Virginia Department of Transportation

Pollutant Discharge Elimination System

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

Serving the

Urbanized Areas of Virginia

Registration # VA040115 - coverage from July 1, 2008 to June 30, 2013

YEAR ONE PROGRESS REPORT

July1, 2008 to June 30, 2009

October 06, 2009

Virginia Department of Transportation
Location and Design Division
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Print Name: David S. Ekern, P.E. Title: Commonwealth Transportation Commissioner

Signature: _____ Date: _____

VIRGINIA DEPARTMENT OF TRANSPORTATION STORMWATER MANAGEMENT PROGRAM

The Virginia Department of Transportation's (VDOT's) Stormwater Management (SWM) Program is presented in the form of the six minimum control measures required by the Virginia MS-4 General Permit. This program has been developed with a consistent statewide implementation strategy since VDOT maintains regulated MS4s (or components of regulated MS4s) within the public right-of-ways within all thirteen designated urbanized areas of Virginia. While VDOT's SWM Program is targeted toward those that construct, maintain and utilize its transportation infrastructure and facilities, many of the program's proposed goals have the potential for a broader appeal.

The VDOT SWM program has and continues to improve environmental compliance, quality and stewardship on VDOT land-disturbing activities through effective management, implementation, and enforcement of sound technical guidelines, criteria, and practices for stormwater management and erosion and sediment control.

This Annual Report identifies the progress towards achieving the measurable goals, as well as any changes and/or additions identified for each BMP. A description of VDOT's proposed Best Management Practices (BMPs) for each minimum control measure, and the Year 1 goals and accomplishments, is summarized on the following pages:

1	**Best Management Practices for Public Education and Outreach** *Distribute educational materials and perform outreach to inform citizens about the impacts polluted stormwater runoff discharges can have on water quality.*
A	**Public Education**
	Provide information on storm water quality, regulatory requirements; information on public participation, and links for additional information.
B	**Public Outreach**
	Employ diverse strategies to target audiences specific to the area serviced by the regulated MS4

BMP 1A	**Public Education - Public Affairs Lead Division**
Measurable Goal(s)	➢ *Goal*: Develop and maintain a Stormwater Management Web page on www.VirginiaDOT.org ➢ *Measure*: The development of the page, and visitor statistics based on industry-accepted Web metrics tools. ➢ *Goal*: Post and promote the availability of the Stormwater Management educational video and public service announcements (PSAs) on the VDOT Stormwater Management Web page and the Commonwealth of Virginia's YouTube Web page. ➢ *Measure*: The posting of the video and PSAs on both Web pages and number of requests received for copies. ➢ *Goal*: Develop a VDOT Stormwater Management fact sheet. An electronic version of the fact sheet will be posted on the VDOT Web page. Additionally, copies may be printed and distributed to the public and other MS4 operators. ➢ *Measure*: The development of the fact sheet and its posting on the VDOT Web page, and the number of copies distributed. ➢ *Goal*: Partner with other MS4 operators to broadcast SWM Public Service Announcements (PSAs) twice in each urbanized area per permit cycle. ➢ *Measure*: Number of times PSAs are broadcast.
Milestone Yr 1	• Establish a Stormwater Management Web page on www.VirginiaDOT.org. • Begin posting program information on the web page as available including the fact sheet, video and PSAs. • Investigate potential partnerships with other MS4 operators on the broadcasting of the Stormwater Management PSAs.
Accomplishments	• The VDOT MS4 Permit Program Web page is in development, and is currently staged on the VDOT web site. Once content has been finalized, the web page will go live. • The web page will consist of information on VDOT's MS4 Program, including the implementation plan and annual reports. The web page also will include links to public service announcements/educational videos, illicit discharge and detection information and a program fact sheet.

BMP 1B(1) (a)	**Public Outreach – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Install message signs and mechanism for distribution of informational brochures at pet waste stations at safety rest stations and welcome centers regarding environmental effects of pet waste and encouraging pet owners to properly dispose of their pet waste. ➢ *Measure*: Number of signs installed and number of brochures distributed.
Milestone Yr 1	• Install message signs at pet waste stations on environmental effects and proper disposal of pet waste.
Accomplishments	• Pet waste stations similar to the **DOGIPOT** pet stations have been installed at all rest areas/welcome centers. The pet waste station is stocked with disposal bags as part of the normal maintenance operation. • Because of the review to determine which rest areas are to be closed, a decision on the placement of additional signage and mechanisms for distribution of informational brochures has been delayed.

BMP 1B(1) (b)	**Public Outreach – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Promote storm drain stenciling and Adopt-a-Highway programs. ➢ *Measure*: Number of land use permits issued for storm drain stenciling and highway miles adopted under the Adopt-a-Highway program.
Milestone Yr 1	• Promote storm drain stenciling and Adopt-a-Highway programs and track number of permits issued and highway miles adopted. • Update and verify the database used for tracking Adopt-a-Highway Program.
Accomplishments	• During the year from July 1, 2008 to June 30, 2009 a total of 7 storm drain stenciling Land Use Permits were issued. From program inception to June 30, 2009 a total of 145 storm drain stenciling Land Use Permits have been issued. • A total of 11,921 miles are currently adopted by citizens for clean up in the Adopt-a-Highway Program.

BMP 1B(2)	**Public Outreach – Traffic Engineering Lead Division**
Measurable Goal(s)	➢ *Goal*: Participate in watershed sign installation program based on available funding. ➢ *Measure*: Total number of signs installed.
Milestone Yr 1	• Install up to 34 watershed signs (based on total budgeted estimated cost of $37,500).
Accomplishments	• 27 watershed signs were installed at various location across the state of Virginia at a cost of $37,500

2	**<u>Best Management Practices for Public Participation and Involvement</u>** *Provide opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives on a stormwater management panel.*
A	**Public Involvement**
	Provide public access to information pertaining to VDOT's MS4 Program.
B	**Public Participation**
	Participate in watershed organizations and local government technical advisory committees to ensure that provisions for linear development projects are incorporated into local watershed planning.

BMP 2A	**Public Involvement - Public Affairs Lead Division**
Measurable Goal(s)	➢ *Goal*: Make available for public review VDOT's MS4 Program Plan and subsequent annual reports on the VDOT Stormwater Management Web page. Promote the location of the Stormwater Management Web page in VDOT publications, where applicable. ➢ *Measure*: Visitor statistics based on industry-accepted Web metrics tools.
Milestone Yr 1	• Post MS4 Program Plan on the VDOT Stormwater Management Web page. • Promote the location of the Stormwater Management Web page in VDOT publications, where applicable.
Accomplishments	• The VDOT MS4 Permit Program Web page is in development, and is currently staged on the VDOT Web site. Once the content has been finalized, the Web page will go live. • The Web page will consist of information on VDOT's MS4 Program Plan.

BMP 2B(1)	**Public Participation – Location and Design Lead Division for project design related issues**
Measurable Goal(s)	➢ *Goal*: Participate in local activities aimed at increasing public awareness of water quality and stormwater issues. ➢ *Measure*: Number of watershed planning meetings attended.
Milestone Yr 1	• Participate in watershed planning meetings and maintain a summary of issues considered.
Accomplishments	• VDOT employees participated in the following meetings / activities o Numerous IDDE informational meetings o 1 - EPA workshop o 4 - Phase II Stormwater Committee meetings-York County Development Services o 8 - Joint Environmental Subcommittee Meetings - HRPDC Chesapeake o 8 – Stormwater Regulatory Action and related meetings -Technical Advisory Committee, BMP Clearing Hose Committee, SWM Handbook Committee SWCB meetings o 2- Fredericksburg Area MS-4 stakeholders meetings o Numerous Rivanna Rambler for Outreach meetings
BMP 2B(2)	**Public Participation – Environmental Lead Division for water quality related regulatory issues**
Measurable Goal(s)	➢ *Goal*: Participate in local activities aimed at increasing public awareness of water quality and stormwater issues. ➢ *Measure*: Number of watershed planning meetings attended.
Milestone Yr 1	• Participate in watershed planning meetings and maintain a summary of issues considered.
Accomplishments	• VDOT employees participated in 14 meetings including the Coastal Zone Management Policy Team, Virginia Waters Advisory Committee, Ecosystem Services Workshop, Wildlife/Climate Change Workshop, Virginia Water Monitoring Council, Upper Tennessee River Roundtable, Accotink Creek Watershed Advisory Group, Nichol Run/Pond Branch Watershed Advisory Group, and the Potomac Watershed Roundtable

3	**<u>Best Management Practices for Illicit Discharge Detection and Elimination (IDDE)</u>** *Develop, implement, and enforce a program to detect and eliminate illicit discharges into VDOT's stormwater system.*
A	**Prevent or minimize to the maximum extent practicable, the discharge of hazardous substances or oil**
	Guidance addresses the issues of illicit discharge. Non-storm water discharges will be prohibited, except for those of uncontaminated water as listed in the permit requirements. Education on illicit discharges will be a key component.
B	**Evaluate guidance to identify and report Illicit Discharges Connections**
	Guidance and procedures to detect and report the source of the illicit discharges into MS4
C	**Continue to develop Inventory of Storm Water Systems**
	An updated GIS-compatible digital database of storm water infrastructure outfalls.
D	**Track the number of illicit discharges identified and eliminated**
	Guidance for tracking and reporting illicit discharges
E	**Prohibit, through ordnance, or other regulatory mechanism non-stormwater discharges**
	Practices to eliminate and/or minimize illicit discharges
F	**Address Total Maximum Daily Load (TMDL) Waste Load Allocation (WLA) streams within each MS4**
	Update plan within 18 months to include measurable goals, schedules, and strategies to ensure MS4 consistency with any TMDL for which waste loads have been allocated to the MS4

BMP 3A	**Evaluate guidance and training programs to prohibit non-stormwater discharge into MS4 – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal:* Review training guidance and current practices and update and revise as necessary ➢ *Measure:* An annual evaluation of guidance and practices ➢ *Goal:* Provide IDDE training programs to appropriate audiences. ➢ *Measure:* Number of employees, contractors, and volunteers trained.
Milestone Yr 1	• Review training guidance and current practices related to IDDE and determine necessary revisions to update for compliance with MS4 permit requirements. • Review other training materials and develop plan to incorporate guidance dealing with IDDE.
Accomplishments	• Maintenance Division conducted a web search to collect information related to how other MS4 permit holders are training employees, contractors and volunteers. This information, including sample brochures and training manuals, was shared by email or in meetings with the Environmental Division, Learning Center , and Public Affairs Division. • The Maintenance and Environmental Divisions agreed to review all of the IDDE material and produce an approved VDOT wording for IDDE definition that will be consistent with hazardous material and other environmental training and guidelines. The Learning Center will use the IDDE definition to review all training guidance and current practices and make recommendations for revisions. The Maintenance Division will work closely with Public Affairs to develop a VDOT IDDE brochure that can be viewed and printed from the MS4 page on the VDOT web site. The Maintenance Division will work with Public Affairs to review all material associated with the Adopt-A-Highway program to determine which items should be modified to include IDDE identification and reporting.

BMP 3B	Guidance to identify and report Illicit Discharges Connections – Maintenance Lead Division
Measurable Goal(s)	➢ *Goal:* Develop/revise illicit discharge identification and reporting protocols. ➢ *Measure:* Establishment of identification and reporting protocols. ➢ *Goal:* Establish a means for the public to report illicit discharges. ➢ *Measure:* Development of reporting system and number of reports received of potential illicit discharges.
Milestone Yr 1	• The development of the illicit discharge identification and reporting protocols will be completed as part of the requirement matrix for NPDES/MS4 Program software and instructions manual for outfall inventory data collection. See BMP 3 C for milestones related to development of the NPDES/MS4 Program software instructional manual for outfall inventory data collection. • Develop a means for the public to report illicit discharges through the VDOT SWM Program webpage, Adopt-A-Highway Program, or by contacting the appropriate VDOT Residency/District Office.
Accomplishments	• An Outfall IDDE Reconnaissance Field Sheet has been developed and approved for IDDE investigations. When an outfall is determined to have an Overall Outfall Characterization (Section 5 on the Outfall Reconnaissance/Inventory Field Sheet) of obvious, or suspect; or when a potential IDDE has been reported the site will be investigated and the Outfall IDDE Reconnaissance Field Sheet will be completed. A GIS database will be developed to store the field data and test results. • When completed and activated the VDOT MS-4 Program web page will provide a means for the public to report a suspected IDDE discharge in a manor similar to the way that a citizen can report a road problem through the Online work request. • Discussions have started to determine the best procedure to establish a reporting procedure for suspected IDDE discharges for phone calls received at the Residencies or other locations. Excellent procedures and protocols are in place for reporting of hazardous materials incidents to VDOT personnel and other state agencies. The suspect IDDE discharges procedure will need to be clearly defined so that it will not jeopardize the hazardous materials incidents reporting procedures.

BMP 3C	Inventory of Storm Water System – Maintenance Lead Division
Measurable Goal(s)	➢ *Goal:* Develop and maintain an updated inventory of roadway outfalls in the MS4 urbanized areas. ➢ *Measure:* Development and implementation of inventory system and protocols. ➢ *Measure:* Percentage of centerline miles by roadway functional class by MS4 area inventoried.
Milestone Yr 1	• Software – Develop requirement matrix for NPDES/MS4 Program software. Review NPDES/MS4 Program software that is currently being used by other MS4 jurisdictions in Virginia or is available in the market place. After evaluation of available software make a purchase vs. develop decision. • Instructional Manual – Review all published material and other DOT manuals and determine the best protocol to be utilized to inventory the outfalls.
Accomplishments	• Several steps have been completed in the development and implementation of an inventory system for MS4 outfalls. These steps have been completed: o Development of the Outfall Reconnaissance/Inventory Field Sheet included a review of all available outfall inventory field data forms. After a review of each form, it was determined that VDOT would modify the EPA - Outfall Reconnaissance Inventory/ Sample Collection Field Sheet for its use. o The Maintenance Division GIS resource developed a GIS model to select targets for field investigation. The key GIS components to the model are VDOT roads, USGS National Hydrograph Dataset\VA_NHD for streams and water bodies, and the National Wetlands Inventory (GIS_DATA.SDE_US_FWS_NWI). The streams and water bodies were enhanced by adding a 25 meter buffer around the shape and the NWI shapes were enhanced with a 35 meter buffer. When the center line of the road came in contact with either a buffered shape crossing the road or a buffer running parallel to the road, a target was produced. The targets were integrated so that when all three buffered shapes were present only one target was produced but the target would have a signature for all three buffers shapes. A total of 11,321 targets were generated and for purposes of estimating outfall locations . It was assumed that there were 3 to 4 outfalls on average per target. This would result in the inventory of 33,963 to 49,284 outfalls for the thirteen Census Urban Areas in Virginia.

Targets generated for each Census Urban Area:

CUA	Targets
Blacksburg, VA	100
Bristol, TN--Bristol, VA	118
Charlottesville, VA	226
Danville, VA	88
Fredericksburg, VA	502
Harrisonburg, VA	113
Kingsport, TN—VA	55
Lynchburg, VA	219
Richmond, VA	2,268
Roanoke, VA	746
Virginia Beach, VA	2,443
Washington, DC--VA—MD	4,217
Winchester, VA	226
VDOT Total	11,321

- In the development of a GIS database for the outfall inventory, VDOT decided to modify the EPA - Outfall Reconnaissance Inventory/ Sample Collection Field Sheet for data collection. It was also decided to modify the Access Database provided by the EPA for data consolidation.
- The US Army Corps of Engineers Baltimore and Wilmington offices were contacted to determine if they have the interest and funding necessary to complete the Outfall Reconnaissance and Inventory under Section 22 of the Water Resources Development Act of 1974 (Public Law 93-251), as amended. This act provides authority for the Corps of Engineers to assist States, local governments, and other Non-Federal entities in the preparation of comprehensive plans for development, utilization, and conservation of water related land resources. Studies under the Section 22 authority are cost shared on a 50/50 basis between the Federal government and the non-federal sponsor. The Corps of Engineers has completed the outfall inventory for many other MS4 permit holders in Virginia and other states. One of the tasks assigned to the Corps of Engineers will be the production of the data collection manual for the Outfall Reconnaissance and Inventory process.
- A listing of watersheds with TMDL's is be used in creating a priority listing for completion of the outfall inventory by watershed. Based on a review of the DEQ website it has been determined that the following watersheds, where VDOT has a waste load allocation, will be first in priority for the Outfall Reconnaissance and Inventory.

TMDL Project	City/County	Watershed ID	Pollutant(s)
Bull Run	Fairfax, Prince William	A23R	Sediment
Goose Creek and Little River Watersheds	Loudoun	A08R	Sediment
Popes Head Creek	Fairfax	A23R	Sediment
Crab Creek Watershed	Montgomery	N18R	E. Coli, Sediment
Stroubles Creek Watershed	Montgomery	N22R	Sediment
Upper Roanoke River Watershed	Montgomery, Bedford, Roanoke, Franklin, Salem	L04R	Sediment
Upper Roanoke River Watershed	Montgomery, Bedford, Roanoke, Franklin, Salem	L02R, L04R, L12L	E. Coli
Opequon and Abrams Creek Watersheds, Aquatic Life	Frederick, Winchester	B09R	Sediment
Opequon and Abrams Creek Watersheds, Bacteria	Frederick, Winchester	B08R, B09R	E. Coli

BMP 3D	**Track and eliminate illicit discharges – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Notify in writing any downstream regulated MS4 to which the VDOT small regulated MS4 is physically interconnected to their system. ➢ *Measure*: Total number of interconnected MS4 Operators notified. ➢ *Goal:* Develop and maintain a process for contacting and reporting illicit discharges to appropriate authority. ➢ *Measure:* Development of process and number of illicit discharges reported.
Milestone Yr 1	• Develop a listing of regulated MS4 localities based on the DCR report of permits issued. • Enhance the list to include contact name and related information and develop a protocol for sending written notification to downstream physically interconnected MS4 localities. • Develop a protocol for sending reports of verified illicit discharges to the appropriate authorities.
Accomplishments	• The DCR PDF listing of all MS4 permit holders has been converted to a Word document in preparation for sending written notification to all MS4 permit holders. VDOT has determined that it has roads that interconnect with all of the MS4 permit holder's area of operation; therefore, it is highly likely that VDOT is discharging regulated stormwater into the downstream MS4 permit holder's regulated stormwater system. A letter of notification will be drafted and will be forwarded to all appropriate MS-4 permit holders. • When a confirmed IDDE discharged is discovered in a VDOT stormwater system, the source of the IDDE discharge will be determined. When the source is external to VDOT right of way a letter of notification along with VDOT's IDDE report will be forwarded to the appropriate authorities.

BMP 3E	**Prohibition of non-stormwater discharges – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Prohibit non-stormwater discharges into storm sewer systems through the Land Use Permitting Program. ➢ *Measure*: Number of guidance and training documents reviewed/revised to incorporate IDDE identification procedures. ➢ *Measure*: Number of Land Use Permitting employees that participate in trained on IDDE identification.
Milestone Yr 1	• Review Land Use Permitting guidance and training documentation and incorporate IDDE identification procedures where appropriate.
Accomplishments	• The MS4 requirements for outfalls, drainage acreage, etc., have been incorporated into the process for acceptance of new streets into the VDOT system. This Secondary Street Acceptance Requirements (SSAR), section 30-92-120, L, 2 procedure went into effect July 1, 2009. A total of 150 Land Use Permitting employees were training on the new requirements. • The Land Use section has been in contact with the VDOT Learning Center about development of E-Learning Modules to cover many of their training needs. The IDDE identification procedure will be incorporated into the E-Learning Modules. • All new piped discharges of stormwater onto VDOT right of way requires a field review and issuance of a Land Use Permit . If the field review indicates the potential for or presence of an IDDE at the point of interconnection, a Land Use Permit will not be issued.

BMP 3F	**Update MS4 plan to ensure consistency with TMDLs – Environmental Lead Division**
BMP 3F(1)	**Evaluate/revise/update legal authorities/policies/procedures – Environmental Lead Division**
Measurable Goal(s)	➢ *Goal:* Develop a list of existing legal authorities, policies and procedures that are applicable to reducing the pollutant identified in the WLA. ➢ *Measure:* Development of list. ➢ *Goal:* Develop and implement a schedule to evaluate existing legal authorities, policies and procedures to determine their effectiveness to address reduction of the pollutant identified in the WLA. ➢ *Measure:* Development and subsequent implementation of schedule ➢ *Goal:* Develop and implement a schedule to update existing legal authorities, policies and procedures to address weaknesses related to the MS4 Program and to ensure consistency with the TDML. ➢ *Measure:* Development and subsequent implementation of schedule.
Milestone Yr 1	• Begin the process of identifying existing legal authorities, policies and procedures applicable to reducing the pollutant identified in the WLA.
Accomplishments	• Continued working with DEQ to identify the EPA themes which are (1) the emphasis on shifting from TMDL development to implementation ("thinking of implementation up front results in a better TMDL", "implementation era", "in the past TMDLs driven by litigation, now turning attention to quality of plans"), and (2) more and more municipalities are being challenged in addressing the link between MS4s and TMDLs. • Held conference call with DEQ, Staunton District and C.O. Natural Resources for the future

	TMDL on Naked Creek. • The L&D Division developed scope of work for the development of consultant RFP to collect this data. Published RFP for consultant contract in August 2009.
BMP 3F(2)	**Update MS4 Program to address TMDL impacts – Environmental Lead Division**
Measurable Goal(s)	➢ *Goal:* Update the MS4 Program Plan to include information regarding TMDLs to ensure consistency; as a stakeholder participate in the development of any implementation plan to address the TDML and incorporate applicable best management practices identified in the TMDL plan into VDOT's MS4 Program Plan. ➢ *Measure:* Number of TMDLs incorporated into VDOT MS4 Program Plan. ➢ *Measure:* Number of plans implemented to address identified WLA. ➢ *Goal:* Identify and develop an estimate of the area draining from within VDOT right of way to identified TMDL waterways. ➢ *Measure:* Number of areas identified. ➢ *Goal:* Develop a characterization of the annual flow that estimates the storm water discharged and the quantity of pollutant identified in the waste load allocation discharged by the MS4. ➢ *Measure:* Number of sites for which development of characterization of stormwater discharges was completed. ➢ *Goal:* Implement procedures, reconnaissance and sampling protocols to identify and address the discharge of the pollutant identified in the waste load allocation to the MS4. ➢ *Measure:* Implementation of procedures. ➢ *Goal:* Integrate an awareness campaign into the public education and outreach program that promotes methods to eliminate and reduce the discharges of the pollutant identified in the WLA. ➢ *Measure:* Number of employees trained regarding the sources and methods to eliminate and minimize the discharge of the pollutant.
Milestone Yr 1	• Secure services of consultant to assist in development and implementation of plan to address TMDL impacts/requirements. • Begin process of identifying VDOT facilities impacted by TMDL Implementation Plans.
Accomplishments	• Developed scope of service, for the consultant contract RFP advertised by the L&D Division in August 2009. • Began process for identifying VDOT facilities in MS4 areas.

Revised 11/16/2009

4	**Best Management Practices for Construction Site Runoff Control Program** *Develop, implement and enforce a program to reduce pollutants in storm water runoff from construction activities that result in a land disturbance of greater than or equal to one acre (2,500 sq ft in Chesapeake Bay Preservation Are).*
A	**Guidance for Construction Site Runoff Control Program**
	Implement qualifying state erosion and sediment control and stormwater management programs approved by the Virginia Department of Conservation and Recreation (DCR) on all regulated land disturbing activities.
B	**Compliance Procedures for Land Disturbance Activities**
	Review and certify erosion and sediment and stormwater management plans for regulated land disturbance activities, secure required coverage under the Virginia Stormwater Management (VSMP) Construction Permit, and track the activities. Perform final inspections to certify construction of post construction swm facilities was completed per approved plans and that the facilities are functional.
C	**Erosion and Sediment Control Training**
	Provide training opportunities through the Erosion and Sediment Control Contractor Certification (ESCCC) Program and the In stream Maintenance Training Program. Ensure employees obtain the appropriate certifications required by the Virginia Erosion and Sediment Control (ESC) law.
D	**Inspections and Quality Assurance Reviews**
	Perform inspections in accordance with Virginia ESC Regulations and undertake quality assurance reviews to assess compliance with environmental commitments on all regulated land disturbance activities.
E	**Enforcement Process**
	Review administrative process for enforcement procedures, penalties for violations and procedures for issuing stop-work orders and revise/develop as appropriate.
F	**Procedures for receipt and consideration of information submitted by the public**
	Develop and implement procedures for the receipt and consideration of information submitted by the public concerning VDOT's stormwater program.

BMP 4A	**Evaluate guidance for Construction Site Runoff Control Program – Location and Design Lead Division**
Measurable Goal(s)	➢ *Goal*: Evaluate guidance documents, adjust/revise as appropriate. ➢ *Measure*: Number of documents reviewed and adjusted/revised. ➢ *Goal*: Secure annual approval of the VDOT ESC and SWM Standards and Specifications from DCR. ➢ *Measure*: Material submitted and approved by DCR. ➢ *Goal*: Continue to implement project tracking of regulated land disturbing activities in urban areas. ➢ *Measure*: Total number of land disturbing activities registered for VSMP Construction Permit coverage.
Milestone Yr 1	• Submit erosion and sediment control and stormwater management standards and specifications to DCR for annual approval. • Acquire and track VSMP Construction Permit coverage for regulated land disturbing activities undertaken by the Department. • Review and update program guidance as appropriate.
Accomplishments	• Submitted the 2009 annual ESC SWM Program including VDOT design Standards and specifications to DCR for approval. • Acquired and tracked 214 VSMP Construction permits. • All changes to the ESC and SWM design standards and specifications / guidance were included in the annual ESC SWM program submittal to DCR.

BMP 4B	Compliance Procedures for Land Disturbance Activities – Location and Design Lead Division
Measurable Goal(s)	➢ *Goal*: Ensure that the requirements of VDOT's ESC and SWM Programs are followed for each land regulated disturbing activity through the VSMP ESC and SWM Plan Certification process and the Termination Notification process. ➢ *Measure*: Number of projects submitted for coverage under the VSMP Construction Permit and number of termination notices processed.
Milestone Yr 1	• Require certification of ESC and SWM plans for regulated land disturbance activities. • Develop and implement procedures for certification of construction and functionality of post construction swm facilities for regulated land disturbance activities.
Accomplishments	• All ESC and SWM plans were reviewed and approved by a DCR certified ESC plan reviewer as a requirement prior to the VSMP construction permit submittal process.

BMP 4C(1)	Erosion Prevention and Sediment Control Training – Location and Design Lead Division
Measurable Goal(s)	➢ *Goal*: Provide VDOT's Erosion and Sediment Control Contractor Certification (ESCCC) Program training to contractor personnel. ➢ *Measure*: Number of contractor personnel trained.
Milestone Yr 1	• Update/revise course material as necessary. • Provide training to appropriate contractor personnel. Track number of personnel trained.
Accomplishments	• All course training material has been up-dated / revised to reflect the current VDOT Road and Bridge Standards and Specifications • 737 persons participated in the ESCCC class • 601 participants received ESCCC certification

BMP 4C(2)	Erosion Prevention and Sediment Control Training – Environmental Lead Division
Measurable Goal(s)	➢ *Goal*: Provide VDOT's In Stream Maintenance Training to VDOT maintenance forces. ➢ *Measure*: Number of employees trained.
Milestone Yr 1	• Update/revise course material as necessary. • Provide training to appropriate VDOT personnel. Track number of personnel trained.
Accomplishments	• Reviewed In-Stream Maintenance Training Materials - all still applicable to existing regulations and Department procedures. • In stream Maintenance Activities Parts 1 & 2 − 16 employees trained. • In-stream Maintenance Activities: Modules 1 – 9 − 16 employees trained. • Permits for Maintenance Activities −20 employees trained. • Initiating Environmental Review and Clearance − 12 employees trained. • Ditch Maintenance − 29 employees trained. • Countersinking of pipes and Culverts − 26 employees trained. • Sizing of Riprap Stone − 22 employees trained. • Maintenance Disposal Areas − 18 employees trained. • Alternative Stream Stabilization Measures − 28 employees trained. • Emergency Situations and Solutions − 1 employee trained.

BMP 4C(3)	Erosion Prevention and Sediment Control Training – Learning Center Lead Division
Measurable Goal(s)	➢ *Goal*: Ensure appropriate VDOT employees have necessary DCR Certifications. ➢ *Measure*: Number of employees certified through DCR as a RLD, ESC Inspector, Plan Reviewer, etc.
Milestone Yr 1	• Track number of employees with DCR certifications and provide notification to those requiring recertification.
Accomplishments	• Responsible Land Disturber – 38 employees certified • ESC Inspector – 325 employees certified • ESC Plan Reviewer – 16 employees certified • ESC Combined Administrator – 11 employees certified • ESC Program Administrator – 3 employees certified

BMP 4D	Inspections and Quality Assurance Reviews – Construction Lead Division
Measurable Goal(s)	➢ *Goal*: Perform site inspections in accordance with VDOT's annually Approved ESC and SWM Standards and Specifications. ➢ *Goal*: Perform project environmental compliance reviews. ➢ *Measure*: Total number of reviews performed. ➢ *Measure*: Percentage of environmental reviews resulting in excellence, complaint, deficient, and non-complaint findings.
Milestone Yr 1	• Perform site inspections and compliance reviews and track data in CEDAR (Comprehensive Environmental Data and Reporting System).
Accomplishments	• Completed 1235 site reviews over the past year. o 0.6% of projects received a rating of Excellence o 86.5% of projects received a rating of Compliant o 11.0% of projects received a rating of Deficient o 1.9% of projects received a rating of Non-Compliant

BMP 4E	Enforcement Process – Construction Lead Division
Measurable Goal(s)	➢ *Goal*: Review and revise/develop enforcement policies, procedures and penalties. ➢ *Measure*: Number of policies/procedures reviewed/revised/developed.
Milestone Yr 1	• Review administrative process for enforcement procedures, penalties for violations and procedures for issuing stop-work orders and revise/develop as appropriate.
Accomplishments	• Reviewed Road and Bridge Specifications and Construction Quality Improvement Program (CQIP) review questions to insure that they were effective in identifying violations and enforcement of our policies. Determined that they continue to be effective and relative to insure program compliance.

BMP 4F	**Procedures for receipt and consideration of information submitted by the public - Public Affairs Lead Division**
Measurable Goal(s)	➢ *Goal*: Develop and implement procedures for the receipt and consideration of information submitted by the public concerning VDOT's Stormwater Mamagement Program. ➢ *Measure*: Establishment of a means for citizens to provide information to the Department concerning the Stormwater Management Program and creation of a process for addressing the information received. ➢ *Measure*: Number of comments received and actions taken.
Milestone Yr 1	• Establish public comment page on VDOT SW website. • Develop procedures for addressing comments received.
Accomplishments	• The VDOT MS-4 Permit Program Web page is in development, and is currently staged on the VDOT Web site. Once content has been finalized, the Web page will go live. The Web page will include a function that allows visitors to submit questions and comments. Visitors will likely click on a link that enables them to send an e-mail to the program manager

5	**Best Management Practices for Post Construction Runoff Program** *Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre*
A	**Guidance for post-construction runoff controls**
	Continue to implement a comprehensive stormwater management program relative to the most recent approved version of the VDOT Erosion and Sediment Control Management standards and specifications.
B	**Develop and implement strategies for post-construction runoff controls**
	Develop and implement strategies, which include a combination of structural and non-structural best management practices and secure registration coverage for regulated land disturbing activities under the VSMP General Permit for Discharges of Stormwater from Construction Activities.
C	**Provide Long-term operation and maintenance of controls**
	Evaluate inspection requirement guidance for post-construction runoff control and related maintenance requirements and track VDOT owned and operated stormwater management facilities.

BMP 5A	**Guidance for post-construction runoff controls - Location and Design Lead Division**
Measurable Goal(s)	➢ *Goal*: Evaluate stormwater program guidance and update as appropriate ➢ *Measure*: Perform annual evaluation of guidance. ➢ *Measure*: Number of documents reviewed/revised.
Milestone Yr 1	• Review stormwater program guidance (Instructional & Informational Memoranda, Drainage Manual, standards, specifications, etc) and update as appropriate.
Accomplishments	• Reviewed stormwater program guidance and updated the following: o SWPPP documents o Instructional and Informational Memorandum revisions o Drainage Manual o 2008-2009 Road and Bridge Standards and Specifications ➢ Developed Temporary Vehicular Watercourse Crossing ➢ Developing Super Silt Fence Standard ➢ Developing Level Spreader Standard

BMP 5B	Develop and implement strategies for post-construction runoff controls – Location and Design Lead Division
Measurable Goal(s)	➢ *Goal:* Develop and promote the use of appropriate design tools and methodologies to meet the technical requirements for post construction runoff control. ➢ *Measure:* Number of design tools and procedures promoted/developed. ➢ *Goal*: Secure coverage for all regulated land disturbing activities under the VSMP General Permit for Discharges of Stormwater from Construction Activities. ➢ *Measure*: Number of projects registered for coverage. ➢ *Goal*: Encourage the use of Low Impact Development (LID) swm practices where determined appropriate. ➢ *Measure*: Number of guidance documents revised to incorporate usage guidelines for LID SWM practices.
Milestone Yr 1	• Register all regulated land disturbing activities for VSMP Construction Permit coverage and track activities in a database. • Make appropriate SWM design tools and practices information available to District Offices and Central Office Staffs. • Incorporate guidelines for usage of LID SWM practices into guidance documents.
Accomplishments	• All applicable regulated land disturbing activities were registered for a VSMP Construction Permit coverage and process was tracked in the database. • SWM design tools and guidelines were made available to all the District Offices and Central Office staff. • Guide lines for LID usage in SWM practices are presently being developed as a guidance document.

BMP 5C	Provide Long-term operation and maintenance of controls – Maintenance Lead Division
Measurable Goal(s)	➢ *Goal*: Evaluate inspection and maintenance guidance/procedures and revise/update as appropriate. ➢ *Measure*: Evaluation and updating/revising of guidance documents. ➢ *Goal*: Update/develop/maintain a database of all known VDOT owned and operated structural stormwater management facilities. ➢ *Measure*: Update/creation of a database identifying the type of BMP, HUC, impaired water discharged to (if any) and number of acres treated by the facility. ➢ *Measure*: Number of SWM facilities entered into database. (Collected information will be provided in subsequent annual reports). ➢ *Goal*: Perform yearly inspection and required maintenance on stormwater management facilities. ➢ *Measure*: Number of facilities inspected.
Milestone Yr 1	• Evaluate the stormwater management facilities inspections reports, conduct quality control inspections to ensure consistent evaluation of basin conditions and develop cost effective and practical inspection and maintenance protocols for all types of structural stormwater management facilities. • Inventory – Location and Design (L&D) Division will continue maintain the pre-construction databases related to stormwater structures. Maintenance Division will continue field verification of existing stormwater structures. • GIS Database – See BMP 3 C for milestones related to the procurement, modification and implementation of NPDES/MS4 Program software. • Perform inspections and required maintenance on stormwater management facilities.

<table>
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<tr><td>Accomplishments</td><td>

VDOT and DCR completed a joint review of a sampling of stormwater facilities in all nine construction districts as part of VDOT's Annual ESC & SWM Standards and Specification approval process. When the DCR report is received in the Fall of 2009 , VDOT will evaluate its inspection process and make corrections as needed.
The Maintenance Division has completed the office and field review of all VDOT construction projects since 1990 to ensure all stormwater features maintained by VDOT are captured in the maintenance database. The total of stormwater features maintained by VDOT is:

<table>
<tr><th>District</th><th>Stormwater Facilities</th></tr>
<tr><td>Bristol</td><td>139</td></tr>
<tr><td>Salem</td><td>87</td></tr>
<tr><td>Lynchburg</td><td>103</td></tr>
<tr><td>Richmond</td><td>228</td></tr>
<tr><td>Hampton Roads</td><td>97</td></tr>
<tr><td>Fredericksburg</td><td>140</td></tr>
<tr><td>Culpeper</td><td>52</td></tr>
<tr><td>Staunton</td><td>142</td></tr>
<tr><td>Northern Virginia</td><td>349</td></tr>
<tr><td></td><td></td></tr>
<tr><td>System Total</td><td>1,337</td></tr>
</table>

The above totals do not include stormwater facilities that were constructed on VDOT projects but are now maintained by cities/towns/counties or private entities.
The shape files that are collected during the time when a stormwater facility is placed into the inventory are collected using ArcMap software. The ArcMap files have been uploaded into ArcView to provide a state wide map. All discrepancies are now being reviewed and corrected so that a statewide GIS map can be developed.
An agreement is being negotiated with the US Army Corps of Engineers that will provide VDOT with the GIS Access Database that the Corps has developed for Stafford County. The database combines the inventory of facilities, which VDOT keeps on Excel spreadsheets, with the inspection reports that are in the ArcMap database format. The Stafford County model will be modified to meet VDOT's requirements. The agreement is expected to be signed in the fall of 2009.
Inspections are completed annually on all stormwater facilities maintained by VDOT. Maintenance recommendations are made to the responsible maintenance provider (residency, division or contractor) as a result of the inspection.

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6	**Best Management Practices for Pollution Prevention and Good Housekeeping** *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*
A	**Implement program to prevent/reduce pollution runoff**
	Existing procedures for nutrient management application will be reviewed and revised (if applicable) in an effort to minimize the discharge of pollutants. The procedures will also be reviewed to ensure that these activities are performed under, and in accordance with, any appropriate permit conditions.
B	**Implement operation procedures, maintenance schedules, and long-term inspection procedures to reduce pollutant discharges**
	Operation and maintenance programs will continue to be implemented and revised as necessary to ensure that these activities are performed under, and in accordance with, any appropriate permit conditions.
C	**Implement a program to reduce/eliminate discharges of pollutants and promote the proper disposal of waste**
	Existing procedures for waste disposal will be reviewed and revised (if applicable) in an effort to minimize the discharge of pollutants. The procedures will also be reviewed to ensure that these activities are performed under, and in accordance with, any appropriate permit conditions.
D	**Employee pollution prevention education**
	Employee education will be provided to help minimize storm water pollution potential from land disturbance activities, fleet storage areas, building sites, parking areas and maintenance yards.

BMP 6A	**Implement program to prevent/reduce pollution runoff – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Complete the approval process for a revised nutrient management strategy for land disturbance activities and implement on all maintenance and construction activities ➢ *Measure*: Number of acres of land disturbance on which the revised nutrient management strategy is implemented under the VSMP Construction Permit Program.
Milestone Yr 1	• Complete the approval process for revised Nutrient Management Program (NMP) guidance and specifications. • Incorporate NMP requirements on all maintenance and construction activities and track acreage through VSMP Construction Permit Program.
Accomplishments	• VDOT has decided to make changes to the specifications for rolled erosion control products (VDOT EC-2 and EC-3) and specifications for hydro mulches in conjunction with the changes to construction specifications necessary to implement a revised NMP. The combined changes to the seeding products (rolled erosion control and hydro mulches) should provide better compliance with the VSMP Construction Permit Program and TMDL requirements for those watersheds where VDOT has a WLA for silt. • A review of the current VDOT specification for EC-2 (one classification) was compared to the FHWA/ECTC classifications for rolled erosion control standards. The Current industry classifications for hydro mulches and compost were also researched. This information along with other states specifications were presented to the Materials & L&D Divisions in May of 2009. The recommendation that came from that meeting was that the development team was to proceed to complete the research, contact the manufactures and other states and complete a draft of revised specifications for fall 2009 delivery. After the research is completed , the engineers and inspectors will have the same guidance for the selection of the proper materials to be placed on the seeded slopes.

BMP 6B	**Implement operation procedures, maintenance schedules, and long-term inspection procedures to reduce pollutant discharges – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Review and revise as necessary the compliance procedures for maintenance activities. ➢ *Measure*: Completion of review and up date of procedures (if applicable). ➢ *Goal*: Perform maintenance activities such as animal carcass removal and disposal, street cleaning, etc. to minimize/eliminate potential sources of stormwater pollution. ➢ *Measure*: Measure and report maintenance activities that contribute to good housekeeping. ➢ *Goal*: Continue to implement procedures and training that will encourage employees and contractors to employ pollution and prevention practices in day-to-day operations ➢ *Measure*: Number of guidance documents revised and number personnel trained.
Milestone Yr 1	• Review Maintenance Best Management Procedures, environmental guidance and equipment/facilities operation procedures to incorporate pollution prevention through good housekeeping. • Review the listing of Maintenance Activity Codes and FMS cost centers to determine appropriate good housekeeping maintenance activities and produce annual report. • Require employees and contractors to employ pollution prevention practices in day-to-day operations and develop a plan to implement any revised guidance and procedures.
Accomplishments	• Discussions have been held with the VDOT Environmental Division about bringing the Environmental Compliance Audit, which is currently being conducted, a MS4 Hot Spot Investigation and other maintenance and environmental compliance procedures under a consolidated MS4 umbrella. A total of 25 Area Headquarters, 7 District Offices and 8 Rest Areas are located inside of the MS4 Census Urban areas along with as yet an undetermined number of Residency Offices, park and rides and staging yards. Because of the uncertainty of which Residency Offices and repair facilities will be closed, any MS4 compliance audits have been delayed. • The following maintenance activities that contribute to good housekeeping on the secondary and primary highways were reported through the work accomplishment system for FY 09. These maintenance activities are included in the overall maintenance requirement for the TAMS contractors that maintain the interstates; therefore no individual maintenance activities are available for the interstates. • Small and large debris removal. Rock fall cleanup or slide removal. Removal of trees, buildings, mud, sand, slide, as a result of a storm. Debris resulting from any maintenance work that is hauled off site. Unit of measure is cubic yard (CYD) and a total of 1,395,435 were reported. • Litter patrol and litter pick-up. Unit of measure is acre (ACR) and a total of 41,307 were reported. • Rebuild and stabilize slopes (alongside the roadway or at bridge sites) or drainage assets (e.g. paved or unpaved ditches, drop inlets, curb and gutter) to restore proper flow of water away from pavement or bridges. This includes repairing slopes. Unit of measure is cubic foot (CFT) and a total of 717,264 were reported. • Hand cleaning of drainage assets, traffic control devices, shoulders, tunnels, ferries, etc. Cleaning with manual tools (shovels, pickaxes, etc.). Cleaning without the use of machinery. Unit of measure is linear foot (LFT) and a total of 4,264,875 were reported. Revised 11/16/2009

	• Machine cleaning or sweeping of drainage assets such as pipes, ditches etc.; tunnels; roadside assets such as sidewalks, truck ramps, pedestrian trails, walls etc.; traffic assets such as rumble strips; pavement assets including roads, and paved shoulders etc. Also to be used for cleaning when using pressurized water such as power washing. Unit of measure is linear foot (LFT) and a total of 27,067,837 were reported. • Cleaning and/or flushing of bridge deck, superstructure and substructure elements, pipes box culverts; tunnels and ferries. Unit of measure is each (EA) and a total of 6229 was reported. • Graffiti removal by any means, including but not limited to by hand or mechanical means. Unit of measure is each (EA) and a total of 115 were reported. • The cost of deal animal collection and proper disposal is tracked through cost center 1116019 and a total of $4,384,263 was charged to this cost center.

BMP 6C	**Implement a program to reduce/eliminate discharges of pollutants and promote the proper disposal of waste – Maintenance Lead Division**
Measurable Goal(s)	➢ *Goal*: Annually evaluate the Department's waste management program and revise waste disposal processes and procedures as necessary. ➢ *Measure*: Annual review of waste management program and number of waste disposal processes or procedures revised. ➢ *Goal*: Ensure proper disposal of wastes from construction and maintenance activities in accordance with the DCR approved VDOT Erosion and Sediment Control and Stormwater Management Standards and Specifications and memorandum of agreement with DEQ through environmental compliance reviews. ➢ *Measure*: Total number of reviews performed. ➢ *Measure*: Percentage of environmental reviews resulting in excellence, compliant, deficient, and non-complaint findings. ➢ *Goal*: Develop/revise protocols and tracking procedure for performing environmental compliance assessments of Maintenance Facilities. Perform annual reviews. ➢ *Measure:* Development of protocols and tracking system. ➢ *Measure*: Total number of reviews performed. ➢ *Measure*: Percentage of environmental reviews resulting in excellence, compliant, deficient, and non-compliant findings.
Milestone Yr 1	• Evaluate all current waste disposal policies, procedures and processes and revise as necessary. • Perform environmental compliance reviews of waste disposal sites for construction and maintenance activities to ensure that disposal is in accordance with the DCR approved VDOT Erosion and Sediment Control and Stormwater Management Standards and Specifications and memorandum of agreement with DEQ. • Review CEDAR data base to determine if an ECR can be produced for disposal sites. • Develop/revise protocols and tracking procedure for performing environmental compliance assessments of Maintenance Facilities.

Accomplishments	• The waste disposal policies, procedures processes and have been revised to provide better guidance for what surplus materials can be buried and the procedure for placing products such as wood chips on VDOT or private property. The Property Owner Agreement form placement of materials on private property has been revised to provide better oversight during use of the disposal site and inspection after the disposal site is closed. The new polices and procedures will be completed and implemented in the fall of 2009. • All maintenance projects that will require a VSMP Construction Permit will be tracked through CEDAR in the same manner as construction projects.

BMP 6D	**Employee pollution prevention education - Environmental Lead Division**
Measurable Goal(s)	➢ *Goal*: Develop/revise/implement training courses for employees that promote a general awareness of stormwater management and pollution prevention. ➢ *Measure*: Number of courses developed/revised and number of employees trained. ➢ *Goal*: Provide Waste Management, Advance Hazardous Waste Management, In-Stream Maintenance Activities, USDOT Hazardous Shipping, Spill Prevention Control and Countermeasure (SPCC), and VDACS Pesticide Applicator Certification training. ➢ *Measure*: Number of employees trained. ➢ *Goal*: Develop/revise/implement training courses for Cleaning Asphalt Equipment and Salt Pond Management. ➢ *Measure*: Number of courses developed/revised and number of employees and contractors trained.
Milestone Yr 1	• Develop/revise training for employees that promotes a general awareness of stormwater management and pollution prevention. • Develop/revise courses for Cleaning Asphalt Equipment and Salt Pond Management. • Provide Waste Management, Advance Hazardous Waste Management, In-Stream Maintenance Activities, USDOT Hazardous Shipping, SPCC, and VDACS Pesticide Applicator Certification training on an as needed basis.
Accomplishments	• Waste Management – Continuing to work with Maintenance Division to schedule statewide refreshers. Training revised to include asphalt and salt management practices. 107 employees trained. • Advance Hazardous Waste Management – Asphalt Cleaning and Salt Pond Management are now included in the Advance Hazardous Waste Training class. 3 employees trained. • In-Stream Maintenance Activities - Continuous On-line training. • USDOT Hazardous Shipping – Video training distributed statewide and course provided online through the Virtual Campus. 19 employees trained. • Shipping, Spill Prevention Control and Countermeasure (SPCC) – Video distributed and initial and refresher sessions were held throughout FY09. 146 employees trained. • Asphalt Cleaning − 76 employees trained. • Salt Pond Management − 72 employees trained.