired Waters (DEQ)

- **Mandated by EPA as a result of court decree.**
- **Implemented through the VSMP MS4 and Construction Permits**
- **10 implementation plans approved for current VSMP MS4 and Construction Permit cycles.**
- **Hundreds of additional implementation plans required to be addressed during next 5 year permit cycles.**

# TMDL Plans for Impaired Waters (DEQ) (Cont.)

- **Defines the pollutant of concern and develops a WLA for permittees.**
- **Typical pollutants are sediment, bacteria, nutrients, etc.**
- **Flow TMDL now being used as a surrogate . Limitations placed on the amount of flow that can be released from site (e.g., 45% of one year 24 hour storm).**

# Chesapeake Bay TMDL

- **Mandated by EPA by way of Presidential Executive Order**
- **Pollutants of concern – phosphorus, nitrogen and sediment**
- **Limitations placed on Agriculture, Urban Development, CSOs and Onsite Septic Systems**
- **Impacts over 50% of the area of the State**

## Chesapeake Bay TMDL (Cont.)

- **Draft Va. Watershed Implementation Plan (WIP) submitted to EPA in September 2010**
- **EPA approved TMDL on 12/29/10**
- **Approved TMDL Includes Va. WIP (Phase I)**
- **Virginia Phase II WIP currently under development (due for completion by end of this year)**

## Chesapeake Bay TMDL (Cont.)

- **Interim evaluation and course correction as needed in 2017**
- **Target completion date of 2025 for full implementation of the CB TMDL program**
- **Will potentially require BMP retrofits on roadways and facilities without any current BMPs and modifications to existing BMPs to achieve greater pollutant removal efficiency.**

# Impacts On VDOT Projects

- ✓ **MORE** design time and cost
- ✓ **MORE** right of way cost
- ✓ **MORE** construction time and cost
- ✓ **MORE** maintenance time and cost

# Questions???