

Lines of Business

LOB #361:

STORMWATER REGULATORY PROGRAM

Purpose

The Stormwater Regulatory Program ensures compliance with all applicable federal, state and local regulations and essential public safety needs. The primary regulatory drivers for the stormwater management program are the state-issued Municipal Separate Storm Sewer System (MS4) Permit, Virginia State dam safety regulations and the National Flood Insurance Program (NFIP) under the Federal Emergency Management Agency (FEMA). The MS4 permit is issued by the state under the Federal Clean Water Act to allow the County to discharge stormwater into state and federal waters and to ensure that water quality standards are achieved to the maximum extent possible. Twenty dams in the County must comply with the Virginia State dam safety standards due to the size of the dam or the impounded water body. The Virginia State dam safety standards establish the minimum maintenance and emergency action plan requirements that must be provided by the County in an effort to better protect the public from a failure of these 20 state-regulated dams. The National Flood Insurance Program is established to reduce future flood damage through floodplain management ordinances and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection. The County must participate in the National Flood Insurance Program in order for residents to be able to obtain federally-backed mortgages and flood insurance.

Description

To comply with the MS4 Permit, Virginia State dam safety regulations and the FEMA NFIP, the Stormwater Regulatory Program collaborates with County agencies, neighboring local governments and state and federal agencies. The MS4 permit requires programs to maintain the County's stormwater infrastructure as well as to restrict what enters and exits the County's storm drains. The state dam safety regulations require structural elements, emergency action plans and inspections. The NFIP requires the County to continue modeling and updating the flood-related information to better serve County residents that live in or near floodplains. All three of these sets of regulations also change from year to year, which means that the Stormwater Regulatory Program is constantly adapting.

The state-issued MS4 Permit allows the County to discharge stormwater from its stormwater systems into state and federal waters in accordance with the federal Clean Water Act. The County currently owns and/or operates approximately 7,000 outfalls, over 1,500 miles of storm sewer and over 1,800 stormwater management facilities within the stormwater system and must ensure the proper functioning of approximately 4,000 privately-owned facilities that are governed by the permit. The previous permit was issued in 2002 and expired in 2007, and the County operated under a state issued administrative extension until the current permit was issued in April 2015.

The level of effort needed to comply with the current MS4 permit has increased significantly over the previous permit by expanding the existing and adding new requirements. The permit also includes explicit tracking and reporting requirements to ensure that permit milestones are being met by the County. The permit requires the County to implement programs related to each of the following subject areas:

- **Authorized discharges.** The permit allows Fairfax County to discharge stormwater to local streams and identifies specific stormwater and non-stormwater sources that may be discharged through its infrastructure and conveyance system. Anything that is not identified as an authorized discharge is considered illegal and must be addressed.

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- **Permittee Responsibilities, Legal Authority, MS4 Program Resources and MS4 Program Plan.** The permit requires the County to maintain, implement and enforce a Program Plan that accurately documents the MS4 permit requirements. The MS4 Program Plan must define the roles and responsibilities of County agencies in implementing the program and must be reviewed each year and updated as needed. The County must maintain and use sufficient legal authority to control discharges to and from the MS4 system. The permit also requires that the County submit each year's fiscal budget, including proposed capital and operation and maintenance expenditures necessary to accomplish the activities required by the permit.
- **Construction Site Runoff and Post Construction Runoff.** The County must implement local Virginia Erosion and Sediment Control and Stormwater Management Programs that are consistent with state laws and regulations.
- **Retrofits on Prior Developed Lands.** The County must complete at least 30 projects by 2020 to retrofit existing development with improved stormwater management.
- **Roadways.** The permit requires the County to take an inventory of County-maintained streets, roads, and parking lots at over 100 County facilities and to develop standard operating procedures (SOP) to minimize pollutant discharge, including de-icing and sanding materials.
- **Pesticide, Herbicide and Fertilizer Application.** The County must develop and implement turf and landscape nutrient management plans for County lands where fertilizer is applied, including Park Authority and Public School athletic fields.
- **Illicit Discharges and Improper Disposal.** The County must inspect the sanitary sewer system to minimize the exfiltration of sewage to the MS4 system, reduce the discharge of floatables, prohibit, locate and eliminate the improper disposal of used motor vehicle fluids, household hazardous waste, grass clippings, leaf litter and animal wastes into the MS4 system.
- **Industrial and High Risk Runoff.** The County must identify and control pollutants in stormwater discharges to the MS4 system from industrial and high risk runoff facilities including: landfills; other treatment, storage or disposal facilities for municipal waste; hazardous waste treatment, storage disposal and recovery facilities; Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313 facilities; major automotive facilities; and any other industrial or commercial discharges with significant pollutant loads. The County must also inspect outfalls and review discharge monitoring reports from Virginia Pollutant Discharge Elimination System (VPDES) industrial stormwater permitted facilities.
- **Stormwater Infrastructure Management.** The County must maintain an asset inventory and perform inspections at a prescribed frequency for both the storm sewer system and the stormwater management facilities in Fairfax County. For storm sewer pipes, the County must inspect at least 15 percent of the MS4 system annually and 100 percent by 2020. County-maintained stormwater facilities must be inspected annually and privately-maintained facilities must be inspected at least once every five years.
- **County Facilities.** The County must prohibit vehicle wash water, wastewater, yard waste, grass clippings and fluid leaks from vehicles from entering the MS4 system. The County also must identify high priority County facilities and develop and implement a site-specific Stormwater Pollution Prevention Plan (SWPPP) for each facility.
- **Public Education/Participation.** The County must implement a public education program to increase stormwater knowledge with the goal of positively impacting behaviors of target audiences. Messages related to illicit discharge reporting; proper disposal of used oil, household hazardous waste, pet waste and household yard waste; proper use and disposal of pesticide, herbicide and fertilizer; residential car washing; litter prevention; public participation in water quality improvement initiatives; voluntary stormwater retrofits; and integrated management practice plans at private and public golf courses must be included.
- **Training.** The County must train employees in the recognition and reporting of illicit discharges, good housekeeping and pollution prevention practices during roadway maintenance, at maintenance and public works yards, and at recreation facilities. The County must also ensure that appropriate employees are certified in pesticide, herbicide and fertilizer application, erosion and sediment control, post-construction stormwater management, and spill response.

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- **Water Quality Screening.** The County must perform water quality screening at outfalls under both wet and dry weather conditions to investigate areas that are suspected of contributing excessive pollutant loads to the MS4 system.
- **Infrastructure Coordination.** The County must coordinate with VDOT about mapping the interconnected MS4 systems, TMDL (Total Maximum Daily Loads) Action Plan development and implementation, illicit discharge detection and elimination, and water quality monitoring.
- **Monitoring.** The County must conduct biological, in-stream and floatables monitoring at different frequencies and sites.
- **TMDL Action Plan and Implementation.** The County must develop TMDL action plans for the Chesapeake Bay and any local TMDLs established prior to the permit effective date. TMDL Action Plans must be submitted to the Virginia Department of Environmental Quality (DEQ) by April 1, 2017.

Benefits

The Regulatory Program ensures compliance with conditions of a state-issued Municipal Separate Storm Sewer System (MS4) Permit, which allows the County to discharge stormwater from its stormwater systems into state and federal waters. In addition, other benefits include:

- Aspects of the County's stormwater program are often used as "model programs" by the state and the Environmental Protection Agency (EPA).
- In an era when many local governments have been fined by both the state and EPA, Fairfax County has navigated increasingly complex requirements to remain in compliance with federal and state regulations while balancing the program with residents' needs.
- This program practices environmental stewardship by improving the water quality of stormwater runoff into our streams and ultimately the Chesapeake Bay.
- This program builds livable spaces by maintaining and protecting the County's natural resources.
- The program creates a culture of engagement by ensuring that the public has an opportunity to comment and participate in the development of the permit, MS4 Program Plan, Watershed Management Plans and TMDL Action Plans.

In addition, emergency flood response and dam safety are part of the regulatory program and are discussed in the Emergency and Flood Response Projects LOB and the Dam Safety and Facility Rehabilitation LOB. These LOBs describe the benefits associated with the FEMA National Flood Insurance Program and the Dam Safety and Facility Rehabilitation Projects.

Mandates

Federal, State and local laws create the need for this program, which is fully mandated by the Federal Clean Water Act and the Virginia Department of Environmental Quality through the following:

- VPDES (Virginia Pollutant Discharge Elimination System) MS4 Permit
- Chesapeake Bay TMDL
- Local Stream TMDLs
- Virginia Dam Safety Act
- Virginia Soil and Water Conservation Board- Impounding Structure Regulations
- National Flood Insurance Program Requirements

Stormwater Management

Trends and Challenges

The trends that affect this LOB include:

- More stringent regulatory and TMDL requirements:
 - The first Chloride TMDL is being established in the state
 - It is anticipated that new pollutant TMDLs will be forthcoming in future years
- Increased oversight and enforcement by state and federal regulators
- Increase in third party lawsuits
- Limited legal authority and land rights
- Moving targets for required Chesapeake Bay TMDL load reductions and project benefits/efficiencies
- The number of local stream TMDLs will continue to increase
- Limited state and federal funds for stormwater projects

The biggest challenge facing the Stormwater Regulatory Program is meeting the Chesapeake Bay TMDL and upcoming local stream TMDL requirements for reduction of pollutant discharges.

Chesapeake Bay TMDL

Under the Chesapeake Bay TMDL, the County is required to reduce Phosphorous, Nitrogen and Sediment loads from its stormwater system by 9,740 pounds/year, 81,900 pounds/year and 8,140,000 pounds/year respectively by 2030. The Chesapeake Bay model is the instrument that is used to establish load reduction requirements for jurisdictions. Updates to the model will likely result in changes to load reduction requirements. The next update is scheduled for 2017, which is roughly halfway into the County's initial MS4 permit cycle that includes Chesapeake Bay TMDL requirements.

Accotink Creek TMDL

The VA DEQ is developing a replacement TMDL for Accotink Creek and has identified the "most probable" stressors causing the benthic impairments to include Chloride (pollutant), sediment (pollutant), habitat modification (non-pollutant), hydromodification (non-pollutant). As TMDLs can only be developed for pollutants, the replacement TMDL will set limits for Chloride and sediment. However, DEQ has stated that they would like to see an implementation approach that addresses the other two stressors as well (habitat modification and hydromodification).

These are just two examples of the increasing regulatory requirements that are expected to impact stormwater. In addition, the information that is required to be tracked in the stormwater inventory continues to change, such as data fields are now required for acres treated and water quality volume, making data management a challenge.

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Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
LOB #361: Stormwater Regulatory Program			
FUNDING			
<u>Expenditures:</u>			
Capital Projects	\$6,023,239	\$7,665,405	\$6,000,000
Total Expenditures	\$6,023,239	\$7,665,405	\$6,000,000
Total Revenue	\$5,000,000	\$5,500,000	\$6,000,000
POSITIONS			
Authorized Positions/Full-Time Equivalents (FTEs)			
<u>Positions:</u>			
Regular	0 / 0	0 / 0	0 / 0
Total Positions	0 / 0	0 / 0	0 / 0

Metrics

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Percent of private facilities inspected within the fiscal year	7.3%	20.0%	31.0%	20.0%	20.0%
Percent of public facilities inspected	52.0%	54.0%	57.5%	50.0%	50.0%
MS4 Permit violations received	0	0	0	0	0

The County's MS4 program was inspected in 2011 by the Environmental Protection Agency. The County did not receive any fines as a result of the inspection; however, EPA did issue an administrative order requiring changes to the industrial and high risk runoff and construction site runoff inspection programs. Failure to comply with MS4 permit requirements could result in the County receiving fines and/or other enforcement such as a consent decree. The Board of Supervisors' support of the stormwater program as reflected in the adopted Capital Improvement Program has enabled sustainable growth to maintain permit compliance as requirements have become more stringent.

The County inspects roughly 20 percent of the privately-maintained facilities annually and inspects roughly 50 percent of the publicly-maintained facilities annually. Private inspections are tracked on a calendar year basis and public inspections and maintenance are tracked on a fiscal year basis. The Stormwater Regulatory Program has met its goal of inspecting 20 percent of the privately-maintained stormwater inventory annually. Because of the calendar year basis, the percent of facilities inspected differs when shown by fiscal year. For example, the FY 2012 combined with the FY 2013 represents 20 percent of the privately-maintained stormwater facility inventory. Some of the private facilities have been archived and a few others have been put in "Out of Service" status (i.e. inactive/under bond status). As of June 30, 2015, the number of active privately-maintained SWM/BMP facilities was 3,933.

The total number of private facilities inspected in FY 2015 was 1,206. The total number of public facilities inspected in FY 2015 was 1,046. The total number public facilities maintained in FY 2015 was 1,727. Maintenance is performed annually and inspections are performed every other year.