Stormwater Pollution Prevention Plan (SWPPP)

For

Fleet Service Center

5235 Hollins Road
Roanoke, VA 24019

SWPPP Prepared By:

Department of Community Development
Stormwater Management Division
5204 Bernard Drive
Roanoke, VA 24018
540-772-2080

SWPPP Preparation Date:

June, 2015

TABLE OF CONTENTS

SECTION **PAGE**

TABLES

FIGURES

1.0 INTRODUCTION

This document is the Stormwater Pollution Prevention Plan (SWPPP) for Roanoke County's Fleet Service Center, located at 5235 Hollins Road, Roanoke, VA 24019.

This facility falls under the requirements of the County's General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4), General Permit No. VAR040022, with an effective date of July 1, 2013 and an expiration date of June 30, 2018. The permit is designed to reduce the discharge of pollutants from stormwater that leaves the regulated MS4 area within the County and subsequently enters the Commonwealth of Virginia's receiving waters, such as the Roanoke River and its tributaries.

According to the United States Environmental Protection Agency (US EPA), polluted stormwater runoff is a leading cause of impairment to nearly 40 percent of surveyed U.S. water bodies that do not meet water quality standards. Whether travelling by overland flow or through stormwater conveyance systems, polluted stormwater runoff is discharged into local receiving waterways. Such untreated water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; it can also cause a loss of aesthetic value, and can threaten public health due to its potential to contaminate food, drinking water supplies, and recreational waterways.

The MS4 Permit aims at reducing pollutants in stormwater runoff by focusing on six Minimum Control Measures (MCMs), as follows: (1) Public Education and Outreach on Stormwater Impacts, (2) Public Involvement and Participation, (3) Illicit Discharge Detection and Elimination, (4) Construction Site Stormwater Runoff Control, (5) Post-Construction Stormwater Management in New Development and Redevelopment, and (6) Pollution Prevention and Good Housekeeping for Municipal Operations. Within each MCM, there are numerous Best Management Practices (BMPs) being implemented by the County of Roanoke.

This SWPPP has been created to satisfy the conditions of BMP 6-6 of MCM 6, entitled Stormwater Pollution Plans (SWPPPs) for Municipal Facilities, which requires Roanoke County to identify all of its high-priority facilities that have a high potential to discharge pollutants into stormwater and develop, implement, and maintain a SWPPP for each of them.

1.1 ORGANIZATION OF THE STORMWATER POLLUTION PREVENTION PLAN

Section 1 of this SWPPP provides information regarding stormwater regulations, the requirements of the 2013 MS4 Permit, review and revision of the SWPPP, and availability of the SWPPP as a public document. Section 2 briefly describes the Fleet Service Center facility, the Pollution Prevention Team responsible for compliance with the MS4 Permit, and other environmental programs that indirectly support compliance with the permit. The section also provides a general discussion of Best Management Practices (BMPs) and identifies those BMPs that are implemented throughout the facility. It includes a list of other environmental compliance plans for the facility and explains the employee training requirements.

Section 3 contains the definition and categories for both authorized and unauthorized non-stormwater discharges. Section 4 identifies the activities conducted, significant materials stored, potential pollutants, and the measures taken to eliminate or reduce the discharge of pollutants to stormwater drainage systems from the facility.

1.2 STORMWATER REGULATORY FRAMEWORK

In 1972 the Federal Water Pollution Control Act (known as the Clean Water Act) was amended to effectively prohibit discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. The United States Environmental Protection Agency (US EPA) delegated administration of the NPDES Program within Virginia to the Department of Environmental Quality (DEQ), and DEQ administers it as the Virginia Pollutant Discharge Elimination System (VPDES) Permit Program. The 1987 amendments of the Clean Water Act added Section 402(p) to the federal regulations, which established the framework for regulating discharges of pollutants via stormwater from industrial activities and MS4s. Section 402(p) required the US EPA to develop permitting regulations for stormwater discharges from MS4s and from industrial facilities, including construction sites.

In Virginia, discharges from municipal separate storm sewer systems are regulated under several programs: the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Permit regulations, and the Clean Water Act (through the VPDES Permit Program) as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain an individual permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective March 23, 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest decennial census) obtain coverage under a general permit to discharge stormwater from their outfalls. Roanoke County is classified as a small MS4, and thus operates under the General MS4 Permit. (Va DEQ, n.d.)

According to the County's MS4 Permit, the following types of high-priority facilities require SWPPPs:

- 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
- Vehicle storage and maintenance yards

In addition, facilities in which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff also require a SWPPP:

1) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;

2) Materials or residuals on the ground or in stormwater inlets from spills or leaks;

3) Material handling equipment (except adequately maintained vehicles);

4) 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);

5) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);

6) 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;

7) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);

8) Application or disposal of process wastewater (unless otherwise permitted); or

9) 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.

Based on the above requirements, the following County-owned facilities have been determined to be high-priority facilities that have a high potential to discharge pollutants. Table 1-1 shows the schedule by which the individual SWPPPs for each facility will be prepared.

Table 1-1 High-Priority County Facilities and Associated Activities

Name of High-Priority Facility	Activities that make it High-Priority	High Potential of Discharging Pollutants (Yes or No)	Reasons for High Potential/ Or Not	Department(s)	Scheduled SWPPP Development
Kessler Mill Service Center	Store Equip/Fert; Public Works Yard	Yes	Exterior material and equipment storage	P,R,and T; GS, CD	By July 1, 2015
Fleet Service Center	Vehicle maintenance	Yes	Heavy vehicle maintenance	GS	By July 1, 2015
#1 North County Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2016
#3 Cave Spring Fire	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2016
#5 Hollins Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2016
#6 Mount Pleasant Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2017
#9 Fort Lewis Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2017
EMS Training Facility	Chemicals used in training	Yes	Exterior training exercises with chemicals	F&R	By July 1 2017

P, R and T = Parks, Recreation and Tourism; GS = General Services; CD = Community Development; F&R = Fire and Rescue

1.3 REVIEW AND REVISION OF THE STORMWATER POLLUTION PREVENTION PLAN

The SWPPP will be reviewed at least annually to determine if any revision is necessary to reflect changes in the facility or changes in the activities conducted that:

- May significantly increase the quantities of pollutants in stormwater runoff;
- Cause a new area of the facility to be exposed to stormwater or authorized non-stormwater discharges; or
- Start-up of an activity that would introduce a new pollutant source at a facility.

In determining if revision of the SWPPP is necessary, the SWPPP Implementation team, identified in Section 2.2, will review the Annual Facility/Activity Stormwater Assessment, which is described in Section 5.

1.4 LOCATION OF THE STORMWATER POLLUTION PREVENTION PLAN

The SWPPP shall be kept in the office of the Fleet Manager for General Services, which is located in the Fleet Service Center. A copy of the SWPPP will also be maintained by the Stormwater Program Manager, Department of Community Development, in the Roanoke County Administration Center.

2.0 SITE DESCRIPTION AND INITIAL FACILITY INSPECTION

Roanoke County's Fleet Service Center is located in the Hollins Magisterial District at 5235 Hollins Road, Roanoke, VA 24019. (Parcel ID 039.05-02-04.00-0000). It is owned by the Roanoke County Board of Supervisors and serves as the County's maintenance facility for all fleet vehicles, including Garbage Trucks, Fire and Rescue vehicles, Police vehicles, Parks, Recreation and Tourism maintenance vehicles, and more. Through a cooperative agreement, the Fleet Service Center also maintains vehicles for the Western Virginia Water Authority. The facility sits on a 9.18 acre parcel abutting Hollins Road to the west and Carlos Drive to the south. The property is zoned "I2S /Industrial (Heavy) District with Special Use." The lot is not situated in a floodplain, but it does drain to nearby Tinker Creek, which is currently listed by DEQ as impaired for sediment, bacteria, and PCBs.

The one-story structure was built in 2009 and is a LEED-certified green building at the Basic level. It spans 24,485 square feet and its exterior is comprised of concrete block, which supports a bar joist roof with a rubber cover.

Stormwater from the Fleet Service Center drains through several onsite Best Management Practices (BMPs), including grassed swales and a bioretention area; it then travels via underground pipe to its discharge point into Tinker Creek.

An initial inspection of the facility was conducted on June 8, 2015 at 9:00 a.m. by the following members of the Pollution Prevention Team, which is further described in Section 2.2:

- Kevin Glass, Fleet Manager - General Services
- Kim Artherhults, Office Coordinator / Department Budget Specialist - General Services
- David Henderson, County Engineer – Community Development
- Cindy Linkenhoker, Stormwater Program Manager – Community Development

Observations of the facility activities and required actions noted during this inspection are listed in Section 2.1. All required action items will be completed and documented prior to the next annual assessment. The associated inspection report is located in Appendix A of this SWPPP.

2.1 SITE FACILITIES

The site is comprised of the Fleet Service Center building, which houses a light-duty vehicle bay and a heavy-duty vehicle bay, a parking lot for employees and visitors, and a surplus lot for wrecked and/or "parts" vehicles and vehicles pending sale online.

2.1.1 BUILDING

Facility Type: <u>Vehicle Service Bay (Light-Duty Vehicles)</u>

Facility Activities: The indoor vehicle servicing bay for light-duty vehicles is used to repair cars, vans, pickup trucks, etc. the facility has an oil filter crusher, a parts-washing sink, a container for dirty rags, and an oil re-use system. Miscellaneous products are stored, such as coolant, windshield washer fluid, and Purple Power degreaser, among others. There is a trench drain in the floor, which is used to capture wash water from vehicle and equipment washing and small-quantity fluid spills. This drain is tied into an oil/water separator and discharges to the sanitary sewer system. At the time of the inspection, some vehicles were being worked on without mats or absorbent materials underneath them to absorb spills. The Fleet Service Center (FSC) staff periodically cleans the trench drain and puts any accumulated sludge into the trash. A company known as Safety-Kleen periodically cleans out the oil/water separator and is also under contract to dispose of waste oil and other products, none of which are exposed to rainwater.

Required Actions: Provide a spill kit with booms to contain spilled fuel or other fluids. Mount the kit near the trench drain. Use drip pans or absorbent material, like cat litter or mats, under vehicles that are actively being repaired. Label material contents of all storage containers within the bay area, and store batteries in a container.

Facility Type: <u>Vehicle Service Bay (Heavy-Duty Vehicles)</u>

Facility Activities: The indoor vehicle servicing bay for heavy-duty vehicles is used to repair large vehicles, like garbage trucks and fire engines. The facility has an oil filter crusher, a parts-washing sink, a container for dirty rags, and a 1,000 gallon oil tank. Miscellaneous products are stored, such as coolant, windshield washer fluid, and degreaser, among others. There is a trench drain in the floor, which is used to capture wash water from vehicle and equipment washing and small-quantity fluid spills. This drain is tied into an oil/water separator and discharges to the sanitary sewer system. At the time of the inspection, some large vehicles were being worked on without mats or absorbent materials to absorb fluids that had spilled beneath them. The FSC staff periodically cleans the trench drain and puts any accumulated sludge into the trash. Safety-Kleen cleans out the oil/water separator and is also under contract to dispose of burned

waste oil ash and other products on a quarterly basis. None of the products are exposed to rainwater.

Required Actions: Provide a spill kit with booms to contain spilled fuel or other fluids. Mount the kit near the trench drain. Use drip pans or absorbent material, like cat litter or mats, under vehicles that are actively being repaired. Label material contents of all storage containers within the bay area, and store batteries in a container.

2.1.2 OUTDOOR AREAS

Facility Type: Employee/Visitor Parking Lot

Facility Activities: A variety of items are stored outside the building in or beside the parking lot including a few containers, both full and empty, and a host of vehicles that await service. One vehicle, parked along the perimeter of the site near the bioretention basin, had an active fluid leak at the time of inspection, posing a potential risk of illicit discharge to the County's MS4 system. There was also evidence of fluid links in front of the building and behind it, along the back curb line. Outdoor trash bins had open lids at the time of inspection; these bins also have drain plugs which are occasionally opened to allow discharge into a nearby trench drain that drains to the sanitary sewer system.

Required Actions: Label material contents of all containers stored outside. Discard empty containers. Keep trash bin lids closed. Provide drip pans or absorbent material, like cat litter or mats, under vehicles that are currently leaking. Drain all fluids from vehicles that are to be only used for parts. Provide absorbent material on all active oil spills and stains throughout the parking area.

Facility Type: Surplus Vehicle Lot

Facility Activities: The vehicle surplus lot contains a variety of wrecked vehicles and others to be exclusively used for parts; some of these vehicles had active fluid leaks at the time of inspection, posing an imminent risk of illicit discharge to the County's MS4 system.

Required Actions: Provide drip pans or absorbent material, like cat litter or mats, under vehicles that are currently leaking. Drain all fluids from vehicles that are to be only used for parts.

Facility Type: Bioretention Basin

Facility Activities: The bioretention basin is a pretreatment device, designed to remove pollutants from stormwater runoff. This basin is overgrown with trees, weeds, and other unwanted vegetation.

Required Actions: Remove trees, weeds, and nuisance vegetation and re-seed any resulting bare areas.

Facility Type: Grass Swale

Facility Activities: The grass swale is a pretreatment device, designed to remove pollutants from stormwater runoff. This swale was free from trash and properly mowed.

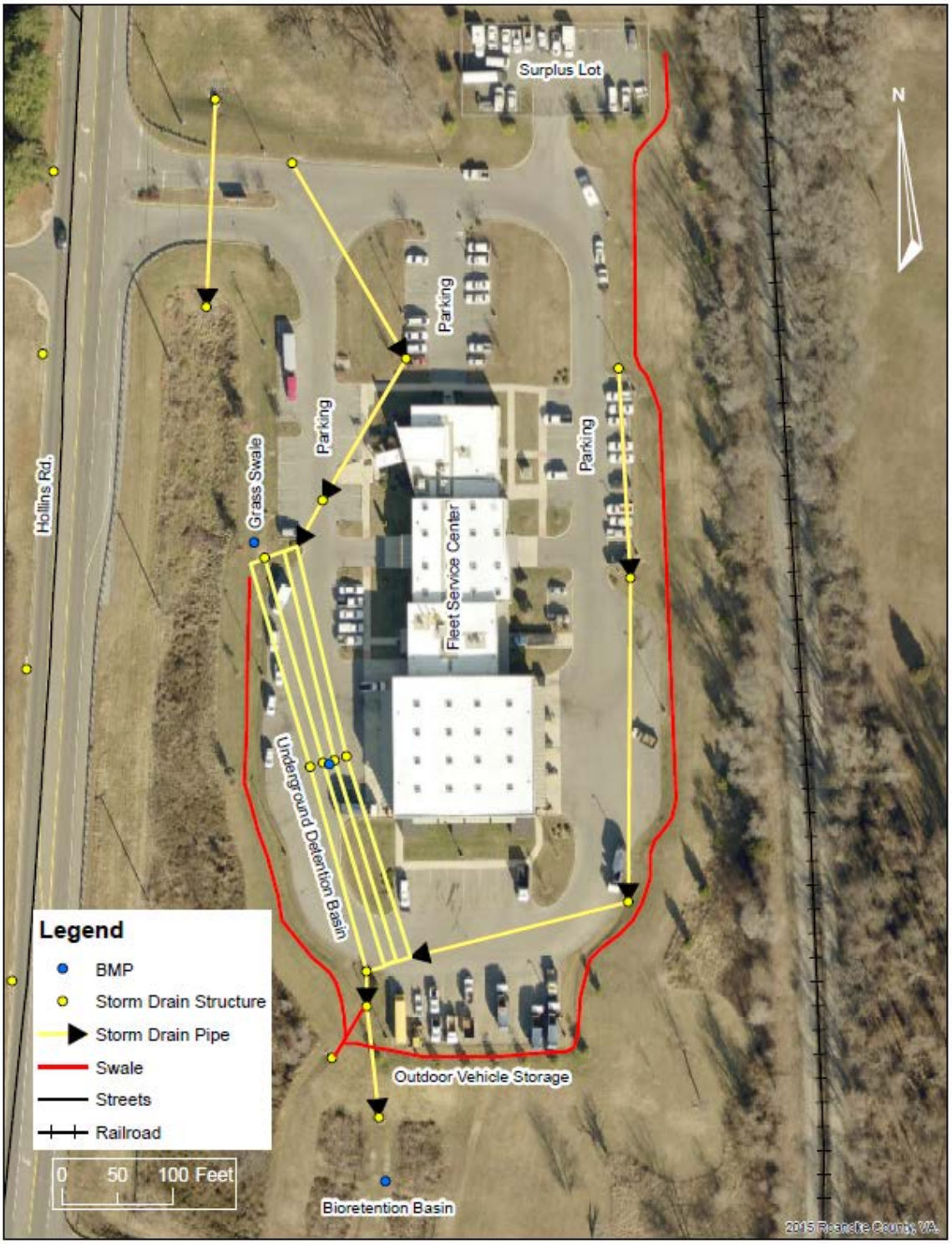
Required Actions: None at this time.

Facility Type: Underground Detention Basin

Facility Activities: The underground detention basin is a quantity control device and is used primarily for storage of stormwater runoff. No issues were noted at the time of inspection.

Required Actions: None at this time.

Figure 2-1 Site Map - Fleet Service Center



2.2 POLLUTION PREVENTION TEAM

The Fleet Manager of General Services shall have the primary responsibility to keep and maintain the SWPPP document, and to lead the SWPPP Implementation Team. The Office Coordinator/ Department Budget Specialist of General Services shall be responsible to assist the Fleet Manager in conducting quarterly inspections and annual inspections.

Table 2-1 Pollution Prevention Team - Fleet Service Center

POSITION	NAME	PHONE	PRIMARY RESPONSIBILITIES
Acting Director - General Services	Rob Light	540-777-6369	SWPPP OVERSIGHT • Provide the necessary resources to comply with the SWPPP. • Ensure assigned staff implements the SWPPP and all of its components. • Provide management support to staff.
Fleet Manager - General Services Office Coordinator / Department Budget Specialist - General Services	Kevin Glass Kim Artherhults	540-362-2132, ext. 222 540-362-2132, ext. 221	SWPPP IMPLEMENTATION • Implement and administer the SWPPP. • Implement the Emergency Response Plan and Procedures (part of the Hazardous Waste Management Program). • Provide Stormwater Training for facility personnel. • Maintain the necessary records and files.
Fleet Manager - General Services	Kevin Glass	540-362-2132, ext. 222	CHEMICAL SPILL RESPONSE • Minimize the threat of chemical spills to personnel and to the surrounding environment; and • Protect storm drain inlets and sanitary sewer drains from any spillage or contamination once personnel safety is assured.
Fleet Manager - General Services Office Coordinator / Department Budget Specialist - General Services	Kevin Glass Kim Artherhults	540-362-2132, ext. 222 540-362-2132, ext. 221	CONDUCT ROUTINE FACILITY INSPECTIONS • Implement BMPs for respective area(s) of responsibility. • Conduct routine inspections of respective areas of responsibility to ensure BMPs are in place, operative, and effective at all times in and around the areas where activities that may impact stormwater are conducted. • Submit quarterly inspection reports, using the Municipal Yard Inspection Checklist, to the Stormwater Program Manager.
County Engineer - Community Development Stormwater Program Manager - Community Development	David Henderson Cindy Linkenhoker	540-772-2096, ext. 238 540-772-2096, ext. 245	MS4 PROGRAM MANAGEMENT • Prepare and revise the SWPPP, as necessary. • Conduct periodic facility inspections to assure compliance. • Collect training records. • Prepare and submit Annual MS4 Report. • Serve as a technical resource to other departments.

2.3 POLLUTION PREVENTION THROUGH BMPS

2.3.1 What are BMPs?

Best Management Practices, or BMPs, are the practices, procedures, policies, prohibitions, schedules of activities, structures, or devices that are implemented to prevent or minimize pollutants from coming into contact with precipitation, stormwater runoff, or non-stormwater flows. BMPs are also structures or devices that remove pollutants from stormwater runoff before the runoff enters a stormwater drainage system or surface water. Therefore, BMPs are often categorized as either "source-control" BMPs or "treatment-control" BMPs.

Source-control BMPs include all types of measures designed to prevent pollution at the source, that is, to keep stormwater from coming into contact with pollutants in the first place. Source-control BMPs are generally simple, low-maintenance, cost-effective, and broadly applicable. They may be categorized as non-structural or structural. Good housekeeping at a municipal yard is an example of a non-structural, source-control BMP; a canopy installed over a fueling island is an example of a structural, source-control BMP.

Treatment-control BMPs, like the onsite bioretention basin, are devices or methods used to treat stormwater runoff to remove pollutants; these BMPs are frequently more costly to design, install, and operate than source-control BMPs. More importantly, treatment-control BMPs are typically not as effective as source-control BMPs, and the effectiveness is highly dependent on regular maintenance. Nevertheless, they can be appropriate and useful under certain conditions. However, treatment-control BMPs typically do not remove all pollutants from stormwater runoff and, therefore, should not be regarded as disposal systems.

2.3.2 Source-Control BMPs

The following source-control BMPs will be employed for use at the Fleet Service Center at the designated facilities. General Services is responsible for implementing these source controls.

Vehicle Service Bay (Light-Duty Vehicles)

a) Train employees on proper spill cleanup techniques.

b) Maintain a spill kit, booms, and other absorbent cleanup materials near the trench drain.

c) Maintain containers for disposal of contaminated cleanup materials.

Vehicle Service Bay (Heavy-Duty Vehicles)

a) Train employees on proper spill cleanup techniques.

b) Maintain a spill kit, booms, and other absorbent cleanup materials near the trench drain.

c) Maintain containers for disposal of contaminated cleanup materials.

Vehicle Parking Areas

a) Train employees to:
    a. Look for oil and other fluid leaks in the parking lot.
    b. Clean up oil/fluid leaks by covering them with absorbent material, like cat litter; then, sweep it up and dispose of it in the trash.
    c. Pick up trash in the parking lot and throw it in a trash bin.
b) Clean drainage inlets within the parking lot on a routine basis.
c) Maintain and use absorbent materials to clean up oil and other fluid leaks in parking lot.
d) Stencil storm drain inlets with "No Dumping, Drains to Creek."
e) Maintain trash bins with lids closed. Do not rinse them out on the pavement.

Vehicle Surplus Lot

a) Train employees to use drip pans, clean them out after use, and properly store inside.
b) Drain all fluids from vehicles that are to be only used for parts.
c) Train employees to:
    a. Look for oil and other fluid leaks in the surplus lot.
    b. Clean up oil/fluid leaks by covering them with absorbent material, like cat litter; then, sweep it up and dispose of it in the trash.

2.3.3 Treatment-Control BMPs

The Fleet Service Center has several treatment control BMPs: a grassed swale, a bioretention basin, and an underground detention system. General Services is responsible for maintaining these treatment control devices.

Bioretention Basin

a) Train employees to look for and remove trash in the basin.
b) Regularly remove trees, weeds, and nuisance vegetation; re-seed any resulting bare areas.

Grass Swale

a) Train employees to look for and remove trash in the grassed swale.
b) Regularly mow grass swale to prevent the overgrowth of weeds and woody vegetation.

Underground Detention Basin

a) Train employees to look for pollutants spilled onto the parking lot that could enter the underground detention system.

b) Inspect the system annually to determine if it needs to be cleaned.

c) Dispose of collected materials in the trash.

2.3.4 Good Housekeeping BMPs

Good housekeeping practices include activities that are intended to maintain a clean site and keep equipment in good working order to prevent pollutants from coming into contact with stormwater runoff. Daily cleanup and inspections are the most effective means of achieving good housekeeping.

Good housekeeping practices shall be incorporated into the day-to-day activities at the facility, as they foster a habit of good housekeeping and help to assure worker safety. Employees shall be trained to understand the practices and to implement them on an ongoing basis. The following good housekeeping BMPs will be employed for use at the Fleet Service Center:

- Tools and materials are returned to designated storage areas after use;
- All storage containers are properly labeled, to include warning labels if appropriate.
- All spills are immediately cleaned up.
- Spilled oil and grease is absorbed using kitty litter or other absorbent material, which is then swept up and disposed of in the trash.
- Spills that escape the site are reported to the Roanoke County Emergency Communications Center at (540) 562-3265.
- Waste materials are collected and properly discarded after the completion of each job, shift, or day as appropriate;
- Indoor work areas are kept neat, uncluttered, and well-ventilated to discourage outdoor work that has the potential to generate pollutants and to allow leaks and spills to be quickly detected and controlled;
- Outdoor work areas are swept regularly (not hosed) and kept neat and clean;
- When outdoor work areas need cleaning beyond sweeping, all wash waters are contained, collected, and properly discarded;
- Outdoor waste or trash receptacles are kept covered and regularly emptied; adjacent areas are inspected for misplaced or wind-blown litter; and
- Employees are regularly trained on proper good housekeeping practices.

2.3.5 Preventive Maintenance BMPs

Preventive maintenance BMPs relate to maintaining equipment in good working order. Having equipment failures or using equipment that poorly functions may result in the discharge of pollutants to the storm drainage system. Therefore, to reduce the likelihood of breakdown or failure, major equipment should have a preventive maintenance schedule for inspection, repair, or replacement of fluids (e.g., hydraulic, lubricating, cooling), greases, seals, hoses, filters, pressure gauges, piping, etc. Paved and landscaped areas should not be allowed to degrade to the point where they erode and contribute pollutants to stormwater runoff. Leaky roofs, broken doors, cracked pavement and berms, and any other enclosure or structural defects that may impact the quality of stormwater runoff should be promptly repaired. Structural BMPs and storm drains within facility boundaries also need to be regularly inspected and maintained.

2.3.6 Proper Materials Handling and Storage BMPs

Materials handling and storage BMPs relate to controlling the potential for leaks, spills, and losses of materials delivered, used, and stored at a facility. Spills and leaks of materials can accumulate in soils or on surfaces and be carried away in stormwater runoff or in authorized non-stormwater discharges. These materials handling and storage BMPs will be employed:

Materials Use

- Only obtain the amount of materials needed to finish a particular job;
- Limit waste generation by keeping good records and reviewing activities;
- Recycle materials whenever possible; and
- Read and follow manufacturer directions for use of materials and review the associated Material Safety Data Sheet (MSDS) for each product.

Materials Storage

- Store materials indoors or in a covered area where exposure to rainwater is eliminated;
- Store lead-acid batteries indoors and within secondary containment;
- Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;
- Locate storage areas away from vehicle and equipment paths to reduce the potential for accident-related leaks or spills;
- Store drums or other containers away from storm drain inlets;
- Provide informational signing, labels, restricted access, locks, inventory control, overhead coverage, and secondary containment for all hazardous material storage areas or container units; and
- Conduct regular inspections for leaks and control dates.

2.3.7 Proper Waste Handling BMPs

Waste handling BMPs relate to properly controlling, collecting, storing, and disposing of wastes that are generated at a facility. All facility personnel should be aware that the disposal of any waste (including wash water) into a storm drain inlet or stormwater conveyance (i.e., ditches or streets) is an illegal discharge. Likewise, disposing of waste (including wash water) onto a paved surface such that it may be carried to a storm drain inlet or stormwater conveyance (i.e., ditches, streets) is an illegal discharge.

The following waste handling BMPs will be employed for use at the Fleet Service Center:

- Sweep or vacuum (dry methods) work areas to collect particulates and debris frequently;
- Limit waste generation by keeping good records and reviewing activities;
- Recycle materials whenever possible;
- Separate and segregate different types of wastes;
- Store waste materials indoors or in a covered area where exposure to rainwater is eliminated;
- Continue using Safety Clean or other service provider for regularly-scheduled waste disposal;
- Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;
- Locate the waste storage area away from vehicle and equipment paths to reduce the potential for accident-related releases;
- Provide informational signage, labels, restricted access, inventory controls, overhead coverage, and secondary containment for all hazardous waste storage areas or container units;
- Conduct regular inspections for leaks and control dates.

2.3.8 Spill Prevention and Response

For spills, the old saying that “an ounce of prevention is worth a pound of cure” is appropriate. Spill clean-up can be labor-intensive and costly, as it involves containing the spill, collecting the spilled substance, properly disposing of the spilled materials, and filing of associated reports to regulatory agencies, not to mention possible monetary fines. Spills and leaks are some of the most significant sources of stormwater pollution and are, in most cases, avoidable.

Spill prevention and control procedures include:

- Placing bollards, berms and containment features around structures or areas where fluids are stored, so releases can be prevented, easily detected, and controlled;
- Using drip pans for maintenance operations involving fluids and under leaking vehicles and equipment awaiting repair;
- Placing spill kits in areas where fluids are stored or in areas where activities may result in a spill;
- Providing training for proper use of materials and equipment used during operations and maintenance activities;
- Providing training for proper use of spill response equipment and supplies; and
- Conducting outdoor maintenance activities on paved surfaces to allow for easy detection, control, and cleanup of spills.

Spill prevention, control, and cleanup apply to all materials and wastes - not only hazardous substances. The toxic water quality effects from spills of hazardous substances (e.g., acids, oils, greases, fuels, solvents, pesticides) are commonly understood. However, non-hazardous materials, such as sand, litter, and wash water, among others - can also greatly impact water quality in receiving waters.

2.4 Other Relevant Facility Plans

In addition to this SWPPP, there is another facility-specific environmental compliance plan that complements the goal of reducing and preventing pollutant discharges, as listed below:

- Spill Prevention, Control, and Countermeasure (SPCC) Plan kept by General Services in the Fleet Manager's office, located at the facility.

2.5 Employee Training

The Director of General Services is responsible to ensure that all of his/her designated employees receive the appropriate Stormwater Management training on a biennial basis. The County's Stormwater Program Manager will make such training available to the department via the County's intranet and/or another easily-accessible venue.

The Stormwater Program Manager coordinates training related to stormwater management on at least a biennial basis and maintains all training records for inclusion in the County's Annual MS4 Report, as submitted to DEQ.

The purpose of stormwater-related training is to educate workers on the day-to-day activities that may impart pollutants into stormwater discharges from the site, to help in the implementation of BMPs, to ensure understanding of the County's Standard Operating Procedures (SOPs) for Water Quality, and to ensure employees understand what illicit discharges are and how to respond to them when they are witnessed.

Training attendance sheets and any other training documentation shall be kept in Appendix C. The instructor's name, if applicable, date and time of training, location of training, training title, participants' names, and corresponding employee numbers will be listed.

All training records shall be kept for a period of no less than five years.

3.0 NON-STORMWATER DISCHARGES

A *non-stormwater* discharge is any discharge or flow to a stormwater drainage system that is not composed entirely of stormwater runoff. The County's MS4 Permit prohibits the discharge of non-stormwater discharges into its Municipal Separate Storm Sewer System (MS4) and to the Waters of the U.S., unless the discharge is regulated under a separate VPDES or VSMP permit, as issued by the Virginia DEQ, or is classified as an *authorized* discharge, as listed below.

3.1 Authorized Non-Stormwater Discharges

The only non-stormwater discharges, or flows, that are allowed to be discharged into the County's MS4 are listed below:

a) Water line flushing;
b) Landscape irrigation;
c) Diverted stream flows or rising groundwater;
d) Uncontaminated ground water infiltration;
e) Uncontaminated pumped groundwater;
f) Discharges from potable water sources;
g) Foundation drains;
h) Air conditioning condensate;
i) Irrigation water;
j) Springs;
k) Water from crawl space pumps;
l) Footing drains;
m) Lawn watering;
n) Individual residential car washing (this exemption does not include any commercial or business activity);
o) Flows from riparian habitats and wetlands;
p) De-chlorinated swimming pool discharges;
q) Street wash water; and
r) Firefighting activities.

4.0 SIGNIFICANT MATERIALS, ACTIVITIES, AND POTENTIAL POLLUTANTS

4.1 Significant Materials

A number of materials are used or stored on-site. Table 4-1 summarizes these materials, by department, and how they are received or stored at the facility.

Table 4-1 List of Significant Materials – Fleet Service Center

GENERAL SERVICES				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Fleet Service Center*	*Fleet Service Center*	*Twice weekly*
Adhesives & Sealants	1 ½ - 12 oz.	FSC	FSC	Daily
Brake fluid	32 oz.	FSC	FSC	Daily
Coolant (new)	55 gal.	FSC	FSC	Daily
Coolant (used)	300 gal.	FSC	FSC	Daily
Hydraulic fluid	500 gal.	FSC	FSC	Daily
Lubricants	12 oz.	FSC	FSC	Daily
Motor oil (new)	1,000 gal.	FSC	FSC	Daily
Motor oil (used)	1,000 gal.	FSC	FSC	Daily
Paint Products	12 oz.	FSC	FSC	Daily
Solvents	55 gal.	FSC	FSC	Daily

4.2 Significant Activities, Potential Pollutants, and BMPs

A number of activities performed on the site have a high potential for pollutant discharge. They are listed in Table 4-2, along with the expected pollutants, pollutant source, and the associated BMPs used to mitigate them.

Table 4-2 Significant Activities, Potential Pollutants, and BMPs

Activity	Description	Pollutants/Sources	BMPs
Vehicle Parking Areas	Stormwater runoff has the potential to wash away any leaked fluids or discarded trash and transport it to the drainage system.	*Oils/Sediment/Trash* • Leaking vehicles • Uncontained trash • Un-swept parking areas	• Train employees to look for and throw away trash found in the parking areas. • Train employees to look for oil and other fluid leaks in the parking lot and to properly clean them up. • Periodically vacuum sweep parking areas to collect sediment and debris. • Routinely clean out drainage inlets. • Stencil storm drain inlets with "No Dumping, Drains to Creek." • Maintain trash bins with lids closed; refrain from rinsing them out on the pavement.
Vehicle Surplus Lot	Vehicles are susceptible to leaking and those that are stored outdoors and subject to weather pose a pollutant risk. Rainfall at the facility will likely wash leaked fluids into the storm drain system.	*Sediment, Metals, Toxic Materials, or Vehicle Fluids* • Leaking vehicle	• Train employees to look for oil and other fluid leaks in the parking lot and to properly clean them up. • Use drip pans underneath leaking vehicles until leaks are fixed or fluids are drained. • Drain all "parts" vehicles of fluids.
Bioretention Basin	This stormwater BMP has the potential to pollute the drainage system, and ultimately Tinker Creek, if not properly maintained.	*Sediment, trash, oil, gas, hydraulic fluid, etc.* • Denuded areas around basin • Accumulation of trash or debris in facility • Active fluid leaks from vehicles stored outside	• Remove trees, weeds, and nuisance vegetation and re-seed any resulting bare areas. • Provide erosion controls when needed.
Grass Swale	This stormwater BMP has the potential to pollute the drainage system, and ultimately Tinker Creek, if not properly maintained.	*Sediment, trash, debris* • Denuded areas around basin • Accumulation of trash or debris in facility	• Remove trash and debris, as needed. • Regularly mow to prevent weedy vegetation from overtaking. • Provide erosion controls when needed.
Underground Detention Basin	This stormwater BMP has the potential to carry pollutants to the offsite drainage system, and ultimately Tinker Creek, if not properly maintained.	*Sediment, trash, oil, gas, hydraulic fluid, etc.* • Inspect annually and clean, as needed.	• Use of most of the above-listed BMPs will help to keep this underground system free from pollutants

5.0 FACILITY INSPECTIONS

5.1 Quarterly Inspections

At least once per quarter, the facility will be inspected using the County's Municipal Yard Inspection Checklist, found in Appendix A. The inspection shall be conducted by the Pollution Prevention SWPPP Implementation Team, identified in Section 2-2.

The purpose of these inspections will be to identify problems early so that they can be corrected in a timely fashion. All completed forms shall be kept in Appendix A and a copy shall be sent to the County's Stormwater Program Manager for inclusion in the Annual MS4 Report, which is submitted to the Virginia Department of Environmental Quality (DEQ) by October 1 of each year.

5.2 Annual Facility Assessments

An "Annual Facility Stormwater Assessment" of the Fleet Service Center will be conducted by the Pollution Prevention SWPPP Implementation Team, identified in Section 2-2, to help assure that significant changes in facilities or activities are identified and can then be reflected in the SWPPP. The Annual Stormwater Assessment will include:

- Visual inspection of all potential sources of pollutants that may enter the stormwater drainage system via stormwater or non-stormwater discharges;

- A review and assessment of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed; and

- Visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, drip pans, brooms or vacuum sweepers, or containers for used absorbents.

The Annual Stormwater Assessment will be documented, as follows:

- Identification of personnel performing the evaluation
- The date(s) of the evaluation
- Findings of the evaluation
- Recommended modifications of the SWPPP
- Schedule for implementing SWPPP revisions
- Any incidents of non-compliance and the corrective actions taken

Following the evaluation, revisions, if needed, to the SWPPP will be completed within 90 days. Blank assessment forms are located in Appendix B, and completed Assessment forms shall be kept there, too. Table 5-1 may be used to track annual assessments and follow-through on recommendations. As always, the County Engineer and Stormwater Program Manager are available for technical assistance during the Assessment Process, as needed.

Table 5-1 Assessment Log

Assessment Date (mm/dd/yyyy)	**Assessor** (Name & Position)	**Revisions Required?** (Y/N)	**Follow Through?** (Date or n/a)
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

APPENDICES

APPENDIX A

Municipal Yard Inspection Checklists

Roanoke County
Municipal Yard Inspection Checklist

Each Department is responsible for conducting quarterly Inspections, at minimum, of its own facilities. Please submit completed forms to: Cindy Linkenhoker, Stormwater Program Manager, in the Department of Community Development.

Date: _____ **Time:** _____ **Inspector:** _____

Facility Name and Location: _____

Description of Activities: _____ **Receiving Waterway:** _____

Fueling Areas		**Comments**
	Proper use of spill overflow protection	
	Roof over fueling area	
	Dry cleanup methods used for fuel spills	
	Tank certified by PBCDERM	
	Leak detection system for fuel tanks	
	Fueling pad graded for minimum run-on of stormwater	
	Fueling pad discharges into a sump pump, not into a storm drain	

Vehicle and Equipment Maintenance		**Comments**
	Proper storage & disposal of greasy rags, oil/air filters, batteries, spent coolants	
	Labeling & tracking for the recycling of hazardous waste materials	
	Hazardous materials stored properly without evidence of spills	
	Inventory of materials maintained onsite & Material Safety Data sheets	
	Wrecked and “part” vehicles drained of all fluids	
	Stored liquids and batteries have secondary containment	
	Liquid waste disposed of properly and not being poured into storm system/sinks	
	Empty drip pans are cleaned and properly stored	
	Floor drains discharge into a storage sump with an oil/water separator	

Outdoor Vehicle and Equipment Storage		**Comments**
	Ground free of visual stains from oil or other vehicle fluids	
	Drip pans used during vehicle maintenance	
	Drip pans cleaned and properly stored	
	Storage are covered and properly maintained	

Painting Areas		**Comments**
	Paint and paint thinner stored and properly labeled	
	Spray paint booths properly operate and have an OSHA-approved hood	
	Personal protection devices/clothes cleaned and properly stored	
	Proper painting equipment being used and is properly cleaned/stored	
	Recycling of used paints, paint thinner, and solvents	
	Employees trained on proper painting and cleaning procedures	

Vehicle and Equipment Washing Areas		**Comments**
	Area designated for cleaning activities	
	Wash waters are contained & recycled, sumps clean & properly used	
	Proper grading for wash pad	
	Parts and equipment washed within designated cleaning area	
	Employees trained on proper washing procedures	

Liquid Storage in Above-Ground Storage		**Comments**
	Installed per design with no leaks (pipes, pumps, valves, hoses, flanges)	
	Storage containers maintained in good condition	
	Safeguards installed (such as secondary containment)	
	System regularly inspected	
	Chemicals are stored with compatible chemicals	
	Container labels can be easily read; containers are properly labeled	
	Employees trained on proper filling and transfer procedures	

Improper Connections to Storm Drainage System		**Comments**
	Floor drains connected to sanitary sewer system, not to storm drains	
	Runoff from wash, maintenance, storage, and fueling areas are not directed to storm drains	
	Facility has updated plumbing schematics to accurately reflect discharge locations	
	All underground storage tanks are maintained with proper safeguards	
	Employees trained on proper disposal of all materials used onsite	

General Site		**Comments**
	Emergency Response Plan onsite	
	Employees trained for emergency procedures	
	Material Safety Data sheets maintained in a convenient location for emergency response	
	Stockpiles properly maintained to prevent runoff	
	Proper litter control (container lids are closed, containers are upright)	
	Vegetated areas properly maintained and erosion-free	
	Site is routinely inspected for indication of illicit discharges	

Other Comments and /or Observations:

APPENDIX B

Annual Facility Stormwater Assessment Forms and Checklists

Annual Facility Stormwater Assessment
Fleet Service Center

1) Name of Building or Operation: _____

2) Facility Representative: _____

Position: _____ Phone No.: _____

	YES	NO	N/A
a) Facility's SWPPP is easily accessible in each building?	☐	☐	☐
b) Awareness of SWPPP by facility personnel? (Random survey of onsite employees.) # Employees Surveyed _____	☐	☐	☐
c) Facility's Emergency Response Plan is easily accessible in each building?	☐	☐	☐
d) Awareness of Emergency Response Plan by facility personnel? (Random survey of employees on site.) # Employees Surveyed _____	☐	☐	☐
e) Assessment Checklist (page 2 of 2) is completed?	☐	☐	☐
f) Was any stormwater pollution prevention training conducted during the year? If yes, provide records in Appendix C.	☐	☐	☐
g) Were non-stormwater discharge visual observations conducted? List Dates: _____	☐	☐	☐
h) Were stormwater discharge visual observations conducted? List Dates: _____	☐	☐	☐

Evaluation Notes: _____

_____

_____

_____

Corrective Measures Recommended: _____

_____

_____

_____

Evaluation Conducted By: _____ Date: _____

This completed evaluation was reviewed with me on: _____ (Date)

Facility Representative (printed name and title): _____

Facility Representative (signature): _____

Stormwater Assessment Checklist

Activities – Check each activity present at the site.	Effectiveness Rating*				
	NO	SO	MO	SC	VE
Vehicle Maintenance and Repair Bays					
1. Maintenance is done in designated areas only.					
2. Equipment is kept clean, with no build-up of oil and grease.					
3. Drip pans, containers, or absorbent pads are used under items that may drip.					
4. Used oil and oil filters, antifreeze, batteries, fluids, etc. are recycled.					
5. Spill kits with booms to contain spilled fuel or other fluids are mounted near the trench drains.					
6. Storage containers are labeled with material contents.					
7. Material Safety Data Sheets are available and periodically reviewed for products stored onsite.					
Outdoor Parking Areas					
1. Dumpsters and trash cans are covered.					
2. Drip pans, containers, or absorbent pads are used under items that may drip.					
3. "Parts only" vehicles are drained of all fluids.					
4. Spills or leaks are contained; absorbent materials are used to clean them up.					
5. Parking lots and/or other paved surface areas are vacuum-swept regularly.					
6. Drainage inlets are routinely cleaned.					
Waste Handling and Disposal					
1. Usage and disposal inventory is used to limit waste generation.					
2. Materials are recycled whenever possible.					
3. Wastes are segregated and separated.					
4. Waste materials are stored indoors or in a covered are not exposed to rainwater.					
5. Hazardous materials are stored in storage lockers with spill containment, where appropriate.					
Bioretention Basin					
1. Erosion is controlled by preservation of native vegetation.					
2. Bare areas are re-vegetated, as needed.					
3. Trash is removed on a routine basis.					
4. Overgrown trees, shrubs, and weeds are removed on a routine basis.					
5. Erosion is controlled by preservation of native vegetation.					
Grass Swale					
1. Trash is removed on a routine basis.					
2. Swale is mowed, as needed, to prevent overgrowth of weeds and woody vegetation.					
General Building and Grounds					
1. Good housekeeping practices are implemented throughout the facility.					
2. Employees are trained to understand and follow the SOPs, SPCC Plan, and SWPPP.					

**NO = No BMPs used and stormwater pollution likely.*
SO = Some BMPs used but not effective.
MO = Some BMPs used and moderately effective.
SC= Source-control BMPs used and very effective/structural BMPs needed.
VE = All necessary BMPs used and very effective.

APPENDIX C

Training Documentation

APPENDIX D

SWPPP Amendment Log

SWPPP Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by *[List Name(s) and Title]*

APPENDIX E

Municipal Separate Storm Sewer System (MS4) Permit

APPENDIX F

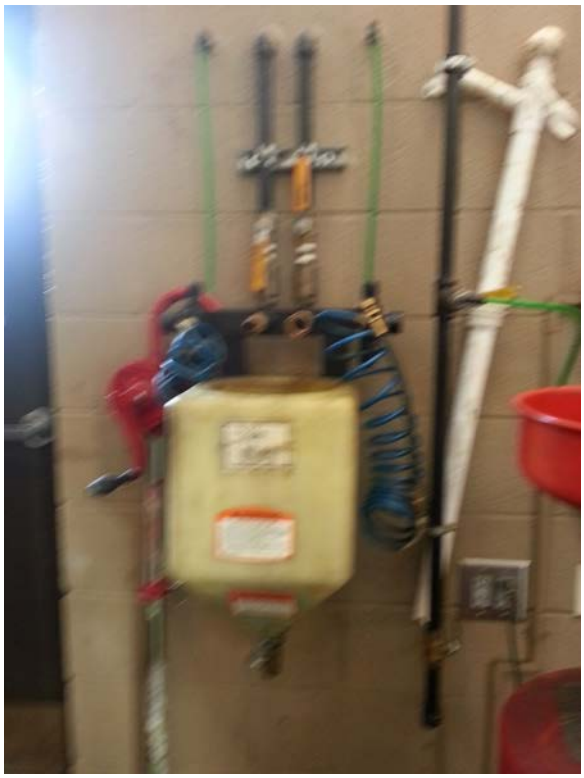
Facility Photographs

Oil filter crusher

55 gallon container of windshield blast

55 gallon container of fleetcharge antifreeze

Properly labeled container, windshield washer fluid

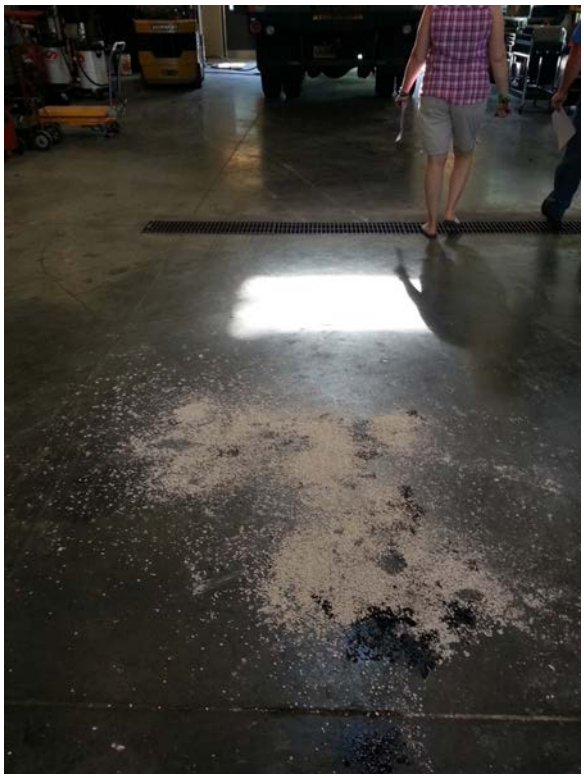


Connection to transfer waste oil and antifreeze from portable storage containers to proper storage tanks

Portable waste oil storage container

Outdoor waste oil tank

Indoor DEF storage tank



Proper use of absorbent material

Storage container of oil absorbent (sta-dry)

Parts cleaning station

Absorbent material for cleaning up spills

Portable antifreeze storage container

R134 refrigerant recovery station

Typical trench drain
(Drains to sanitary sewer)

Battery storage - indoors

Outdoor crate used for occasional container storage

Access manholes for underground detention facility

Access manholes for Oil/Water Separator
(Drains to sanitary sewer)

Outdoor storage bin for scrap steel

Stormwater Pollution Prevention Plan (SWPPP)

For

Roanoke County Public Schools (RCPS) Municipal Yards

622, 701, and 702 South Market Street
Salem, VA 24153

SWPPP Prepared By:

Department of Community Development
Stormwater Management Division
5204 Bernard Drive
Roanoke, VA 24018
540-772-2080

SWPPP Preparation Date:

June, 2015

TABLE OF CONTENTS

TABLES

FIGURES

1.0 INTRODUCTION

This document is the Stormwater Pollution Prevention Plan (SWPPP) for Roanoke County Public Schools' (RCPS) various Municipal Yards, located at 622, 701, and 722 South Market Street, Salem, VA 24153.

These municipal yards fall under the requirements of the County's General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4), General Permit No. VAR040022, with an effective date of July 1, 2013 and an expiration date of June 30, 2018, in accordance with the Memorandum of Agreement (MOA) between Roanoke County and RCPS. The permit is designed to reduce the discharge of pollutants from stormwater that leaves the regulated MS4 area within the County and subsequently enters the Commonwealth of Virginia's receiving waters, such as the Roanoke River and its tributaries.

According to the United States Environmental Protection Agency (US EPA), polluted stormwater runoff is a leading cause of impairment to nearly 40 percent of surveyed U.S. water bodies that do not meet water quality standards. Whether travelling by overland flow or through stormwater conveyance systems, polluted stormwater runoff is discharged into local receiving waterways. Such untreated water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; it can also cause a loss of aesthetic value, and can threaten public health due to its potential to contaminate food, drinking water supplies, and recreational waterways.

The MS4 Permit aims at reducing pollutants in stormwater runoff by focusing on six Minimum Control Measures (MCMs), as follows: (1) Public Education and Outreach on Stormwater Impacts, (2) Public Involvement and Participation, (3) Illicit Discharge Detection and Elimination, (4) Construction Site Stormwater Runoff Control, (5) Post-Construction Stormwater Management in New Development and Redevelopment, and (6) Pollution Prevention and Good Housekeeping for Municipal Operations. Within each MCM, there are numerous Best Management Practices (BMPs) being implemented by the County of Roanoke and RCPS.

This SWPPP has been created to satisfy the conditions of BMP 6-6 of MCM 6, entitled Stormwater Pollution Plans (SWPPPs) for Municipal Facilities, which requires the identification of the high-priority facilities that have a high potential to discharge pollutants into stormwater, followed by development, implementation, and maintenance of a SWPPP for said facilities.

1.1 ORGANIZATION OF THE STORMWATER POLLUTION PREVENTION PLAN

Section 1 of this SWPPP provides information regarding stormwater regulations, the requirements of the 2013 MS4 Permit, review and revision of the SWPPP, and availability of the SWPPP as a public document. Section 2 briefly describes the Roanoke County Public Schools' municipal yards, the Pollution Prevention Team responsible for compliance with the MS4 Permit, and other environmental programs that indirectly support compliance with the permit. The section also provides a general discussion of Best Management Practices (BMPs) and

identifies those BMPs that are implemented throughout the facilities. It includes a list of other environmental compliance plans for the facilities and explains the employee training requirements.

Section 3 contains the definition and categories for both authorized and unauthorized non-stormwater discharges. Section 4 identifies the activities conducted, significant materials stored, potential pollutants, and the measures taken to eliminate or reduce the discharge of pollutants to stormwater drainage systems from the three facilities.

1.2 STORMWATER REGULATORY FRAMEWORK

In 1972 the Federal Water Pollution Control Act (known as the Clean Water Act) was amended to effectively prohibit discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. The United States Environmental Protection Agency (US EPA) delegated administration of the NPDES Program within Virginia to the Department of Environmental Quality (DEQ), and DEQ administers it as the Virginia Pollutant Discharge Elimination System (VPDES) Permit Program. The 1987 amendments of the Clean Water Act added Section 402(p) to the federal regulations, which established the framework for regulating discharges of pollutants via stormwater from industrial activities and MS4s. Section 402(p) required the US EPA to develop permitting regulations for stormwater discharges from MS4s and from industrial facilities, including construction sites.

In Virginia, discharges from municipal separate storm sewer systems are regulated under several programs: the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Permit regulations, and the Clean Water Act (through the VPDES Permit Program) as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain an individual permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective March 23, 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest decennial census) obtain coverage under a general permit to discharge stormwater from their outfalls. Roanoke County is classified as a small MS4, and thus operates under the General MS4 Permit. (Va DEQ, n.d.)

According to the County's MS4 Permit, the following types of high-priority facilities require SWPPPs:

- 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
- Vehicle storage and maintenance yards

In addition, facilities in which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff also require a SWPPP:

1) Areas where residuals from using, storing, or cleaning machinery or equipment remain and are exposed to stormwater;

2) Materials or residuals on the ground or in stormwater inlets from spills or leaks;

3) Material handling equipment (except adequately maintained vehicles);

4) 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);

5) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);

6) 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;

7) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);

8) Application or disposal of process wastewater (unless otherwise permitted); or

9) 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.

Based on the above requirements, the following Roanoke County Public Schools facilities have been determined to be high-priority facilities that have a high potential to discharge pollutants. Table 1-1 shows the anticipated schedule by which the SWPPPs for each facility will be prepared.

Table 1-1 High-Priority RCPS Facilities and Associated Activities

Name of High-Priority Facility	Activities that make it High-Priority	High Potential of Discharging Pollutants (Yes or No)	Reasons for High Potential, Or Not	Scheduled SWPPP Development
Maintenance Shop, Offices, and Warehouse Maintenance Dept. 716 South Market Street, Salem, VA 24153	Maintenance activities	Yes	Maintenance activities	7/1/15
Small Engine Repair and Welding Shop 622 South Market Street, Salem, VA 24153	Maintenance activities	Yes	Maintenance activities	7/1/15
Bus Maintenance Shop/ Parking Lot Transportation Dept. 701 South Market Street, Salem, VA 24153	Vehicle parking; fueling	Yes	Fueling activities	7/1/15
Maintenance/Storage Facility Burton Center for Arts and Technology (BCAT)	Vehicle storage	Yes	Inoperable vehicle storage	7/1/16
Cave Spring Bus Lot	Vehicle parking; fueling	Yes	Outdoor fueling	7/1/16
Glenvar Bus Lot	Vehicle parking; fueling	Yes	Outdoor fueling	7/1/17
Northside Bus Lot	Vehicle parking; fueling	Yes	Outdoor fueling	7/1/17
Vinton Bus Lot	Vehicle parking; fueling	Yes	Outdoor fueling	7/1/17

1.3 REVIEW AND REVISION OF THE STORMWATER POLLUTION PREVENTION PLAN

The SWPPP will be reviewed at least annually to determine if any revision is necessary to reflect changes in the facility or changes in the activities conducted that:

- May significantly increase the quantities of pollutants in stormwater runoff;
- Cause a new area of the facility to be exposed to stormwater or authorized non-stormwater discharges; or
- Start-up of an activity that would introduce a new pollutant source at a facility.

In determining if revision of the SWPPP is necessary, the SWPPP Implementation team, identified in Section 2.2, will review the Annual Facility/Activity Stormwater Assessment, which is described in Section 5.

1.4 LOCATION OF THE STORMWATER POLLUTION PREVENTION PLAN

The SWPPP shall be kept in the office of the RCPS Maintenance Supervisor, located in the office building adjacent to the warehouse at 702 South Market Street, Salem, VA. A copy of the SWPPP will also be maintained by the Stormwater Program Manager, Department of Community Development, in the Roanoke County Administration Center.

2.0 SITE DESCRIPTION AND INITIAL FACILITY INSPECTION

Roanoke County Public Schools' (RCPS) municipal yards are located in Salem, VA at 701, 702, and 622 South Market Street. These commercial properties are owned by the Roanoke County School Board and contain warehouse-type structures used for bus repair, bus washing, vehicle painting, welding, facilities maintenance, and offices for transportation and maintenance staff. General information about each parcel is listed below:

SITE	TAX PARCEL #	ADDRESS	YEAR BUILT	EXTERIOR MATERIAL	BLDG. SIZE (Sq. Ft.)	LOT SIZE (ac.)	ZONING
Small Engine Repair & Welding Shop	160-8-4	622 S. Market Street Salem, VA 24153	1984	Metal	5,750	0.352	LM
Bus Maintenance Shop/Parking Lot	160-9-1.1	701 S. Market Street Salem, VA 24153	1950	Cinderblock	11,704	3.052	LM
Maintenance Shop, Office, & Warehouse	160-7-1	702 S. Market Street Salem, VA 24153	1967	Cinderblock	14,460	1.148	LM

All three parcels front South Market Street, located in the block between East 4th Street to the north and 6th Street to the south. All three properties drain directly or indirectly, via drop inlets, to a creek behind the bus parking lot, known as Williams Branch. This, in turn, drains to the nearby Roanoke River, which is currently listed by DEQ as impaired for sediment, bacteria, and PCBs.

An initial inspection of the facility was conducted on June 9, 2015 at 9:00 a.m. by the following members of the Pollution Prevention Team, which is further described in Section 2.2:

- Dennis Epperly – Supervisor, Maintenance Department - RCPS
- David Henderson, County Engineer - Community Development
- Cindy Linkenhoker, Stormwater Program Manager - Community Development

Observations of the facility activities and required actions noted during this inspection are listed in Section 2.1. All required action items will be completed and documented prior to the next annual assessment. The associated inspection report is located in Appendix A of this SWPPP.

2.1 SITE FACILITIES

As listed above, there are three sites that are the focus of this SWPPP:

- Small Engine Repair & Welding Shop
- Bus Maintenance Shop/Parking Lot
- Maintenance Shop, Office, & Warehouse

Each of these facilities will be individually discussed, below:

2.1.1 SMALL ENGINE REPAIR AND WELDING SHOP

Facility Type: Engine Repair and Welding

Facility Activities: The small engine repair and welding shop is used to conduct minor activities, such as routine service and oil changes, and welding activities. The facility contains a parts-washing station, two 275-gallon oil tanks, and various related equipment. Vehicle batteries are stored inside in a cabinet. The floor houses a trench drain, which discharges into the sanitary sewer system. A paved parking lot abuts the building face and contains dumpsters, with closed covers, for trash and waste materials.

Required Actions: Provide a spill kit with booms to contain spilled fuel or other fluids. Mount the kit near the trench drain. Use drip pans or absorbent material, like cat litter or mats, under vehicles that are actively being repaired. Label material contents of all storage containers within the shop area.

2.1.2 BUS MAINTENANCE SHOP/PARKING LOT

Facility Type: Bus Repair, Parking, Washing, Fueling; and Offices

Facility Activities: The building is used for bus repair and contains office space for RCPS' transportation personnel. There are four bays for conducting school bus maintenance and two bays for conducting light truck repairs. All of the bays have floor drains that discharge into the sanitary sewer system; those located in the light truck repair bays also have covers over the inlets. At the time of the inspection, there was evidence of spills beside the waste oil container. In addition, active spills were noticed under the buses that were inside and being repaired. The building houses several parts cleaning stations and a 275-gallon waste oil tank in "the basement." Also, there are two 200-gallon tanks for new oil and a tank for storing waste antifreeze; all three tanks are located outside of the building. There is also a covered bus wash bay and an indoor paint bay, both of which have floor drains that are tied into the sanitary system.

Outside, there is a covered fueling island in the paved parking lot, along with (2) underground storage tanks (USTs), each holding

10,000 gallons of fuel (1- gasoline, 1-diesel). Many buses and other vehicles are parked around the perimeter of the lot.

The entire parking lot is graded to drain to the adjacent creek via a storm drain pipe on the west side of the site, which is adjacent to a storage building that is relatively close to the fueling island.

Required Actions: Label material contents of all containers that are stored outside. Discard any empty containers. Provide drip pans or absorbent material, like cat litter or mats, under vehicles that are currently leaking. Provide absorbent material on all active oil spills and stains throughout the building and parking area. Provide a spill kit for the fueling station and mount it someplace nearby; ensure to label it. Drain fluids from all junk buses or those being stored for "parts only."

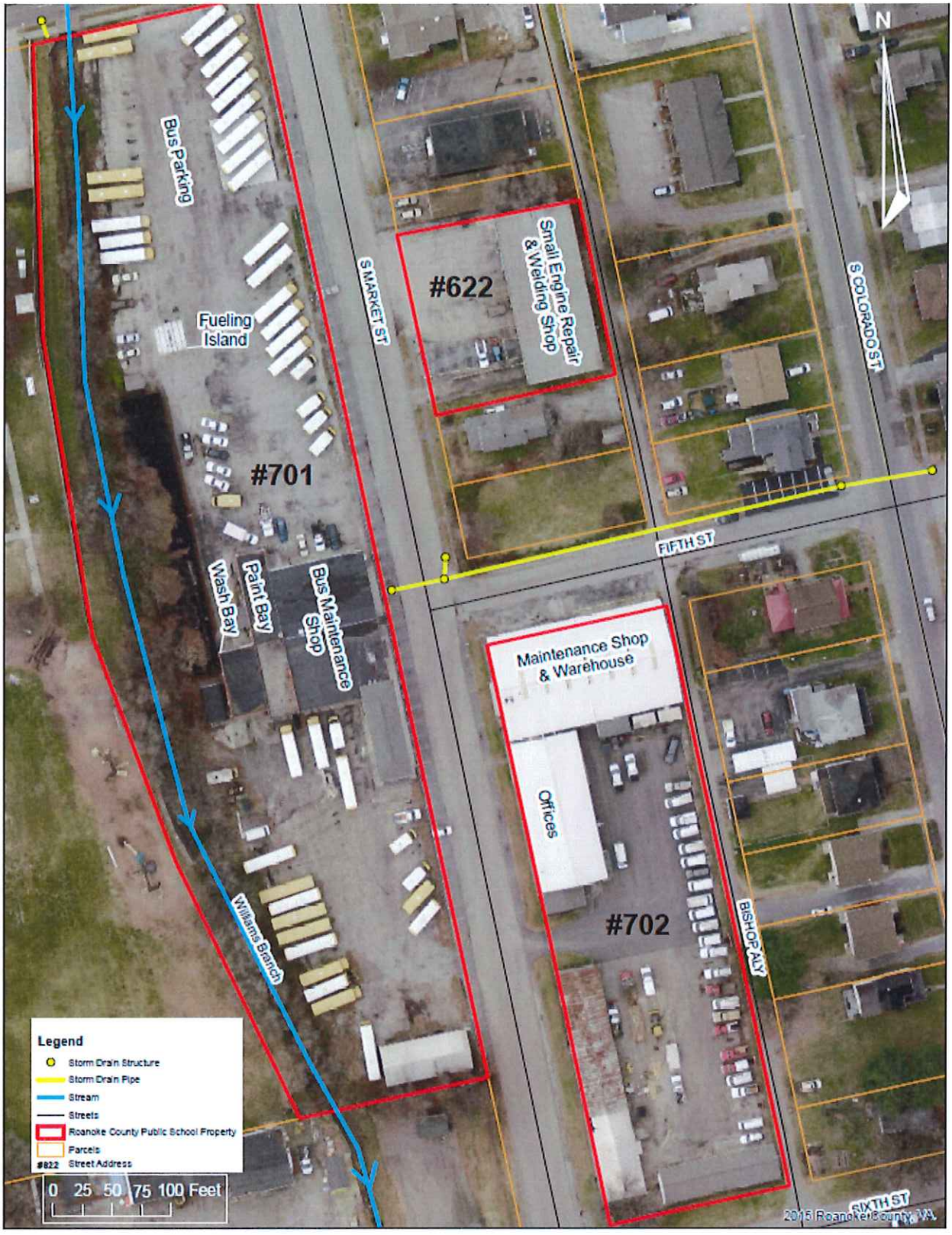
2.1.3 MAINTENANCE SHOP, WAREHOUSE, AND OFFICES

Facility Type: Warehouse and Offices

Facility Activities: Offices for the RCPS Maintenance Department are located inside the building, which also houses a wood working shop. Adjacent to this building is the warehouse building. This structure is used to store delivered materials and products, all of which are in original packaging. Hazardous materials are appropriately labeled. At the time of inspection, there was some evidence of outdoor equipment washing beside (to the south of) the warehouse building. There is a paved parking area behind (to the east of) the office building.

Required Actions: Educate employees to not wash any equipment outside. If desired, the bus wash bay could be used for this purpose.

Figure 2-1 Site Map – RCPS Municipal Yards



2.2 POLLUTION PREVENTION TEAM

The Supervisor of the Maintenance Department for RCPS shall have the primary responsibility to keep and maintain the SWPPP document, and to lead the SWPPP Implementation Team. The Shop Foreman of the Transportation Department for RCPS shall be responsible to assist the Maintenance Department Supervisor in conducting quarterly inspections and annual inspections.

Table 2-1 Pollution Prevention Team – RCPS Municipal Yards

POSITION	NAME	PHONE	PRIMARY RESPONSIBILITIES
Director of Operations & Construction, RCPS	Martin W. Misicko, Ed. D	(540) 562-3800	SWPPP OVERSIGHT • Provide the necessary resources to comply with the SWPPP. • Ensure assigned staff implements the SWPPP and all of its components. • Provide management support to staff.
Supervisor, Maintenance Department, RCPS Shop Foreman, Transportation, RCPS	Dennis Epperly Darel Maggard	(540) 562-3900, ext. 11001 540-562-3900, ext. 12011	SWPPP IMPLEMENTATION • Implement and administer the SWPPP. • Implement the Emergency Response Plan and Procedures (part of the Hazardous Waste Management Program). • Provide Stormwater Training for facility personnel. • Maintain the necessary records and files.
Supervisor, Maintenance Department, RCPS Shop Foreman, Transportation, RCPS	Dennis Epperly Darel Maggard	(540) 562-3900, ext. 11001 540-562-3900, ext. 12011	CHEMICAL SPILL RESPONSE • Minimize the threat of chemical spills to personnel and to the surrounding environment; and • Protect storm drain inlets and sanitary sewer drains from any spillage or contamination once personnel safety is assured.
Supervisor, Maintenance Department, RCPS Shop Foreman, Transportation, RCPS	Dennis Epperly Darel Maggard	(540) 562-3900, ext. 11001 540-562-3900, ext. 12011	CONDUCT ROUTINE FACILITY INSPECTIONS • Implement BMPs for respective area(s) of responsibility. • Conduct routine inspections of respective areas of responsibility to ensure BMPs are in place, operative, and effective at all times in and around the areas where activities that may impact stormwater are conducted. • Submit quarterly inspection reports, using the Municipal Yard Inspection Checklist, to the Stormwater Program Manager.
County Engineer - Community Development Stormwater Program Manager - Community Development	David Henderson Cindy Linkenhoker	540-772-2096, ext. 238 540-772-2096, ext. 245	MS4 PROGRAM MANAGEMENT • Prepare and revise the SWPPP, as necessary. • Conduct periodic facility inspections to assure compliance. • Collect training records. • Prepare and submit Annual MS4 Report. • Serve as a technical resource.

2.3 POLLUTION PREVENTION THROUGH BMPS

2.3.1 What are BMPs?

Best Management Practices, or BMPs, are the practices, procedures, policies, prohibitions, schedules of activities, structures, or devices that are implemented to prevent or minimize pollutants from coming into contact with precipitation, stormwater runoff, or non-stormwater flows. BMPs are also structures or devices that remove pollutants from stormwater runoff before the runoff enters a stormwater drainage system or surface water. Therefore, BMPs are often categorized as either "source-control" BMPs or "treatment-control" BMPs.

Source-control BMPs include all types of measures designed to prevent pollution at the source, that is, to keep stormwater from coming into contact with pollutants in the first place. Source-control BMPs are generally simple, low-maintenance, cost-effective, and broadly applicable. They may be categorized as non-structural or structural. Good housekeeping at a municipal yard is an example of a non-structural, source-control BMP; a canopy installed over a fueling island is an example of a structural, source-control BMP.

Treatment-control BMPs, like a detention pond, are devices or methods used to treat stormwater runoff to remove pollutants; these BMPs are frequently more costly to design, install, and operate than source-control BMPs. More importantly, treatment-control BMPs are typically not as effective as source-control BMPs, and the effectiveness is highly dependent on regular maintenance. Nevertheless, they can be appropriate and useful under certain conditions. However, treatment-control BMPs typically do not remove all pollutants from stormwater runoff and, therefore, should not be regarded as disposal systems.

2.3.2 Source-Control BMPs

The following source-control BMPs will be employed for use at the RCPS Municipal Yards, as identified in this document. The SWPPP Implementation Team, identified in Table 2-1, is responsible for implementing these source controls.

Small Engine Repair and Welding Shop

a) Train employees to use drip pans, clean them out after use, and properly store inside.

b) Train employees to clean up oil/fluid leaks by covering them with absorbent material, like cat litter; then, sweep it up and dispose of it in the trash.

c) Label all containers.

Bus Maintenance Shop, Parking Lot, and Fueling Island

a) Train employees to:
   a. Use proper spill cleanup techniques.
   b. Look for oil and other fluid leaks in the parking lot and at fueling area.
   c. Clean up oil/fluid leaks by covering them with absorbent material, like cat litter; then, sweep it up and dispose of it in the trash.
   d. Use drip pans, clean them out after use, and properly store inside.

b) Maintain a spill kit, booms, and other absorbent cleanup materials near the trench drain in all bays and at the outdoor fueling island.

c) Maintain containers for disposal of contaminated cleanup materials.

d) Pick up trash in the parking lot and throw it in a trash bin; keep all lids closed.

e) Label all containers that are stored outside.

Maintenance Shop / Warehouse/ Offices

a) Train employees to not wash equipment outside, where runoff may go to a storm drain.

2.3.3 Good Housekeeping BMPs

Good housekeeping practices include activities that are intended to maintain a clean site and keep equipment in good working order to prevent pollutants from coming into contact with stormwater runoff. Daily cleanup and inspections are the most effective means of achieving good housekeeping.

Good housekeeping practices shall be incorporated into the day-to-day activities at the three facilities, as they foster a habit of good housekeeping and help to assure worker safety. Employees shall be trained to understand the practices and to implement them on an ongoing basis. The following good housekeeping BMPs will be employed for use at the RCPS Municipal Yards, as identified in this document.

- Tools and materials are returned to designated storage areas after use;
- All storage containers are properly labeled, to include warning labels if appropriate.
- All spills are immediately cleaned up.
- Spilled oil and grease is absorbed using kitty litter or other absorbent material, which is then swept up and disposed of in the trash.

- Spills that escape the site are reported to the Roanoke County Emergency Communications Center at (540) 562-3265.
- Waste materials are collected and properly discarded after the completion of each job, shift, or day as appropriate;
- Indoor work areas are kept neat, uncluttered, and well-ventilated to discourage outdoor work that has the potential to generate pollutants and to allow leaks and spills to be quickly detected and controlled;
- Outdoor work areas are swept regularly (not hosed) and kept neat and clean;
- When outdoor work areas need cleaning beyond sweeping, all wash waters are contained, collected, and properly discarded;
- Outdoor waste or trash receptacles are kept covered and regularly emptied; adjacent areas are inspected for misplaced or wind-blown litter; and
- Employees are regularly trained on proper good housekeeping practices.

2.3.4 Preventive Maintenance BMPs

Preventive maintenance BMPs relate to maintaining equipment in good working order. Having equipment failures or using equipment that poorly functions may result in the discharge of pollutants to the storm drainage system. Therefore, to reduce the likelihood of breakdown or failure, major equipment should have a preventive maintenance schedule for inspection, repair, or replacement of fluids (e.g., hydraulic, lubricating, cooling), greases, seals, hoses, filters, pressure gauges, piping, etc. Paved and landscaped areas should not be allowed to degrade to the point where they erode and contribute pollutants to stormwater runoff. Leaky roofs, broken doors, cracked pavement and berms, and any other enclosure or structural defects that may impact the quality of stormwater runoff should be promptly repaired.

2.3.5 Proper Materials Handling and Storage BMPs

Materials handling and storage BMPs relate to controlling the potential for leaks, spills, and losses of materials delivered, used, and stored at a facility. Spills and leaks of materials can accumulate in soils or on surfaces and be carried away in stormwater runoff or in authorized non-stormwater discharges. These materials handling and storage BMPs will be employed:

Materials Use

- Only obtain the amount of materials needed to finish a particular job;
- Limit waste generation by keeping good records and reviewing activities;
- Recycle materials whenever possible; and

- Read and follow manufacturer directions for use of materials and review the associated Material Safety Data Sheet (MSDS) for each product.

Materials Storage

- Store materials indoors or in a covered area where exposure to rainwater is eliminated;
- Store lead-acid batteries indoors and within secondary containment;
- Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;
- Locate storage areas away from vehicle and equipment paths to reduce the potential for accident-related leaks or spills;
- Store drums or other containers away from storm drain inlets;
- Provide informational signing, labels, restricted access, locks, inventory control, overhead coverage, and secondary containment for all hazardous material storage areas or container units; and
- Conduct regular inspections for leaks and control dates.

2.3.6 Proper Waste Handling BMPs

Waste handling BMPs relate to properly controlling, collecting, storing, and disposing of wastes that are generated at a facility. All facility personnel should be aware that the disposal of any waste (including wash water) into a storm drain inlet or stormwater conveyance (i.e., ditches or streets) is an illegal discharge. Likewise, disposing of waste (including wash water) onto a paved surface such that it may be carried to a storm drain inlet or stormwater conveyance (i.e., ditches, streets) is an illegal discharge.

The following waste handling BMPs will be employed for use at the RCPS Municipal Yards:

- Sweep or vacuum (dry methods) work areas to collect particulates and debris frequently;
- Limit waste generation by keeping good records and reviewing activities;
- Recycle materials whenever possible;
- Separate and segregate different types of wastes;
- Store waste materials indoors or in a covered area where exposure to rainwater is eliminated;
- Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;

- Locate the waste storage area away from vehicle and equipment paths to reduce the potential for accident-related releases;
- Provide informational signage, labels, restricted access, inventory controls, overhead coverage, and secondary containment for all hazardous waste storage areas or container units;
- Conduct regular inspections for leaks and control dates.

2.3.7 Spill Prevention and Response

For spills, the old saying that "an ounce of prevention is worth a pound of cure" is appropriate. Spill clean-up can be labor-intensive and costly, as it involves containing the spill, collecting the spilled substance, properly disposing of the spilled materials, and filing of associated reports to regulatory agencies, not to mention possible monetary fines. Spills and leaks are some of the most significant sources of stormwater pollution and are, in most cases, avoidable.

Spill prevention and control procedures include:

- Placing bollards, berms and containment features around structures or areas where fluids are stored, so releases can be prevented, easily detected, and controlled;
- Using drip pans for maintenance operations involving fluids and under leaking vehicles and equipment awaiting repair;
- Placing spill kits in areas where fluids are stored or in areas where activities may result in a spill, such as at the fueling island;
- Providing training for proper use of materials and equipment used during operations and maintenance activities;
- Providing training for proper use of spill response equipment and supplies; and
- Conducting outdoor maintenance activities on paved surfaces to allow for easy detection, control, and cleanup of spills.

Spill prevention, control, and cleanup apply to all materials and wastes - not only hazardous substances. The toxic water quality effects from spills of hazardous substances (e.g., acids, oils, greases, fuels, solvents, pesticides) are commonly understood. However, non-hazardous materials, such as sand, litter, and wash water, among others - can also greatly impact water quality in receiving waters.

2.4 Employee Training

The Director of Operations & Construction, RCPS, is responsible to ensure that all of his/her designated employees receive the appropriate Stormwater Management training on a biennial basis. The County's Stormwater Program Manager will make such training available to RCPS via compact disc or another easily-accessible venue.

The Stormwater Program Manager coordinates training related to stormwater management on at least a biennial basis and maintains all training records for inclusion in the County's Annual MS4 Report, as submitted to DEQ.

The purpose of stormwater-related training is to educate workers on the day-to-day activities that may impart pollutants into stormwater discharges from the sites, to help in the implementation of BMPs, to ensure understanding of the County's Standard Operating Procedures (SOPs) for Water Quality, and to ensure employees understand what illicit discharges are and how to respond to them when they are witnessed.

Training attendance sheets and any other training documentation shall be kept in Appendix C. The instructor's name, if applicable, date and time of training, location of training, training title, participants' names, and corresponding employee numbers will be listed.

All training records shall be kept for a period of no less than five years.

3.0 NON-STORMWATER DISCHARGES

A *non-stormwater* discharge is any discharge or flow to a stormwater drainage system that is not composed entirely of stormwater runoff. The County's MS4 Permit prohibits the discharge of non-stormwater discharges into its Municipal Separate Storm Sewer System (MS4) and to the Waters of the U.S., unless the discharge is regulated under a separate VPDES or VSMP permit, as issued by the Virginia DEQ, or is classified as an *authorized* discharge, as listed below.

3.1 Authorized Non-Stormwater Discharges

The only non-stormwater discharges, or flows, that are allowed to be discharged into the County's MS4 are listed below:

a) Water line flushing;
b) Landscape irrigation;
c) Diverted stream flows or rising groundwater;
d) Uncontaminated ground water infiltration;
e) Uncontaminated pumped groundwater;
f) Discharges from potable water sources;
g) Foundation drains;
h) Air conditioning condensate;
i) Irrigation water;
j) Springs;
k) Water from crawl space pumps;
l) Footing drains;
m) Lawn watering;
n) Individual residential car washing (this exemption does not include any commercial or business activity);
o) Flows from riparian habitats and wetlands;
p) De-chlorinated swimming pool discharges;
q) Street wash water; and
r) Firefighting activities.

4.0 SIGNIFICANT MATERIALS, ACTIVITIES, AND POTENTIAL POLLUTANTS

4.1 Significant Materials

A number of materials are used or stored on the various municipal sites. Table 4-1 summarizes these materials, by location, and how they are received or stored at each facility.

Table 4-1 (a). List of Significant Materials – Small Engine Repair and Welding Shop

Small Engine Repair and Welding Shop				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Welding Shop*	*Welding Shop*	*Twice weekly*
Coolant (new)	50 gallons	Small Engine/Welding Shop	Small Engine/Welding Shop	Yearly
Coolant (used)	50 gallons	"	"	Yearly
Detergents	various	"	"	Twice yearly
Diesel fuel	5 gallons	"	"	Routinely
Gasoline	21 gallons	"	"	Yearly
Hydraulic fluid	10 gallons	"	"	Yearly
Lubricants	24 - 16oz. tubes	"	"	Yearly
Motor oil (new)	300 gallons	"	"	Yearly
Motor oil (used)	300 gallons	"	"	Yearly
Paint Products	24 - 16oz. cans	"	"	Yearly
Solvents	3 gallons	"	"	Yearly

Table 4-1 (b). List of Significant Materials – Maintenance Shop, Warehouse, Offices

Maintenance Shop, Warehouse, Offices				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Maintenance Shop*	*Maintenance Shop*	*Twice weekly*
Adhesives & Sealants	16oz	Maintenance Shop	Maintenance Shop	Weekly
Lubricants	16oz	"	"	Weekly
Paint Products	2500 gallons	"	"	Yearly
Solvents	130 gallons	"	"	Yearly

Table 4-1 (c). List of Significant Materials – Bus Maintenance Shop/Parking Lot

Bus Maintenance Shop/Parking Lot				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Bus Repair Bay*	*Bus Repair Bay*	*Twice weekly*
Adhesives & Sealants	4 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Brake fluid	5 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Coolant (new)	500 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Coolant (used)	500 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Detergents	1000 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Diesel fuel	50,830 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Gasoline	9,225 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Lubricants	5 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Motor oil (new)	700 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Motor oil (used)	700 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Paint Products	15 gallons	Bus Repair Bay	Bus Repair Bay	Yearly
Solvents	15 gallons	Bus Repair Bay	Bus Repair Bay	Yearly

4.2 Significant Activities, Potential Pollutants, and BMPs

A number of activities performed on the sites have a high potential for pollutant discharge. They are listed in Table 4-2, along with the expected pollutants, pollutant source, and the associated BMPs used to mitigate them.

Table 4-2 Significant Activities, Potential Pollutants, and BMPs

Activity	Description	Pollutants/Sources	BMPs
Vehicle parking areas at all three RCPS municipal yards	Stormwater runoff has the potential to wash away any leaked fluids or discarded trash and transport it to the storm drain system, which discharges into the adjacent creek, Williams Branch.	*Oils/Sediment/Trash* • Leaking vehicles • Uncontained trash • Un-swept parking areas	• Train employees to look for and throw away trash found in the parking areas. • Train employees to look for oil and other fluid leaks in the parking lot and to properly clean them up. • Periodically vacuum sweep parking areas to collect sediment and debris. • Maintain trash bins with lids closed; refrain from rinsing them out on the pavement. • Drain fluids from junk and "parts-only" buses.
Vehicle and equipment fueling at the RCPS bus parking lot	Vehicle and equipment fueling is a potential source of stormwater pollution at the facility. Stormwater run-on has the potential to wash away any spills or leaked fluids located at the fueling area and subsequently drain into the nearby storm drain inlet.	*Fuels/Oils* • Spills caused by overtopping • Spills and leaks during deliveries • Hosing or washing down fuel area. • Rainfall running onto and off of fueling area	• Train employees in proper fueling/cleanup procedures. • Discourage "topping off" of fuel tanks. • Install "shut-off" valves on nozzles. • Use adsorbent materials on spills as opposed to hosing down. • Install covered spill kits next to fueling area. • Maintain canopy over fueling area.
Outdoor material, chemical, vehicle, and equipment storage at all three RCPS municipal yards	Outdoor material, chemical, vehicle, and equipment storage have a potential for stormwater pollution. In particular, vehicles and equipment are susceptible to leaking and those that are stored outdoors, subject to weather, pose a pollutant risk. Rainfall at the facility will likely wash leaked fluids or spilled chemicals into the storm drain system.	*Antifreeze, pesticides, oil, gas, solvents, etc.* • Container spills or leaks • Vehicle and equipment leaks	• Minimize outdoor storage. Store materials indoors or under a roof whenever possible. • Conduct loading and unloading in dry weather, if possible. Store materials in enclosed or covered areas. • Train employees in spill containment and cleanup procedures during loading/unloading. • Use drip pans under leaking vehicles and equipment. • Repair leaking vehicles and maintain equipment to prevent leaks. • Drain fluids from junk and "parts-only" buses.

5.0 FACILITY INSPECTIONS

5.1 Quarterly Inspections

At least once per quarter, the facility will be inspected using the County's Municipal Yard Inspection Checklist, found in Appendix A. The inspection shall be conducted by the Pollution Prevention SWPPP Implementation Team, identified in Section 2-2.

The purpose of these inspections will be to identify problems early so that they can be corrected in a timely fashion. All completed forms shall be kept in Appendix A and a copy shall be sent to the County's Stormwater Program Manager for inclusion in the Annual MS4 Report, which is submitted to the Virginia Department of Environmental Quality (DEQ) by October 1 of each year.

5.2 Annual Facility Assessments

An "Annual Facility Stormwater Assessment" of the RCPS Municipal Yards will be conducted by the Pollution Prevention SWPPP Implementation Team, identified in Section 2-2, to help assure that significant changes in facilities or activities are identified and can then be reflected in the SWPPP. The Annual Stormwater Assessment will include:

- Visual inspection of all potential sources of pollutants that may enter the stormwater drainage system via stormwater or non-stormwater discharges;
- A review and assessment of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed; and
- Visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, drip pans, brooms or vacuum sweepers, or containers for used absorbents.

The Annual Stormwater Assessment will be documented, as follows:

- Identification of personnel performing the evaluation
- The date(s) of the evaluation
- Findings of the evaluation
- Recommended modifications of the SWPPP
- Schedule for implementing SWPPP revisions
- Any incidents of non-compliance and the corrective actions taken

Following the evaluation, revisions, if needed, to the SWPPP will be completed within 90 days. Blank assessment forms are located in Appendix B, and completed Assessment forms shall be kept there, too. Table 5-1 may be used to track annual assessments and follow-through on recommendations. As always, the County Engineer and Stormwater Program Manager are available for technical assistance during the Assessment Process, as needed.

Table 5-1 Assessment Log

Assessment Date (mm/dd/yyyy)	**Assessor** (Name & Position)	**Revisions Required?** (Yes / No)	**Follow Through?** (Date or n/a)
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	
		☐ Yes ☐ No	

APPENDICES

APPENDIX A

Municipal Yard Inspection Checklists

Roanoke County
Municipal Yard Inspection Checklist

Each Department is responsible for conducting quarterly Inspections, at minimum, of its own facilities. Please submit completed forms to: Cindy Linkenhoker, Stormwater Program Manager, in the Department of Community Development.

Date: _____ **Time:** _____ **Inspector:** _____

Facility Name and Location: _____

Description of Activities: _____ **Receiving Waterway:** _____

	Fueling Areas	**Comments**
	Proper use of spill overflow protection	
	Roof over fueling area	
	Dry cleanup methods used for fuel spills	
	Tank certified by PBCDERM	
	Leak detection system for fuel tanks	
	Fueling pad graded for minimum run-on of stormwater	
	Fueling pad discharges into a sump pump, not into a storm drain	

	Vehicle and Equipment Maintenance	**Comments**
	Proper storage & disposal of greasy rags, oil/air filters, batteries, spent coolants	
	Labeling & tracking for the recycling of hazardous waste materials	
	Hazardous materials stored properly without evidence of spills	
	Inventory of materials maintained onsite & Material Safety Data sheets	
	Wrecked and "part" vehicles drained of all fluids	
	Stored liquids and batteries have secondary containment	
	Liquid waste disposed of properly and not being poured into storm system/sinks	
	Empty drip pans are cleaned and properly stored	
	Floor drains discharge into a storage sump with an oil/water separator	

	Outdoor Vehicle and Equipment Storage	**Comments**
	Ground free of visual stains from oil or other vehicle fluids	
	Drip pans used during vehicle maintenance	
	Drip pans cleaned and properly stored	
	Storage are covered and properly maintained	

Painting Areas		Comments
	Paint and paint thinner stored and properly labeled	
	Spray paint booths properly operate and have an OSHA-approved hood	
	Personal protection devices/clothes cleaned and properly stored	
	Proper painting equipment being used and is properly cleaned/stored	
	Recycling of used paints, paint thinner, and solvents	
	Employees trained on proper painting and cleaning procedures	

Vehicle and Equipment Washing Areas		Comments
	Area designated for cleaning activities	
	Wash waters are contained & recycled, sumps clean & properly used	
	Proper grading for wash pad	
	Parts and equipment washed within designated cleaning area	
	Employees trained on proper washing procedures	

Liquid Storage in Above-Ground Storage		Comments
	Installed per design with no leaks (pipes, pumps, valves, hoses, flanges)	
	Storage containers maintained in good condition	
	Safeguards installed (such as secondary containment)	
	System regularly inspected	
	Chemicals are stored with compatible chemicals	
	Container labels can be easily read; containers are properly labeled	
	Employees trained on proper filling and transfer procedures	

Improper Connections to Storm Drainage System		Comments
	Floor drains connected to sanitary sewer system, not to storm drains	
	Runoff from wash, maintenance, storage, and fueling areas are not directed to storm drains	
	Facility has updated plumbing schematics to accurately reflect discharge locations	
	All underground storage tanks are maintained with proper safeguards	
	Employees trained on proper disposal of all materials used onsite	

General Site		Comments
	Emergency Response Plan onsite	
	Employees trained for emergency procedures	
	Material Safety Data sheets maintained in a convenient location for emergency response	
	Stockpiles properly maintained to prevent runoff	
	Proper litter control (container lids are closed, containers are upright)	
	Vegetated areas properly maintained and erosion-free	
	Site is routinely inspected for indication of illicit discharges	

Other Comments and /or Observations:

Roanoke County
Municipal Yard Inspection Checklist

Each department in Roanoke County is responsible for conducting quarterly Inspections, at minimum, of its own facilities. Please submit completed forms to: Cindy Linkenhoker, Stormwater Program Manager, Department of Community Development.

Date: 6-9-15 **Time:** 9:00 **Inspector:** Cindy Linkenhoker, Dennis Epperly, David Henderson

Facility Name and Location: Roanoke Schools - Municipal Yards (in Salem)

Description of Activities: Bus maintenance, Offices, Small Engine Repair, Welding **Receiving Waterway:** Williams Branch, then Roanoke River

Fueling Areas		Comments
	Proper use of spill overflow protection	
✓	Roof over fueling area	
✓	Dry cleanup methods used for fuel spills	
	Tank certified by PBCDERM	
✓	Leak detection system for fuel tanks	
X	Fueling pad graded for minimum run-on of stormwater	
X	Fueling pad discharges into a sump pump, not into a storm drain	– discharges to above-named creek

Vehicle and Equipment Maintenance		Comments
✓	Proper storage & disposal of greasy rags, oil/air filters, batteries, spent coolants – crushed/trashed? – Lcored, returned	oil filters are crushed
✓	Labeling & tracking for the recycling of hazardous waste materials	
✓	Hazardous materials stored properly without evidence of spills – HAZ waste storage in warehouse near Dennis' office.	
✓	Inventory of materials maintained onsite & Material Safety Data sheets	
✓	Wrecked and "part" vehicles drained of all fluids – mostly, except windshield washer fluid	
✓	Stored liquids and batteries have secondary containment	
✓	Liquid waste disposed of properly and not being poured into storm system/sinks	
	Empty drip pans are cleaned and properly stored	
✓	Floor drains discharge into a storage sump with an oil/water separator	

Outdoor Vehicle and Equipment Storage		Comments
X	Ground free of visual stains from oil or other vehicle fluids – some evidence of outdoor equipment washing	
X	Drip pans used during vehicle maintenance	
-	Drip pans cleaned and properly stored	
X	Storage containers are covered and properly maintained – label all storage containers	

Painting Areas		Comments
✓	Paint and paint thinner stored and properly labeled	all inside floor drains go to sanitary
–	Spray paint booths properly operate and have an OSHA-approved hood	
–	Personal protection devices/clothes cleaned and properly stored	
✓	Proper painting equipment being used and is properly cleaned/stored	
✓	Recycling of used paints, paint thinner, and solvents	
✓	Employees trained on proper painting and cleaning procedures	

Vehicle and Equipment Washing Areas		Comments
X	Area designated for cleaning activities	Buses are washed inside bay, which drain to sanitary system
X	Wash waters are contained & recycled, sumps clean & properly used	
N/A	Proper grading for wash pad	
✓–	Parts and equipment washed within designated cleaning area (mostly)	
	Employees trained on proper washing procedures	

Liquid Storage in Above-Ground Storage		Comments
✓	Installed per design with no leaks (pipes, pumps, valves, hoses, flanges)	
✓	Storage containers maintained in good condition	
✓	Safeguards installed (such as secondary containment)	
✓	System regularly inspected	
	Chemicals are stored with compatible chemicals	
X	Container labels can be easily read; containers are properly labeled – label all storage containers	
	Employees trained on proper filling and transfer procedures	

Improper Connections to Storm Drainage System		Comments
✓	Floor drains connected to sanitary sewer system, not to storm drains	fueling area is graded towards creek & nearby pipe
X	Runoff from wash, maintenance, storage, and fueling areas are not directed to storm drains	
X	Facility has updated plumbing schematics to accurately reflect discharge locations	
✓	All underground storage tanks are maintained with proper safeguards	
	Employees trained on proper disposal of all materials used onsite	

General Site		Comments
?	Emergency Response Plan onsite	
?	Employees trained for emergency procedures	
?	Material Safety Data sheets maintained in a convenient location for emergency response	
N/A	Stockpiles properly maintained to prevent runoff	
✓	Proper litter control (container lids are closed, containers are upright)	
N/A	Vegetated areas properly maintained and erosion-free	
	Site is routinely inspected for indication of illicit discharges – need to do this	

Other Comments and /or Observations:

- Wood shop in Warehouse. NO ISSUES

- Need spill kits near fueling island and in all vehicle/bus repair bays

- Spills/staining @ waste oil container
- Bus wash rack has a drop inlet – drains to sanitary
  1 waste oil tank (275 gal) below floor
  2 - 200 gal new oil 1 waste antifreeze (outside)
  Light truck repair bays – floor drains w/ covers (3)
  parts cleaning station
  4 bus bays w/ floor drains (all to sanitary)

Small Engines/welding Shops
trench drains to sanitary
routine service oil/filter change, etc.
2-275 gal oil tanks, parts washer

APPENDIX B

Annual Facility Stormwater Assessment Forms and Checklists

Annual Facility Stormwater Assessment
Roanoke County Public Schools Municipal Yards

1) Name of Building or Operation: _____

2) Facility Representative: _____

Position: _____ Phone No.: _____

	YES	NO	N/A
a) Facility's SWPPP is easily accessible in each building?	☐	☐	☐
b) Awareness of SWPPP by facility personnel? (Random survey of onsite employees.) # Employees Surveyed _____	☐	☐	☐
c) Facility's Emergency Response Plan is easily accessible in each building?	☐	☐	☐
d) Awareness of Emergency Response Plan by facility personnel? (Random survey of employees on site.) # Employees Surveyed _____	☐	☐	☐
e) Assessment Checklist (page 2 of 2) is completed?	☐	☐	☐
f) Was any stormwater pollution prevention training conducted during the year? If yes, provide records in Appendix C.	☐	☐	☐
g) Were non-stormwater discharge visual observations conducted? List Dates: _____	☐	☐	☐
h) Were stormwater discharge visual observations conducted? List Dates: _____	☐	☐	☐

Evaluation Notes: _____

_____

_____

_____

Corrective Measures Recommended: _____

_____

_____

_____

Evaluation Conducted By: _____ Date: _____

This completed evaluation was reviewed with me on: _____ (Date)

Facility Representative (printed name and title): _____

Facility Representative (signature): _____

Stormwater Assessment Checklist

Activities – Check each activity present at the site.	Effectiveness Rating*				
	NO	SO	MO	SC	VE
Bus/Vehicle Maintenance and Repair Bays					
1. Maintenance is done in designated areas only.					
2. Equipment is kept clean, with no build-up of oil and grease.					
3. Drip pans, containers, or absorbent pads are used under items that may drip.					
4. Used oil and oil filters, antifreeze, batteries, fluids, etc. are recycled.					
5. Spill kits with booms to contain spilled fuel or other fluids are mounted near the trench drains.					
6. Storage containers are labeled with material contents.					
7. Material Safety Data Sheets are available and periodically reviewed for products stored onsite.					
Outdoor Parking Areas					
1. Dumpsters and trash cans are covered.					
2. Drip pans, containers, or absorbent pads are used under vehicles/equipment that may drip.					
3. Spills or leaks are contained; absorbent materials are used to clean them up.					
4. Parking lots and/or other paved surface areas are vacuum-swept regularly.					
5. A spill kit with booms to contain spilled fuel or other fluids is mounted near fueling island.					
Waste Handling and Disposal					
1. Usage and disposal inventory is used to limit waste generation.					
2. Materials are recycled whenever possible.					
3. Wastes are segregated and separated.					
4. Waste materials are stored indoors or in a covered are not exposed to rainwater.					
5. Hazardous materials are stored in storage lockers with spill containment, where appropriate.					
Bus Wash Bay					
1. Buses are washed inside.					
2. No equipment or container washing occurs outside the wash bay.					
Outdoor Container Storage of Materials					
1. Materials are covered to protect from rainfall.					
2. Materials are protected from run-on and runoff of stormwater.					
3. Dumpsters and trash cans are covered.					
4. Hazardous materials are stored in a properly-designed storage area and labeled.					
General Building and Grounds					
1. Good housekeeping practices are implemented throughout the facility.					
2. Employees are trained to understand and follow the SOPs and SWPPP.					
3. Paved areas are swept instead of hosed down.					
4. Materials used in repair and remodeling (paints, etc.) are stored properly.					
5. Wash water, sweeping, and sediments are properly discarded.					

**NO = No BMPs used and stormwater pollution likely.*
SO = Some BMPs used but not effective.
MO = Some BMPs used and moderately effective.
SC= Source-control BMPs used and very effective/structural BMPs needed.
VE = All necessary BMPs used and very effective.

APPENDIX C

Training Documentation

Roanoke County Public Schools

Due By July 1, 2015

6-23-15

Required Stormwater (MS4) Training Recognition and Reporting of Illicit Discharges

Job Class	Employee Name	Employee Signature	Date Taken
Maintenance Supervisor	Dennis Epperly		7/23/2015
GROUNDS	LEWIS ALLS		7/23/2015
CARPENTER	STEVE ALTICE		7/23/2015
PLUMBER	ROGER BENNETT		7/23/2015
HVAC	GUY BROOKS		7/23/2015
A/V	RICH BOWLES		7/23/2015
PAINTER	NEIL BROWN		7/23/2015
PAINTER	TIM BUCCHOLTZ		7/23/2015
PLUMBER	JIMMY CARROLL		7/23/2015
PAINTER	RODNEY COLEMAN		7/23/2015
HVAC	HENRY CROUCH		7/23/2015
ADMIN. ASSIST.	KATHY CURRAN		7/23/2015
CARPENTER	JASON DUNFOR		7/23/2015
SUPERVISOR	DENNIS EPPERLY		7/23/2015
CARPENTER	DENNIS GINTER		7/23/2015
ELECTRICIAN	DON HIGGINS		7/23/2015
WATER / FIRE EXT. TESTING	TOMMY LANE		7/23/2015
WELDER SM. ENGINE TECH.	MARK MADDOX		7/23/2015
HVAC	FRANZ MANTHEY		7/23/2015
CARPENTER	JERRY MARTIN		7/23/2015
AC	ART PASSUDETTI		7/23/2015
ELECTRICIAN	STEVE POFF		7/23/2015
CARPENTER	LARRY REEDY		7/23/2015
KEY/LOCK	ROB SHELL		7/23/2015
PAINTER	MARVIN SINK		7/23/2015
ELECTRICIAN	BEN SOTHERDEN		7/23/2015
COMMUNICATIONS	MITCH VAUGHAN		7/23/2015
ELECTRICIAN	RALPH WADE		7/23/2015
PLUMBER	RANDY WEBB		7/23/2015
CARPENTER	DAVID WILLIAMS		
ADD OTHER PERTINENT JOB CLASS TITLES			

Submitted by _____ Date 7/1/15

Roanoke County Public Schools
Required Stormwater (MS4) Training
Due By July 1, 2015

Recognition and Reporting of Illicit Discharges			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Maintenance Supervisor		Dennis Epperly	
Transportation Supervisor		Mike Stovall	
Custodian			
Custodian			
Custodian			
Custodian			
Custodian			
Custodian			
Custodian			
Custodian			
Add more as needed			
Bus Driver			
Bus Driver			
Bus Driver			
Bus Driver			
Bus Driver			
Bus Driver			
Add more as needed			
TITLES: ILLICT DISCHARGE			
MIDNIGHT DUMPING			
GROUND CONTROL			
ADD OTHER PERTINENT JOB CLASS TITLES			
WARE House	6126	Joyce Paige	6-30-15
	1102	Butch CANNADAY	6-30-15
WAREHOUSE DEPARTMENT	2153	LARRY GILL	6-30-15
	1717	Robert PAYNE	6/30/15
WAREHOUSE - Dept.	2079	DAVID C. JOINER SR.	6/30/15

Good Housekeeping/Pollution Prevention Practices & Employee Has Read SOPs, SWPPPs, SPCC's			
Job Class	**Employee #**	**Employee Name**	**Date Taken**

Roanoke County Public Schools

Due By July 1, 2015

Required Stormwater (MS4) Training Recognition and Reporting of Illicit Discharges			
Job Class	Employee Name	Employee Signature	Date Taken
TRANSPORTATION SUPERVISOR	MIKE STOVALL		6/30/2015
TECHNICIAN	BRYAN FAGG		6/30/2015
TECHNICIAN	RUSS FARMER		*
TECHNICIAN	DON GRIFFIN		6/30/2015
ADMIN. ASSIST.	MARY LYNN GRUBB		6/30/2015
TECHNICIAN	CHARLES HERMANN		7/1/2015
TRANSPORTATION MANAGER	JERRY HUBBARD		6/30/2015
TECHNICIAN	RAY JAMISON		6/30/2015
ROUTE SUPERVISOR	RUDY JONES		6/30/2015
OFFICE/SAFETY MANAGER	KATHY KING		6/30/2015
SHOP FOREMAN	DAREL MAGGARD		6/30/2015
PARTS MANAGER	RANDY PRATT		6/30/2015
TECHNICIAN	COREY REID		6/30/2015
TECHNICIAN	CHUCK SPRADLIN		6/30/2015
TECHNICIAN	ROBERT TAYLOR		6/30/2015
BODY/TECHNICIAN	TIM VAUGHT		7/1/2015
LOT ATTENDANT (10 MONTH)	CHARLES ABB		**
OT ATTENDANT	MICHAEL BARNETTE		6/30/2015
JT ATTENDANT	MEGAN DIX		6/30/2015
LOT ATTENDANT	TIM FERGUSON		6/30/2015
LOT ATTENDANT (10 MONTH)	MYRON POWELL		**
SUMMER CLEANING CREW	MARIE PRATT		6/30/2015

* RUSS FARMER ON VACATION, WILL COMPLETE WHEN HE RETURNS **10 MONTH LOT ATTENDANTS WILL COMPLETE WHEN RETURN IN AUGUST

Submitted by _____ Date 7.1.15
School Superintendent

For questions about this form, please contact Cindy Linkenhoker, Stormwater Program Manager, (540) 772-2096, ext. 245

APPENDIX D

SWPPP Amendment Log

SWPPP Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by *(List Name(s) and Title)*

APPENDIX E

Municipal Separate Storm Sewer System (MS4) Permit

07-03-13 14:48 IN

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
TDD (804) 698-4021
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

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

July 1, 2013

Mr. B. Clayton Goodman, III, County Administrator
County of Roanoke, Virginia
5204 Bernard Drive
Roanoke, Virginia 24018

RE: General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems
General Permit No. VAR040022
Roanoke County

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 Blue Ridge Regional Office at the following address:

DEQ Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke, VA 24019

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. Kip Foster, Water Permits Manager, at (540) 562-6782 or kip.foster@deq.virginia.gov .

Sincerely,

Melanie D. Davenport

Melanie D. Davenport, Director
Water Division

Enc. General Permit No. VAR040022

Cc. Kip Foster, DEQ-BRRO

COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

General Permit No.: VAR040022

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 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.

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.

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

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 affects 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.

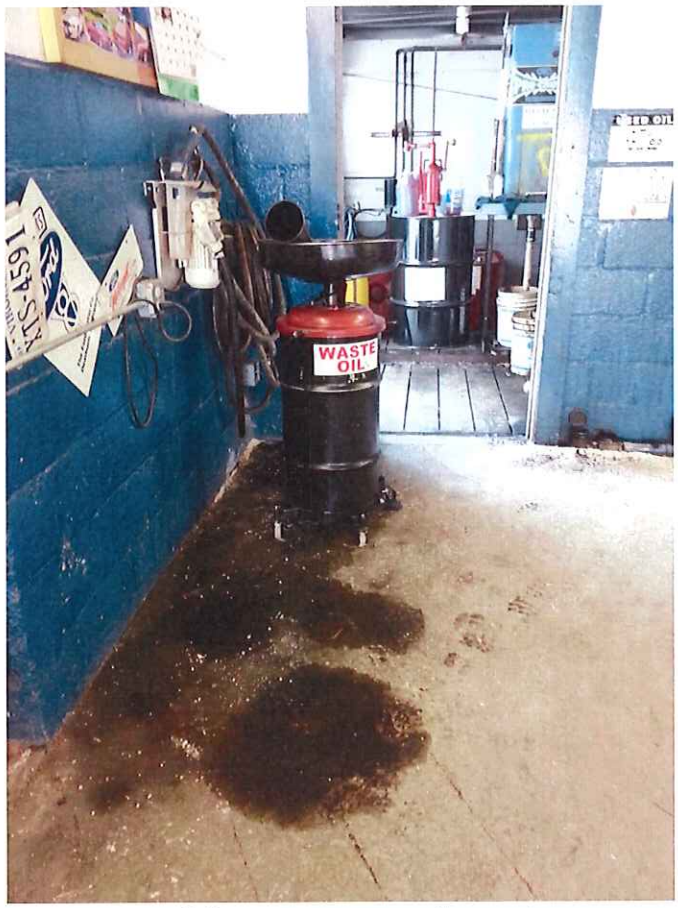
Y. Transfer of state permits.
1. State permits are not transferable to any person except after notice to the department. Except as provided in Section III Y 2, a state permit may be transferred by the operator to a new owner or operator only if the state permit has been modified or revoked and reissued, 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.

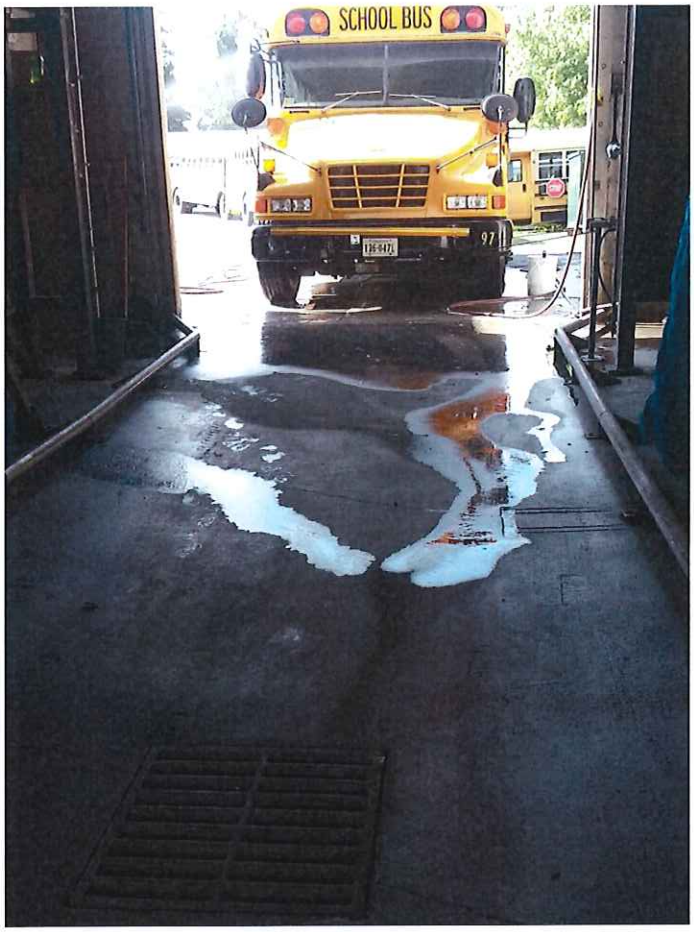
APPENDIX F

FACILITY PHOTOGRAPHS

Bus repair bay; some use of absorbent material.



Stained floor near waste oil container.



Bus wash bay.

Outdoor container storage outside building at bus repair bay.

Oil filter crusher at bus repair bay.

Storm pipe discharges to creek from bus parking lot.

Equipment storage beside maintenance warehouse;
evidence of minor equipment washing.

APPENDIX G

MOA Regarding Stormwater Management by and between County of Roanoke and Roanoke County Public Schools

MEMORANDUM OF AGREEMENT
STORMWATER MANAGEMENT

This Memorandum of Agreement by and between the County of Roanoke (County) and the Roanoke County Public Schools (Public Schools) is made this 18 day of August, 2014, the parties hereto.

I. Background.

Discharges from **M**unicipal **S**eparate **S**torm **S**ewer **S**ystems (MS4s) are regulated under the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Permit regulations, and the Clean Water Act as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain a permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective March 23, 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest decennial census) obtain a permit to discharge stormwater from their outfalls (DEQ, 2014).

The County and the Public schools both fall under the small MS4 permit requirements. As such, each must comply with the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems.

Under this general permit, small MS4s must develop, implement, and enforce a program that includes six Minimum Control Measures, as follows:

1. Public education and outreach on stormwater impacts
2. Public involvement and participation
3. Illicit discharge detection and elimination
4. Construction site stormwater runoff control
5. Post-construction stormwater management in new development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations

Similar to the Phase I programs, small MS4 programs must be designed and implemented to control the discharge of pollutants from their storm sewer system to the "maximum extent practicable" in a manner that protects the water quality in nearby streams, rivers, wetlands and bays (DEQ, 2014).

II. Purpose.

This Memorandum of Agreement is made for the purpose of complying with the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems and to provide for discharge authorization, maintenance, and installation of the stormwater and/or storm drainage facilities and operations of the Roanoke County Public Schools. By entering into this Agreement, Roanoke County agrees to accept the Roanoke County Public Schools facilities and

operations within its coverage under the General Permit No. VAR040022, which expires on June 30, 2018.

III. Responsibilities of the Roanoke County Public Schools.

a. The Public Schools, to include its facilities and operations, agree to abide by all legal requirements of state and federal law and of the Roanoke County Code, including but not limited to Chapter 23, which is attached hereto and becomes a part hereof. The Public Schools agree to comply with the orders or directives of the Director of Community Development or his/her designee for the purposes of the stormwater management program. The Public Schools agree to refrain from all prohibited acts, including but not limited to allowing, putting, pouring or discharging any substances into the stormwater system.

b. The Public Schools agree to pay all costs for any violation and/or remediation measures including all expenses incurred by the County for Public Schools violations relevant to the provisions of federal and state law pertaining to the Clean Water Act, the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP), the Virginia Erosion and Sediment Control Law and Regulations, and other related regulations regarding proper waste disposal.

c. The Public Schools and its facilities and operations agree to develop and maintain good housekeeping processes, to include:

    a. providing Spill Prevention Plans, as directed by the County
    b. providing proper storage and disposal of all chemicals and substances listed on the EPA list of hazardous and/or toxic substances
    c. providing proper storage and disposal of any substances which are unlawful or harmful to the storm drainage system and/or the waters of the Commonwealth of Virginia or the United States

d. The Public Schools is required to and hereby agrees to submit an Annual Report of problems, violations, and solutions or remediation efforts related to stormwater management to the Community Development Department of Roanoke County no later than August 15th of any year for the preceding fiscal year. Said report shall be submitted in the format required by and provided by the County.

e. The Public Schools agree to conduct all maintenance, labor, or repairs to storm drainage structures or facilities owned by the Public Schools. The Public Schools also agrees to allow the County routine access for the purposes of inspection of said facilities.

f. Should the Public Schools fail to properly maintain or repair the storm drainage structures or facilities owned by the Public Schools, the Public Schools authorize the County to conduct the work on its behalf and pay the County for the costs incurred to conduct the maintenance or repair work.

g. The Public Schools agree to cooperate fully with the County in all permitting processes, including the meeting of all new requirements for the 5-year MS4 permit and any other permits pertaining to the Clean Water Act, and State and County Code provisions for stormwater management, drainage, and proper waste disposal.

h. Should the County adopt a funding mechanism, such as a stormwater utility fee, or other mechanism to fund its stormwater management program, the Public Schools agree to continue to pay such stormwater fee, as required by the County Code.

i. The Public Schools will designate, by name and position, a responsible agent for this agreement.

IV. Responsibilities of the County of Roanoke.

a. The County agrees to prepare and submit the required MS4 Permit Annual Report on or by October 1st of each year for the preceding fiscal year, which shall include the information for the Public Schools.

b. The County agrees to timely apply for all required federal and state permits and to provide the Public Schools with a copy of the current permit.

c. The County will work with the Public Schools to provide education of selected Public Schools staff about the stormwater program, and will specifically provide biennial training in the following categories:

   i. Pollution prevention and good housekeeping
   ii. Spill prevention
   iii. Illicit discharge detection and elimination
   iv. Total maximum daily loads

d. The County will provide a format for the Annual Report that is to be submitted by the Public Schools to the County's Community Development Department.

V. Agreement Termination by Either Party.

a. The County may terminate this agreement at any time that the Public Schools fail to comply with any provisions of this agreement. Following a written notice of non-compliance by the County, the Public Schools shall have 30 days to completely correct or cure, to the satisfaction of the County, the issue of non-compliance. Should the Public Schools fail to correct the issue within the specified time period, this agreement will be terminated and the Public Schools will be required to obtain separate coverage under the MS4 General Permit.

b. The Public Schools may terminate this agreement at any time by giving the County written notice that it has received separate coverage under a MS4 General Permit and shall provide a copy of same to the County. The Public Schools further agrees to notify the Community Development Director, in writing, of its intent to apply for said permit coverage as soon as it becomes aware of such intention.

VI. Right of Entry.

The Public Schools agree to cooperate and permit County employees or contractors to access its facilities for all purposes under this agreement.

VII. Hold Harmless.

The parties hereto agree to hold each other harmless for all acts or omissions pursuant to this agreement.

VIII. Additional Obligations.

The parties hereto agree to cooperate fully with all related regulations and the requests of authorized representatives of federal, state, and local authorities for permitting and for purposes of the stormwater program.

In Witness Whereof, this agreement has been entered into by the parties on the day and date first above written.

Roanoke County Public Schools

BY: Lorraine S. Lange
Superintendent of Schools

County of Roanoke, Virginia

BY: D. R. O'Dell
County Administrator

References

Department of Environmental Quality (2014). Municipal Separate Storm Sewer System (MS4) Permits. Retrieved on March 18, 2014, from http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/MS4Permits.aspx

Stormwater Pollution Prevention Plan (SWPPP)

For

Public Service Center

1216 Kessler Mill Road
Salem, VA 24153

SWPPP Prepared By:

Department of Community Development
Stormwater Management Division
5204 Bernard Drive
Roanoke, VA 24018
540-772-2080

SWPPP Preparation Date:

June, 2015

TABLE OF CONTENTS

SECTION **PAGE**

TABLES

FIGURES

1.0 INTRODUCTION

This document is the Stormwater Pollution Prevention Plan (SWPPP) for Roanoke County's Public Service Center, located at 1216 Kessler Mill Road Salem, VA 24153.

This facility falls under the requirements of the County's General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4), General Permit No. VAR040022, with an effective date of July 1, 2013 and an expiration date of June 30, 2018. The permit is designed to reduce the discharge of pollutants from stormwater that leaves the regulated MS4 area within the County and subsequently enters the Commonwealth of Virginia's receiving waters, such as the Roanoke River and its tributaries.

According to the United States Environmental Protection Agency (US EPA), polluted stormwater runoff is a leading cause of impairment to nearly 40 percent of surveyed U.S. water bodies that do not meet water quality standards. Whether travelling by overland flow or through stormwater conveyance systems, polluted stormwater runoff is discharged into local receiving waterways. Such untreated water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; it can also cause a loss of aesthetic value, and can threaten public health due to its potential to contaminate food, drinking water supplies, and recreational waterways.

The MS4 Permit aims at reducing pollutants in stormwater runoff by focusing on six Minimum Control Measures (MCMs), as follows: (1) Public Education and Outreach on Stormwater Impacts, (2) Public Involvement and Participation, (3) Illicit Discharge Detection and Elimination, (4) Construction Site Stormwater Runoff Control, (5) Post- Construction Stormwater Management in New Development and Redevelopment, and (6) Pollution Prevention and Good Housekeeping for Municipal Operations. Within each MCM, there are numerous Best Management Practices (BMPs) being implemented by the County of Roanoke.

This SWPPP has been created to satisfy the conditions of BMP 6-6 of MCM 6, entitled Stormwater Pollution Plans for Municipal Facilities, which requires Roanoke County to identify all of its high-priority facilities that have a high potential to discharge pollutants into stormwater and develop, implement, and maintain a SWPPP for each of them.

1.1 ORGANIZATION OF THE STORMWATER POLLUTION PREVENTION PLAN

Section 1 of this SWPPP provides information regarding stormwater regulations, the requirements of the 2013 MS4 Permit, review and revision of the SWPPP, and availability of the SWPPP as a public document. Section 2 briefly describes the Public Service Center facility, the Pollution Prevention Team responsible for compliance with the MS4 Permit, and the results of the initial site inspection. The section also provides a general discussion of Best Management Practices (BMPs) and identifies those BMPs that are implemented throughout the facility.

Section 3 contains the definition and categories for both authorized and unauthorized non-stormwater discharges. Section 4 identifies the activities conducted, significant materials stored, potential pollutants, and the measures taken to eliminate or reduce the discharge of pollutants to stormwater drainage systems from the facility.

1.2 STORMWATER REGULATORY FRAMEWORK

In 1972 the Federal Water Pollution Control Act (known as the Clean Water Act) was amended to effectively prohibit discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. The United States Environmental Protection Agency (US EPA) delegated administration of the NPDES Program within Virginia to the Department of Environmental Quality (DEQ), and DEQ administers it as the Virginia Pollutant Discharge Elimination System (VPDES) Permit Program. The 1987 amendments of the Clean Water Act added Section 402(p) to the federal regulations, which established the framework for regulating discharges of pollutants via stormwater from industrial activities and MS4s. Section 402(p) required the US EPA to develop permitting regulations for stormwater discharges from MS4s and from industrial facilities, including construction sites.

In Virginia, discharges from municipal separate storm sewer systems are regulated under several programs: the Virginia Stormwater Management Act, the Virginia Stormwater Management Program (VSMP) Permit regulations, and the Clean Water Act (through the VPDES Permit Program) as point source discharges. MS4 regulations were developed and implemented in two phases. Implementation of the first phase began in the early 1990s and required that operators of MS4s serving populations of greater than 100,000 people (per the 1990 decennial census) apply for and obtain an individual permit to discharge stormwater from their outfalls. The second phase of MS4 regulations became effective March 23, 2003, and required that operators of small MS4s in "urbanized areas" (as defined by the latest decennial census) obtain coverage under a general permit to discharge stormwater from their outfalls. Roanoke County is classified as a small MS4, and thus operates under the General MS4 Permit. (Va DEQ, n.d.)

According to the County's MS4 Permit, the following types of high-priority facilities require SWPPPs:

- 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
- Vehicle storage and maintenance yards

In addition, facilities in which any of the following materials or activities occur and are expected to have exposure to stormwater resulting from rain, snow, snowmelt or runoff also require a SWPPP:

1) Areas where residuals from using, storing or cleaning machinery or equipment remain and are exposed to stormwater;

2) Materials or residuals on the ground or in stormwater inlets from spills or leaks;

3) Material handling equipment (except adequately maintained vehicles);

4) 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);

5) Materials or products stored outdoors (except final products intended for outside use where exposure to stormwater does not result in the discharge of pollutants);

6) 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;

7) Waste material except waste in covered, non-leaking containers (e.g., dumpsters);

8) Application or disposal of process wastewater (unless otherwise permitted); or

9) 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.

Based on the above requirements, the following County-owned facilities have been determined to be high-priority facilities that have a high potential to discharge pollutants. Table 1-1 shows the schedule by which the individual SWPPPs for each facility will be prepared.

Table 1-1 High-Priority County Facilities and Associated Activities

Name of High-Priority Facility	Activities that make it High-Priority	High Potential of Discharging Pollutants (Yes or No)	Reasons for High Potential/ Or Not	Department(s)	Scheduled SWPPP Development
Kessler Mill Service Center	Store Equip/Fert; Public Works Yard	Yes	Exterior material and equipment storage	P,R,and T; GS, CD	By July 1, 2015
Fleet Service Center	Vehicle maintenance	Yes	Heavy vehicle maintenance	GS	By July 1, 2015
#1 North County Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2016
#3 Cave Spring Fire	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2016
#5 Hollins Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2016
#6 Mount Pleasant Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2017
#9 Fort Lewis Fire and Rescue	Equipment washing, fueling activities	Yes	Exterior fueling and washing	F&R	By July 1, 2017
EMS Training Facility	Chemicals used in training	Yes	Exterior training exercises with chemicals	F&R	By July 1 2017

P, R and T = Parks, Recreation and Tourism; GS = General Services; CD = Community Development; F&R = Fire and Rescue

1.3 REVIEW AND REVISION OF THE STORMWATER POLLUTION PREVENTION PLAN

The SWPPP will be reviewed at least annually to determine if any revision is necessary to reflect changes in the facility or changes in the activities conducted that:

- May significantly increase the quantities of pollutants in stormwater runoff;
- Cause a new area of the facility to be exposed to stormwater or authorized non-stormwater discharges; or
- Start-up of an activity that would introduce a new pollutant source at a facility.

In determining if revision of the SWPPP is necessary, the SWPPP Implementation team, identified in Section 2.1, will review the Annual Facility/Activity Stormwater Assessment, which is described in Section 5.

1.4 LOCATION OF THE STORMWATER POLLUTION PREVENTION PLAN

The SWPPP shall be kept in the office of the Facility Manager for General Services, which is located in the main building of the Public Service Center. A copy of the SWPPP will also be maintained by the Stormwater Program Manager, Department of Community Development, in the Roanoke County Administration Center.

2.0 SITE DESCRIPTION AND INITIAL FACILITY INSPECTION

Roanoke County's Public Service Center is located in the Catawba Magisterial District at 1216 Kessler Mill Road in Salem, VA. It is owned by the Roanoke County Board of Supervisors and sits on a 13.3 acre parcel not far from the intersection of I-81 and Electric Road. The property is zoned I2/heavy industrial and is situated in the floodplain of Mason Creek, which is currently listed by DEQ as impaired for bacteria, sediment, and PCBs. The one-story primary structure was built about 1950; it spans about 16,400 square feet and is comprised of corrugated metal and face brick. This building houses the administrative offices for several departments, including (a) General Services, (b) Parks, Recreation, and Tourism, and (c) Communication/ Radio Shop. In addition, the drainage crews for the Stormwater Operations Division of Community Development are housed in the facility.

Stormwater from the Public Service Center drains via underground piping and discharges directly across the street from the building into Mason Creek.

An initial inspection of the facility was conducted on June 8, 2015 by the following members of the Pollution Prevention Team, which is described in Section 2.2:

- Rob Light, Acting Director - General Services
- John Patten, Facilities Manager - General Services
- Mark Courtright, Asst. Director - Parks, Recreation, and Tourism
- Eric Vest, Parks Manager - Parks, Recreation, and Tourism
- Jeff Altice, Stormwater Operation Supervisor
- David Henderson, County Engineer
- Cindy Linkenhoker, Stormwater Program Manager

Observations of the facility activities and required actions noted during this inspection are listed in Section 2.1. All required action items will be completed and documented prior to the next annual assessment. The associated inspection report is located in Appendix A of this SWPPP.

2.1 SITE FACILITIES

In addition to the office areas mentioned above, there are several facilities of interest on the site, as described below.

2.1.1 OUTSIDE MAIN BUILDING

Facility Type: Vehicle Fueling Station

Facility Activities: The outdoor fueling station, recently renovated, is under a canopy. One side of the fueling pad is protected by a constructed

berm on the pavement, designed to eliminate stormwater run-on. The fueling pad is graded to sheet flow to a nearby trench drain, which is connected to a storm pipe that discharges to a grass-lined ditch near the facility's main entrance.

Required Actions: Provide a spill kit with booms to contain spilled fuel. Mount the kit on the adjacent building.

Facility Type: Vehicle Parking Areas

Facility Activities: A paved parking lot for employees and visitors abuts the main building. Additional vehicular parking is randomly scattered about the facility, as can be seen in the site map, Figure 2-1. Several storm drain inlets capture runoff and underground storm pipes discharge it into nearby Mason Creek.

Required Actions: Stencil all inlets with "NO DUMPING, DRAINS TO CREEK."

Facility Type: Vehicle Wash Bay for Garbage Trucks

Facility Activities: There is an enclosed wash bay that is exclusively used to wash County garbage trucks. The wash bay discharges into the sanitary sewer system. Also, the bay has a solids collection unit in the floor that holds grit and other solids washed from the vehicles. The Western Virginia Water Authority (WVWA) periodically removes the solids and disposes of them at their wastewater treatment site. No wash water leaves the wash bay via overland flow or via the storm drainage system.

Required Actions: None at this time.

Facility Type: Material and Equipment Storage Sheds

Facility Activities: A variety of sheds (both closed and open-air on one side) house lawn care and miscellaneous equipment and materials, including seed, fertilizer, latex turf paint, and liquid ice melt. All such products are stored under the roof, unexposed to rainwater.

Required Actions: None at this time.

Facility Type: Material and Equipment Storage Yards

Facility Activities: A variety of lawn care and earth moving equipment is stored outside around the perimeter of the facility and up on the hill near the borrow area. There are also random items such as used transformers, stone stockpiles, concrete drainage products, wire fencing, etc. All of these items are in the weather and exposed to rainfall.

Required Actions: Relocate used transformers to a location under a roof.

Facility Type: Borrow Area

Facility Activities: A borrow area is actively being used to obtain material for use on off-site projects. Currently, there is a sediment trap, which is in need of sediment removal and possibly reconstruction and/or expansion. The borrow area itself is poorly stabilized and in need of a vegetative cover, at least on the outer edges where it is not being actively worked.

Required Actions: Obtain a permit for the borrow site, stabilize the area, redesign and reconstruct the sediment trap.

2.1.2 INSIDE MAIN BUILDING

Facility Type: Maintenance Shop (Parks/Rec/Tourism)

Facility Activities: The Department of Parks, Recreation, and Tourism maintains an indoor shop within the primary building. It currently has a small sink that is directly connected to a drop inlet outside of the building. The shop primarily contains latex turf paints and associated equipment. Various storage containers lack labels.

Required Actions: Disconnect the sink from the storm drain inlet, located outside beside the shop.

Facility Type: Welding Shop

Facility Activities: The welding shop has a floor drain which is connected directly to the storm drainage system. However, the drain was permanently plugged after the inspection.

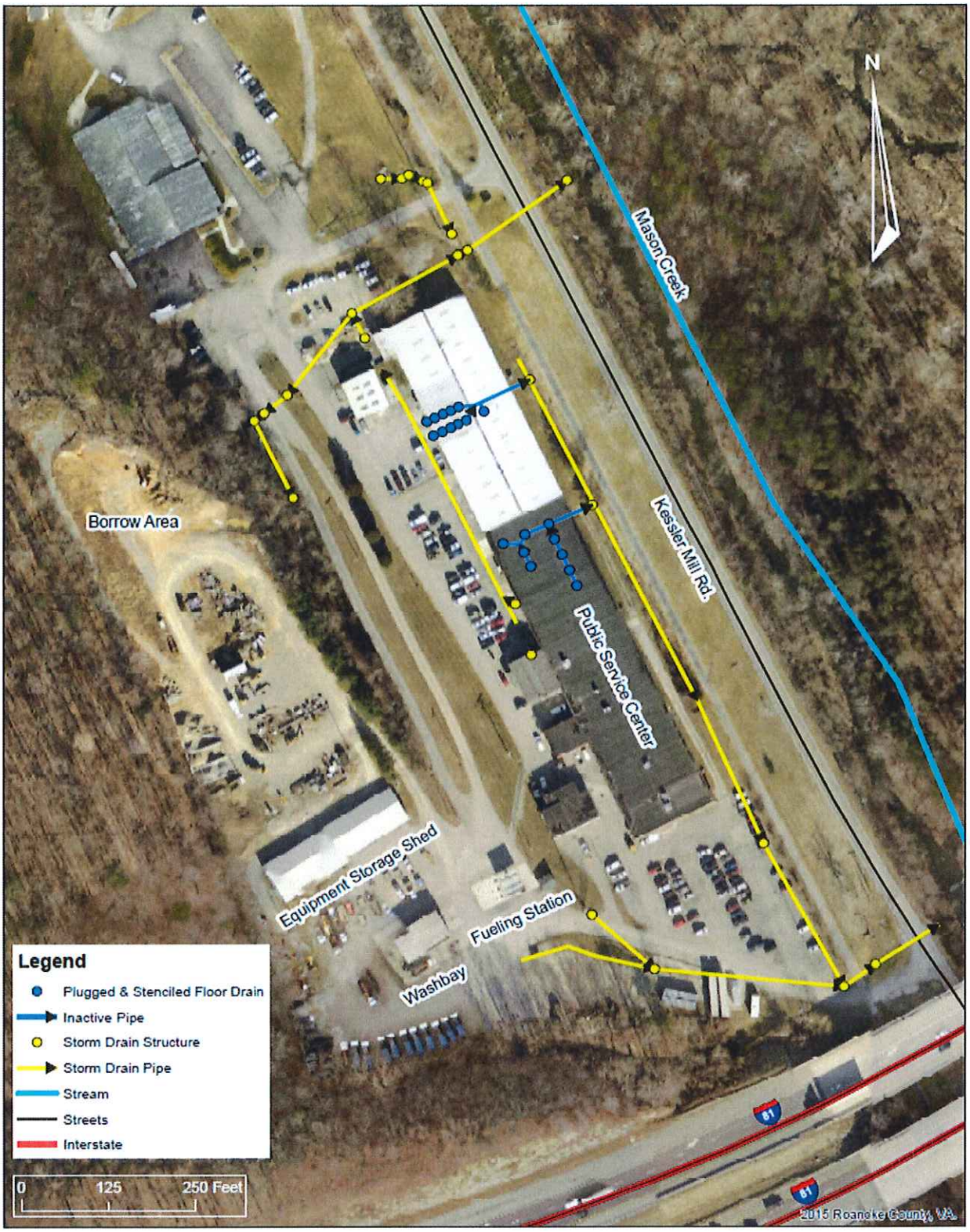
Required Actions: Stencil "DO NOT USE, DRAINS TO CREEK."

2.1.3 OTHER INDOOR FACILITIES

Other Indoor facilities include a Vehicle Repair Shop, Communications/Radio Shop, Surplus Material Storage Area, and a Maintenance Shop for use by the drainage crews. All of these areas have floor drains that have been plugged and are labeled "DO NOT USE, DRAINS TO CREEK." No issues were noted in these areas regarding potential stormwater pollution, but most of them have a variety of containers that are not, but should be, labeled.

Required Actions: Label all containers with material contents.

Figure 2-1 Site Map - Public Service Center



2.2 POLLUTION PREVENTION TEAM

The Facilities Manager of General Services shall have the primary responsibility to keep and maintain the SWPPP document, and to lead the SWPPP Implementation Team. The Asst. Director of Parks, Recreation, and Tourism and the Stormwater Operations Supervisor shall be responsible to cooperate with the Facilities manager for quarterly inspections and annual inspections.

Table 2-1 Pollution Prevention Team - Public Service Center

POSITION	NAME	PHONE	PRIMARY RESPONSIBILITIES
Acting Director - General Services Director - Parks, Recreation, and Tourism Director - Community Development	Rob Light Doug Blount Arnold Covey	540-777-6369 540-777-6321 540-776-7111	SWPPP OVERSIGHT • Provide the necessary resources to comply with the SWPPP. • Ensure assigned staff implements the SWPPP and all of its components. • Provide management support to staff.
Facilities Manager - General Services Asst. Director - Parks, Recreation, and Tourism Stormwater Operations Supervisor	John Patten Mark Courtright Jeff Altice	540-777-6370 540-777-6338 540-777-6387	SWPPP IMPLEMENTATION • Implement and administer the SWPPP. • Implement the Emergency Response Plan and Procedures (part of the Hazardous Waste Management Program). • Provide Stormwater Training for facility personnel. • Maintain the necessary records and files.
Facilities Manager - General Services Asst. Director - Parks, Recreation, and Tourism Stormwater Operations Supervisor	John Patten Mark Courtright Jeff Altice	540-777-6370 540-777-6338 540-777-6387	CHEMICAL SPILL RESPONSE • Minimize the threat of chemical spills to personnel and to the surrounding environment; and • Protect storm drain inlets and sanitary sewer drains from any spillage or contamination once personnel safety is assured.
Facilities Manager - General Services Asst. Director - Parks, Recreation, and Tourism Stormwater Operations Supervisor	John Patten Mark Courtright Jeff Altice	540-777-6370 540-777-6338 540-777-6387	CONDUCT ROUTINE FACILITY INSPECTIONS • Implement BMPs for respective area(s) of responsibility. • Conduct routine inspections of respective areas of responsibility to ensure BMPs are in place, operative, and effective at all times in and around the areas where activities that may impact stormwater are conducted. • Submit quarterly inspection reports, using the Municipal Yard Inspection Checklist, to the Stormwater Program Manager.
County Engineer - Community Development Stormwater Program Manager - Community Development	David Henderson Cindy Linkenhoker	540-772-2096, ext. 238 540-772-2096, ext. 245	MS4 PROGRAM MANAGEMENT • Prepare and revise the SWPPP, as necessary. • Conduct periodic facility inspections to assure compliance. • Collect training records. • Prepare and submit Annual MS4 Report. • Serve as a technical resource to other departments.

2.3 POLLUTION PREVENTION THROUGH BMPS

2.3.1 What are BMPs?

Best Management Practices, or BMPs, are the practices, procedures, policies, prohibitions, schedules of activities, structures, or devices that are implemented to prevent or minimize pollutants from coming into contact with precipitation, stormwater runoff, or non-stormwater flows. BMPs are also structures or devices that remove pollutants from stormwater runoff before the runoff enters a stormwater drainage system or surface water. Therefore, BMPs are often categorized as either "source-control" BMPs or "treatment-control" BMPs.

Source-control BMPs include all types of measures designed to prevent pollution at the source, that is, to keep stormwater from coming into contact with pollutants in the first place. Source-control BMPs are generally simple, low-maintenance, cost-effective, and broadly applicable. They may be categorized as non-structural or structural. Good housekeeping at a municipal yard is an example of a non-structural, source-control BMP; a canopy installed over a fueling island is an example of a structural, source-control BMP.

Treatment-control BMPs are devices or methods used to treat stormwater runoff to remove pollutants; these BMPs are frequently more costly to design, install, and operate than source-control BMPs. More importantly, treatment-control BMPs are typically not as effective as source-control BMPs, and the effectiveness is highly dependent on regular maintenance. Nevertheless, they can be appropriate and useful under certain conditions. However, treatment-control BMPs typically do not remove all pollutants from stormwater runoff and, therefore, should not be regarded as disposal systems.

2.3.2 Source-Control BMPs

The following source-control BMPs will be employed for use at the Public Service Center at the designated facilities, and the responsible department is indicated using these abbreviations: GS = General Services; CD = Community Development; and PRT = Parks, Recreation, and Tourism.

Vehicle Fueling Station (GS)

a) Train employees on proper fueling methods and spill cleanup techniques.

b) Maintain the roof over the fueling island.

c) Maintain absorbent spill cleanup materials and spill kits at the fueling island and on mobile fueling vehicles.

d) Maintain containers for disposal of contaminated cleanup materials.

e) Maintain a silt sock, sand bags, or other berm device(s) to block the nearby storm drain inlet in the event of a fuel spill at the island.

Silt Sock Used to Protect a Drop Inlet

Vehicle Parking Areas (CD, except as otherwise noted)

a) Train employees to look for oil and other fluid leaks and trash in the parking lot, and to know what procedure to use when these items are noticed. (GS, CD, PR&T)

b) Clean drainage inlets within the parking lot on a routine basis.

c) Stencil storm drain inlets with "No Dumping, Drains to Creek."

Vehicle Wash Bay for Garbage Trucks (GS)

a) Train employees who work in the wash bay to notify the appropriate supervisor when floor catchment is almost full and in danger of overflowing.

b) Train employees to conduct washing activities of any kind inside the wash bay.

c) Maintain loose trash cans outside of wash bay with lids closed; discard damaged or broken cans.

Material and Equipment Storage Sheds (GS, CD, PR&T)

a) Train employees to:
   a. Look for oil stains and fluid leaks under stored vehicles.
   b. Clean up spilled oil using kitty litter; sweep it up, and dispose of it in the trash.

b) Change vehicle and equipment fluids inside.

c) Train employees to use drip pans, clean them out after use, and properly store inside.

d) Maintain products inside - out of the weather and unexposed to rainwater.

Material and Equipment Storage Yards (GS, CD, PR&T)

a) Train employees to:
   a. Look for oil stains and fluid leaks under stored vehicles.
   b. Clean up spilled oil using kitty litter; sweep it up, and dispose of it in the trash.

b) Train employees to use drip pans, clean them out after use, and properly store inside.

d) Maintain products inside - out of the weather and unexposed to rainwater.

e) Label contents of all containers; relocate containers to inside, if possible.

f) Keep storage yards clear of debris and periodically dispose of unneeded items.

2.3.3 **Good Housekeeping BMPs** (GS, CD, PR&T)

Good housekeeping practices include activities that are intended to maintain a clean site and keep equipment in good working order to prevent pollutants from coming into contact with stormwater runoff. Daily cleanup and inspections are the most effective means of achieving good housekeeping.

For the most part, good housekeeping practices should be incorporated into the day-to-day activities at the facility, as they foster a habit of good housekeeping, and they also help to assure worker safety. Employees shall be trained to understand the practices and to implement them on an ongoing basis.

The following good housekeeping BMPs will be employed for use at the Public Service Center:

- Tools and materials are returned to designated storage areas after use;
- All storage containers are properly labeled, to include warning labels if appropriate.
- All spills are immediately cleaned up.
- Spilled oil and grease is absorbed using kitty litter or other absorbent material, which is then swept up and disposed of in the trash.
- Spills that escape the site are reported to the Roanoke County Emergency Communications Center at (540) 562-3265.
- Waste materials are collected and properly discarded after the completion of each job, shift, or day as appropriate;
- Indoor work areas are kept neat, uncluttered, and well-ventilated to discourage outdoor work that has the potential to generate pollutants and to allow leaks and spills to be quickly detected and controlled;
- Outdoor work areas are swept regularly (not hosed) and kept neat and clean;
- When outdoor work areas need cleaning beyond sweeping, all wash waters are contained, collected, and properly discarded;
- Outdoor waste or trash receptacles are kept covered and regularly emptied; adjacent areas are inspected for misplaced or wind-blown litter; and
- Employees are regularly trained on proper good housekeeping practices.

2.3.4 **Preventive Maintenance BMPs** (GS, CD, PR&T)

Preventive maintenance BMPs relate to maintaining equipment in good working order. Having equipment failures or using equipment that poorly functions may result in the discharge of pollutants to the storm drainage system. Therefore, to reduce the likelihood of breakdown or failure, major equipment should have a preventive maintenance schedule for inspection, repair, or replacement of fluids (e.g., hydraulic, lubricating, cooling), greases, seals, hoses, filters, pressure gauges, piping, etc. Paved and landscaped areas should not be allowed to degrade to the point where they erode and contribute pollutants to stormwater runoff. Leaky roofs, broken doors, cracked pavement and berms, and any other enclosure or structural defects that may impact the quality of stormwater runoff should be promptly repaired. Structural BMPs and storm drains within facility boundaries also need to be regularly inspected and maintained.

2.3.5 **Proper Materials Handling and Storage BMPs** (GS, CD, PR&T)

Materials handling and storage BMPs relate to controlling the potential for leaks, spills, and losses of materials delivered, used, and stored at a facility. Spills and leaks of materials can accumulate in soils or on surfaces and be carried away in stormwater runoff or in authorized non-stormwater discharges. These materials handling and storage BMPs will be employed:

Materials Use

- Only obtain the amount of materials needed to finish a particular job;
- Limit waste generation by keeping good records and reviewing activities;
- Recycle materials whenever possible; and
- Read and follow manufacturer directions for use of materials and review the associated Material Safety Data Sheet (MSDS) for each product.

Materials Storage

- Store materials indoors or in a covered area where exposure to rainwater is eliminated;
- Store lead-acid batteries indoors and within secondary containment;
- Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;
- Locate storage areas away from vehicle and equipment paths to reduce the potential for accident-related leaks or spills;
- Store drums or other containers away from storm drain inlets;
- Provide informational signing, labels, restricted access, locks, inventory control, overhead coverage, and secondary containment for all hazardous material storage areas or container units; and
- Conduct regular inspections for leaks and control dates.

2.3.6 **Proper Waste Handling BMPs** (GS, CD, PR&T)

Waste handling BMPs relate to properly controlling, collecting, storing, and disposing of wastes that are generated at a facility. All facility personnel should be aware that the disposal of any waste (including wash water) into a storm drain inlet or stormwater conveyance (i.e., ditches or streets) is an illegal discharge. Likewise, disposing of waste (including wash water) onto a paved surface such that it may be carried to a storm drain inlet or stormwater conveyance (i.e., ditches, streets) is an illegal discharge.

The following waste handling BMPs will be employed for use at the Public Service Center:

- Sweep or vacuum (dry methods) work areas to collect metal, wood, and other particulates and debris frequently;
- Limit waste generation by keeping good records and reviewing activities;
- Recycle materials whenever possible;
- Separate and segregate different types of wastes;
- Store waste materials indoors or in a covered area where exposure to rainwater is eliminated;
- Continue using Safety Clean or other service provider for regularly-scheduled waste disposal;
- Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;
- Locate the waste storage area away from vehicle and equipment paths to reduce the potential for accident-related releases;
- Provide informational signage, labels, restricted access, inventory controls, overhead coverage, and secondary containment for all hazardous waste storage areas or container units;
- Conduct regular inspections for leaks and control dates.

2.3.7 **Spill Prevention and Response** (GS, CD, PR&T)

For spills, the old saying that "an ounce of prevention is worth a pound of cure" is appropriate. Spill clean-up can be labor-intensive and costly, as it involves containing the spill, collecting the spilled substance, properly disposing of the spilled materials, and filing of associated reports to regulatory agencies, not to mention possible monetary fines. Spills and leaks are some of the most significant sources of stormwater pollution and are, in most cases, avoidable.

Spill prevention and control procedures include:

- Placing bollards, berms and containment features around structures or areas where fluids are stored, so releases can be prevented, easily detected, and controlled;
- Using drip pans for maintenance operations involving fluids and under leaking vehicles and equipment awaiting repair;
- Placing spill kits in areas where fluids are stored or in areas where activities may result in a spill;
- Providing training for proper use of materials and equipment used during operations and maintenance activities;
- Providing training for proper use of spill response equipment and supplies; and
- Conducting outdoor maintenance activities on paved surfaces to allow for easy detection, control, and cleanup of spills.

Spill prevention, control, and cleanup apply to all materials and wastes - not only hazardous substances. The toxic water quality effects from spills of hazardous substances (e.g., acids, oils, greases, fuels, solvents, pesticides) are commonly understood. However, non-hazardous materials, such as sand, litter, and wash water, among others - can also greatly impact water quality in receiving waters.

2.4 Employee Training

Each department head identified in the Pollution Prevention Team for SWPPP Oversight (in Section 2.2) is responsible to ensure that all of their designated employees receive the appropriate Stormwater Management training on a biennial basis. The County's Stormwater Program Manager will make such training available to the department heads via the County's intranet and/or another easily-accessible venue.

The Stormwater Program Manager coordinates training related to stormwater management on at least a biennial basis and maintains all training records for inclusion in the County's Annual MS4 Report, as submitted to DEQ.

The purpose of stormwater-related training is to educate workers on the day-to-day activities that may impart pollutants into stormwater discharges from the site, to help in the implementation of BMPs, to ensure understanding of the County's Standard Operating Procedures (SOPs) for Water Quality, and to ensure employees understand what illicit discharges are and how to respond to them when they are witnessed.

Training attendance sheets and any other training documentation shall be kept in Appendix C. The instructor's name, if applicable, date and time of training, location of training, training title, participants' names, and corresponding employee numbers will be listed.

All training records shall be kept for a period of no less than five years.

3.0 NON-STORMWATER DISCHARGES

A *non-stormwater* discharge is any discharge or flow to a stormwater drainage system that is not composed entirely of stormwater runoff. The County's MS4 Permit prohibits the discharge of non-stormwater discharges into its Municipal Separate Storm Sewer System (MS4) and to the Waters of the U.S., unless the discharge is regulated under a separate VPDES or VSMP permit, as issued by the Virginia DEQ, or is classified as an *authorized* discharge, as listed below.

3.1 Authorized Non-Stormwater Discharges

The only non-stormwater discharges, or flows, that are allowed to be discharged into the County's MS4 are listed below:

a) Water line flushing;
b) Landscape irrigation;
c) Diverted stream flows or rising groundwater;
d) Uncontaminated ground water infiltration;
e) Uncontaminated pumped groundwater;
f) Discharges from potable water sources;
g) Foundation drains;
h) Air conditioning condensate;
i) Irrigation water;
j) Springs;
k) Water from crawl space pumps;
l) Footing drains;
m) Lawn watering;
n) Individual residential car washing (this exemption does not include any commercial or business activity);
o) Flows from riparian habitats and wetlands;
p) De-chlorinated swimming pool discharges;
q) Street wash water; and
r) Firefighting activities.

4.0 SIGNIFICANT MATERIALS, ACTIVITIES, AND POTENTIAL POLLUTANTS

4.1 Significant Materials

A number of materials are used or stored on-site. Table 4-1 summarizes these materials, by department, and where they are received or stored at the facility.

Table 4-1(a). List of Significant Materials – General Services

GENERAL SERVICES				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Maintenance Shop*	*Maintenance Shop*	*Twice weekly*
Acid	12 quarts	Building Maintenance	Building Maintenance	Quarterly
Acid	24 quarts	Custodial Storage	Custodial Storage	Semi-Annual
Acid	6 batteries	Machine Shop	Machine Shop	Rotate Weekly
Adhesives & Sealants	12 tubes	Building Maintenance	Building Maintenance	Daily
Adhesives & Sealants	8 tubes	Machine Shop	Machine Shop	Monthly
Brake fluid	3 pints	Machine Shop	Machine Shop	Quarterly
Coolant (new)	5 gallons	Machine Shop	Machine Shop	Weekly
Coolant (used)	20 gallons	Machine Shop	Machine Shop	Stored in Barrel
Diesel fuel	3 gallons	Machine Shop	Machine Shop	Weekly
Gasoline	5 gallons	Machine Shop	Machine Shop	Daily
Hydraulic fluid	50 gallons	Machine Shop	Machine Shop	Weekly
Lubricants	60 gallons	Machine Shop	Machine Shop	Daily
Motor oil (new)	40 gallons	Machine Shop	Machine Shop	Daily
Motor oil (used)	100 gallons	Machine Shop	Machine Shop	Stored
Paint Products	40 gallons	Building Maintenance	Building Maintenance	Quarterly
Paint Products	12 gallons	Machine Shop	Machine Shop	Monthly
Solvents	1 gallon	Building Maintenance	Building Maintenance	Quarterly
Solvents	15 gallons	Machine Shop	Machine Shop	Daily

Table 4-1(b). List of Significant Materials – Parks, Recreation, and Tourism

PARKS, RECREATION, and TOURISM				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Maintenance Shop*	*Maintenance Shop*	*Twice weekly*
Adhesives/Sealants	5 gal	Maintenance Shops	Maintenance Shops	Monthly
Aggregate	5 ton	Bin or parking lot	Bin or parking lot	Monthly
Brake fluid	1 gal	Maintenance Shops	Maintenance Shops	Weekly
Concrete	1 ton (dry)	Maintenance Shops	Maintenance Shops	Monthly
Coolant (new)	5 gal	Maintenance Shops	Maintenance Shops	Weekly
Diesel fuel	40 gal	Maintenance Shops	Maintenance Shops	Daily
Fertilizers	1 ton	Maintenance Shops	Maintenance Shops	Monthly
Gasoline	40 gal	Maintenance Shops	Maintenance Shops	Daily
Gravel	5 ton	Bin or parking lot	Bin or parking lot	Monthly
Hydraulic fluid	20 gal	Maintenance Shops	Maintenance Shops	Weekly
Lubricants	5 gal	Maintenance Shops	Maintenance Shops	Weekly
Motor oil (new)	5 gal	Maintenance Shops	Maintenance Shops	Weekly
Paint Products	300 gal	Maintenance Shops	Maintenance Shops	Monthly
Pesticides/Herbicid	50 gal	Maintenance Shops	Maintenance Shops	Monthly
Sand	5 ton	Bin or parking lot	Bin or parking lot	Monthly
Soil amendments	3 ton	Maintenance Shops	Maintenance Shops	Monthly
Solvents	4 gal	Maintenance Shops	Maintenance Shops	Weekly

Table 4-1(c). List of Significant Materials – Community Development

COMMUNITY DEVELOPMENT				
Material Name	**Typical Quantity**	**Receiving and Shipping Location**	**Handling Location**	**Frequency of Use**
EXAMPLE: Acid	*12 gal*	*Maintenance Shop*	*Maintenance Shop*	*Twice weekly*
Adhesives & Sealants	40 Gal	Maintenance Shop	Maintenance Shop	Weekly
Aggregate	200 Tons	Outside Storage Bin	Outside Storage Bin	Twice Weekly
Concrete	2 Tons	Maintenance Shop	Maintenance Shop	Weekly
Coolant (new)	5 Gal	Maintenance Shop	Maintenance Shop	Bi-annually
Detergents	1 Gal	Maintenance Shop	Maintenance Shop	Monthly
Diesel fuel	100 Gal	Maintenance Shop	Service Truck	Daily
Fertilizers	1/2 Ton	Maintenance Shop	Maintenance Shop	Weekly
Gasoline	20 Gal	Maintenance Shop	Service Truck	Daily
Gravel	200 Tons	Outside storage bin	Outside storage bin	Twice Weekly
Hydraulic fluid	55 Gal	Maintenance Shop	Maintenance Shop	Monthly
Lubricants	75 Gal	Maintenance Shop	Shop / Service Truck	Weekly
Motor oil (new)	70 Gal	Maintenance Shop	Maintenance Shop	Weekly
Motor oil (used)	30 Gal	Maintenance Shop	Maintenance Shop	Bi-annually
Paint Products	10 Gal	Maintenance Shop	Maintenance Shop	Monthly
Sand	50 Tons	Outside storage bin	Outside storage bin	Monthly
Soil amendments	1/2 Ton	Maintenance Shop	Maintenance Shop	Bi-annually
Solvents	25 Gal	Maintenance Shop	Maintenance Shop	Monthly

4.2 Significant Activities, Potential Pollutants, and BMPs

A number of activities performed on the site have a high potential for pollutant discharge. They are listed in Table 4-2, along with the expected pollutants, pollutant source, and the associated BMPs used to mitigate them.

Table 4-2 Significant Activities, Potential Pollutants, and BMPs

Activity	Description	Pollutants/Sources	BMPs
Vehicle and Equipment Fueling	Vehicle and Equipment Fueling is a potential source of stormwater pollution at the facility. Stormwater run-on has the potential to wash away any spills or leaked fluids located at the fueling area and subsequently drain into the nearby storm drain inlet.	*Fuels/Oils* • Spills caused by overtopping • Spills and leaks during deliveries • Hosing or washing down fuel area. • Rainfall running onto and off of fueling area	• Train employees in proper fueling/cleanup procedures. • Discourage "topping off" of fuel tanks. • Install "shut-off" valves on nozzles. • Use adsorbent materials on spills as opposed to hosing down. • Install covered spill kits next to fueling area. • Maintain canopy over fueling area.
Outdoor Equipment/Container Washing	Outdoor Equipment Washing has a high pollutant potential to drain into the storm drain inlets/trench drains located onsite. Pollutants from washing include sediment, metals, toxic materials, and fluids such as oil and gasoline, and any products, like turf paint, that are being rinsed out of containers.	*Sediment, Metals, Toxic Materials, or Equipment Fluids* • Washing particulates and debris off of equipment • Container contents, such as turf paint or detergents	• Wash equipment at an off-site commercial washing location whenever possible or inside garbage truck wash bay. • If on-site, direct wash water towards surrounding, existing vegetation. • Wash indoors and dispose of wash water in sanitary sewer system.
Outdoor Material, Chemical, Vehicle, and Equipment Storage	Outdoor Material, Vehicle, and Equipment Storage have a potential for stormwater pollution. In particular, vehicles and equipment are susceptible to leaking and those that are stored outdoors, subject to weather, pose a pollutant risk. Rainfall at the facility will likely wash leaked fluids into the storm drain system.	*Antifreeze, pesticides, oil, gas, solvents, etc.* • Container spills or leaks • Vehicle and equipment leaks	• Minimize outdoor storage. Store materials indoors or under a roof whenever possible. • Conduct loading and unloading in dry weather if possible. Store materials in enclosed or covered areas. • Avoid placing storm drains in loading/unloading and storage areas. • Grade and/or berm the loading/unloading and storage areas to a drain that is connected to a dead-end. • Train employees in spill containment and cleanup present during loading/unloading. • Use drip pans under leaking vehicles and equipment. • Repair leaking vehicles and maintain equipment to prevent leaks.
Borrow Operations	Borrow activities at the site conducted by the Stormwater Operations group have the potential to pollute the drainage system, and ultimately Mason Creek, with excessive sediment.	*Sediment* • Ineffective erosion controls • Denuded areas around borrow site • Clogged sediment trap	• Provide and maintain erosion controls. • Seed/mulch denuded areas. • Clean out sediment trap and reshape/ deepen it to provide more storage. • Provide additional means of filtration at sediment trap outfall.

5.0 FACILITY INSPECTIONS

5.1 Quarterly Inspections

At least once per quarter, the facility will be inspected using the County's Municipal Yard Inspection Checklist, found in Appendix A. The inspection shall be conducted by the Pollution Prevention SWPPP Implementation Team, identified in Section 2-1.

The purpose of these inspections will be to identify problems early so that they can be corrected in a timely fashion. All completed forms shall be placed in Appendix A by the Facilities Manager of General Services; he or she shall also send a copy of such reports to the County's Stormwater Program Manager for inclusion in the Annual MS4 Report, which is submitted to the Virginia Department of Environmental Quality (DEQ) by October 1 of each year.

5.2 Annual Facility Assessments

An "Annual Facility Stormwater Assessment" of the Public Service Center will be conducted by the Pollution Prevention SWPPP Implementation Team, identified in Section 2-1, to help assure that significant changes in facilities or activities are identified and can then be reflected in the SWPPP. The Annual Stormwater Assessment will include:

- Visual inspection of all potential sources of pollutants that may enter the stormwater drainage system via stormwater or non-stormwater discharges;
- A review and assessment of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed; and
- Visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, drip pans, brooms or vacuum sweepers, or containers for used absorbents.

The Annual Stormwater Assessment will be documented by the Facilities Manager of General Services as follows:

- Identification of personnel performing the evaluation
- The date(s) of the evaluation
- Findings of the evaluation
- Recommended modifications of the SWPPP
- Schedule for implementing SWPPP revisions
- Any incidents of non-compliance and the corrective actions taken

Following the evaluation, revisions to the SWPPP, if needed, will be completed within 90 days. Blank assessment forms are located in Appendix B, and completed assessment forms shall be placed there by the Facilities Manager of general Services.

Table 5-1 may be used to track annual assessments and follow-through on recommendations. The County Engineer and Stormwater Program Manager are available for technical assistance during the Assessment Process, if needed.

Table 5-1 Assessment Log

Assessment Date (mm/dd/yyyy)	**Assessor** (Name & Position)	**Revisions Required?** (Y/N)		**Follow Through?** (Date or n/a)
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	
		Yes	No	

APPENDICES

APPENDIX A

Municipal Yard Inspection Checklists

Roanoke County
Municipal Yard Inspection Checklist

Each Department is responsible for conducting quarterly Inspections, at minimum, of its own facilities. Please submit completed forms to: Cindy Linkenhoker, Stormwater Program Manager, in the Department of Community Development.

Date: _____ **Time:** _____ **Inspector:** _____

Facility Name and Location: _____

Description of Activities: _____ **Receiving Waterway:** _____

Fueling Areas		**Comments**
	Proper use of spill overflow protection	
	Roof over fueling area	
	Dry cleanup methods used for fuel spills	
	Tank certified by PBCDERM	
	Leak detection system for fuel tanks	
	Fueling pad graded for minimum run-on of stormwater	
	Fueling pad discharges into a sump pump, not into a storm drain	

Vehicle and Equipment Maintenance		**Comments**
	Proper storage & disposal of greasy rags, oil/air filters, batteries, spent coolants	
	Labeling & tracking for the recycling of hazardous waste materials	
	Hazardous materials stored properly without evidence of spills	
	Inventory of materials maintained onsite & Material Safety Data sheets	
	Wrecked and "part" vehicles drained of all fluids	
	Stored liquids and batteries have secondary containment	
	Liquid waste disposed of properly and not being poured into storm system/sinks	
	Empty drip pans are cleaned and properly stored	
	Floor drains discharge into a storage sump with an oil/water separator	

Outdoor Vehicle and Equipment Storage		**Comments**
	Ground free of visual stains from oil or other vehicle fluids	
	Drip pans used during vehicle maintenance	
	Drip pans cleaned and properly stored	
	Storage are covered and properly maintained	

Painting Areas		Comments
	Paint and paint thinner stored and properly labeled	
	Spray paint booths properly operate and have an OSHA-approved hood	
	Personal protection devices/clothes cleaned and properly stored	
	Proper painting equipment being used and is properly cleaned/stored	
	Recycling of used paints, paint thinner, and solvents	
	Employees trained on proper painting and cleaning procedures	

Vehicle and Equipment Washing Areas		Comments
	Area designated for cleaning activities	
	Wash waters are contained & recycled, sumps clean & properly used	
	Proper grading for wash pad	
	Parts and equipment washed within designated cleaning area	
	Employees trained on proper washing procedures	

Liquid Storage in Above-Ground Storage		Comments
	Installed per design with no leaks (pipes, pumps, valves, hoses, flanges)	
	Storage containers maintained in good condition	
	Safeguards installed (such as secondary containment)	
	System regularly inspected	
	Chemicals are stored with compatible chemicals	
	Container labels can be easily read; containers are properly labeled	
	Employees trained on proper filling and transfer procedures	

Improper Connections to Storm Drainage System		Comments
	Floor drains connected to sanitary sewer system, not to storm drains	
	Runoff from wash, maintenance, storage, and fueling areas are not directed to storm drains	
	Facility has updated plumbing schematics to accurately reflect discharge locations	
	All underground storage tanks are maintained with proper safeguards	
	Employees trained on proper disposal of all materials used onsite	

General Site		Comments
	Emergency Response Plan onsite	
	Employees trained for emergency procedures	
	Material Safety Data sheets maintained in a convenient location for emergency response	
	Stockpiles properly maintained to prevent runoff	
	Proper litter control (container lids are closed, containers are upright)	
	Vegetated areas properly maintained and erosion-free	
	Site is routinely inspected for indication of illicit discharges	

Other Comments and /or Observations:

* others present:
Mark Courtright, Rob Light, Jeff Altice, John Patten

Roanoke County
Municipal Yard Inspection Checklist

Each Department in Roanoke County is Responsible for Conducting Quarterly Inspections, at minimum, of its Own Facilities
Please submit completed forms to: Cindy Linkenhoker, Stormwater Program Manager, Dept. of Community Development

Date: 6-8-15 **Time:** 1:00 p.m.* **Inspector:** Cindy Linkenhoker, David Henderson

Facility Name and Location: Public Service Center 1216 Kessler Mill Rd., Salem

Description of Activities: "Public Works" Yard **Receiving Waterway:** Mason Creek

Fueling Areas		Comments
X	Proper use of spill overflow protection (auto shutoff on pump)	– Need a spill kit/boom
✓	Roof over fueling area	
✓	Dry cleanup methods used for fuel spills	– absorbent like kitty litter
	Tank certified by PBCDERM	
✓	Leak detection system for fuel tanks phone box/dispatch; overfill alarm	
✓	Fueling pad graded for minimum run-on of stormwater	– protected by a berm
X	Fueling pad discharges into a sump pump, not into a storm drain	– drains to a nearby storm drain

– Store new oil in nearby bldg. 2-250 gal. each hydraulic + motor oil

Vehicle and Equipment Maintenance		Comments
✓	Proper storage & disposal of greasy rags, oil/air filters, batteries, spent coolants	
X	Labeling & tracking for the recycling of hazardous waste materials –	need to label all containers
✓	Hazardous materials stored properly without evidence of spills	
	Inventory of materials maintained onsite & Material Safety Data sheets	
N/A	Wrecked and "part" vehicles drained of all fluids	
X	Stored liquids and batteries have secondary containment – No, but	most are inside
X	Liquid waste disposed of properly and not being poured into storm system/sinks –	evidence of paint poured into storm drain
✓	Empty drip pans are cleaned and properly stored	
X	Floor drains discharge into a storage sump with an oil/water separator –	discharge to storm system, but all have been plugged & stenciled "DO NOT USE, DRAINS TO CREEK"

Outdoor Vehicle and Equipment Storage		Comments
X	Ground free of visual stains from oil or other vehicle fluids – Some	evidence of leaks, oil stains under "shed"
X	Drip pans used during vehicle maintenance – not always	
✓	Drip pans cleaned and properly stored	
X	Storage ~~are~~ covered and properly maintained –	materials stored by Commander drainage crews exposed to weather (sand, rock, topsoil, etc.)

areas

Painting Areas		Comments
N/A	Paint and paint thinner stored and properly labeled	only painting is that done by PR&T - lawn painting using turf paint (water based)
N/A	Spray paint booths properly operate and have an OSHA-approved hood	
N/A	Personal protection devices/clothes cleaned and properly stored	
✓	Proper painting equipment being used and is properly cleaned/stored	
N/A	Recycling of used paints, paint thinner, and solvents	
X	Employees trained on proper painting and cleaning procedures - evidence of rinsing in drain & on the ground	

Vehicle and Equipment Washing Areas (Wash bay for Garbage trucks)		Comments Run by Solid Waste folks
✓	Area designated for cleaning activities	
✓	Wash waters are contained & recycled, sumps clean & properly used - wash water goes to sanitary	
✓	Proper grading for wash pad	Solids collected in a floor pit, which is periodically cleaned by WVWA; no permit w/ WVWA
X	Parts and equipment washed within designated cleaning area	
X	Employees trained on proper washing procedures	

- witnessed employee rinsing mowers outside of wash bay

Liquid Storage in Above-Ground Storage		Comments
✓	Installed per design with no leaks (pipes, pumps, valves, hoses, flanges)	"Safety Clean" pumps out waste oil containers
✓	Storage containers maintained in good condition	- seeds/fertilizers stored in Tin Storage bldg.
✓	Safeguards installed (such as secondary containment)	
	System regularly inspected	
	Chemicals are stored with compatible chemicals	
X	Container labels can be easily read; containers are properly labeled - Label all containers onsite	
	Employees trained on proper filling and transfer procedures	

Improper Connections to Storm Drainage System		Comments
X	Floor drains connected to sanitary sewer system, not to storm drains - Connected to storm but have been plugged & stenciled	
X	Runoff from wash, maintenance, storage, and fueling areas are not directed to storm drains - fuel pad does have protection on one side but drains to a nearby drop inlet	
✓	Facility has updated plumbing schematics to accurately reflect discharge locations	
✓	All underground storage tanks are maintained with proper safeguards	
✓	Employees trained on proper disposal of all materials used onsite	

bldg. in floodplain; all drop inlets need cleaning

General Site		Comments
N/A	Emergency Response Plan onsite	transformers stored outside "up on hill" near borrow area along w/ a generator owned by WVWA
X	Employees trained for emergency procedures	
	Material Safety Data sheets maintained in a convenient location for emergency response	
N/A	Stockpiles properly maintained to prevent runoff	
X	Proper litter control (container lids are closed, containers are upright) - trash can lids open or missing and cans contain trash	
X	Vegetated areas properly maintained and erosion-free - sed. trap - needs maint., as does borrow area	
X	Site is routinely inspected for indication of illicit discharges - inspections are to be conducted quarterly from this point forward	

X Borrow area/storage area "up on hill" needs an E+SC plan, and a land disturbance permit/VSMP permit.

APPENDIX B

Annual Facility Stormwater Assessment Forms and Checklists

Annual Facility Stormwater Assessment
Public Service Center

1) Name of Building or Operation: _____

2) Facility Representative: _____

Position: _____ Phone No.: _____

	YES	NO	N/A
a) Facility's SWPPP is easily accessible in each building?	☐	☐	☐
b) Awareness of SWPPP by facility personnel? (Random survey of onsite employees.) # Employees Surveyed _____	☐	☐	☐
c) Facility's Emergency Response Plan is easily accessible in each building?	☐	☐	☐
d) Awareness of Emergency Response Plan by facility personnel? (Random survey of employees on site.) # Employees Surveyed _____	☐	☐	☐
e) Assessment Checklist (page 2 of 2) is completed?	☐	☐	☐
f) Was any stormwater pollution prevention training conducted during the year? If yes, provide records in Appendix C.	☐	☐	☐
g) Were non-stormwater discharge visual observations conducted? List Dates: _____	☐	☐	☐
h) Were stormwater discharge visual observations conducted? List Dates: _____	☐	☐	☐

Evaluation Notes: _____

_____

_____

_____

Corrective Measures Recommended: _____

_____

_____

_____

Evaluation Conducted By: _____ Date: _____

This completed evaluation was reviewed with me on: _____ (Date)

Facility Representative (printed name and title): _____

Facility Representative (signature): _____

Stormwater Assessment Checklist

Activities – Check each activity present at the site.	Effectiveness Rating*				
	NO	SO	MO	SC	VE
Vehicle and Equipment Fueling:					
1. Fueling area is designed to prevent run-on of stormwater and the runoff of spills.	☐	☐	☐	☐	☐
2. Employees are trained in proper fueling and cleanup procedures.	☐	☐	☐	☐	☐
3. Absorbent materials are used on small spills rather than hosing down.	☐	☐	☐	☐	☐
4. Daily inspections.	☐	☐	☐	☐	☐
5. Pump island is inspected regularly for spills and/or leaks	☐	☐	☐	☐	☐
Vehicle Wash Bay for Garbage Trucks					
1. Garbage trucks are only washed inside the bay.	☐	☐	☐	☐	☐
2. Wash water in the containment area is routinely removed by the WVWA.	☐	☐	☐	☐	☐
3. No equipment or container washing occurs outside the wash bay.	☐	☐	☐	☐	☐
Vehicle and Equipment Maintenance and Repair					
1. Maintenance is done in designated areas only.	☐	☐	☐	☐	☐
2. Equipment is kept clean, with no build-up of oil and grease.	☐	☐	☐	☐	☐
3. Drip pans, containers, or absorbent pads are used under items that may drip.	☐	☐	☐	☐	☐
4. Used oil and oil filters, antifreeze, batteries, fluids, etc. are recycled.	☐	☐	☐	☐	☐
Outdoor Loading/Unloading of Materials					
1. Delivery vehicles are parked so spills and leaks can be contained.	☐	☐	☐	☐	☐
2. Loading/unloading areas are covered to reduce exposure of materials to rain.	☐	☐	☐	☐	☐
3. Loading/unloading areas are designed to prevent stormwater run-on.	☐	☐	☐	☐	☐
4. Fork lift operators are properly trained.	☐	☐	☐	☐	☐
Outdoor Container Storage of Materials					
1. Materials are covered to protect from rainfall.	☐	☐	☐	☐	☐
2. Materials are protected from run-on and runoff of stormwater.	☐	☐	☐	☐	☐
3. Dumpsters and trash cans are covered.	☐	☐	☐	☐	☐
4. Hazardous materials are stored in a properly-designed storage area and labeled.	☐	☐	☐	☐	☐
Outdoor Storage of Raw Materials/Products					
1. Storage areas are covered with a roof.	☐	☐	☐	☐	☐
2. Materials are covered with a temporary plastic covering, if outside.	☐	☐	☐	☐	☐
3. Berms and curbing are used to prevent materials from entering the storm drain system.	☐	☐	☐	☐	☐
4. Parking lots and/or other surface areas are swept regularly.	☐	☐	☐	☐	☐
Waste Handling and Disposal					
1. Usage and disposal inventory is used to limit waste generation.	☐	☐	☐	☐	☐
2. Materials are recycled whenever possible.	☐	☐	☐	☐	☐
3. Wastes are segregated and separated.	☐	☐	☐	☐	☐
4. Storage area is covered, enclosed and bermed.	☐	☐	☐	☐	☐
Contaminated or Erodible Surface Areas					
1. Erosion can be controlled by preservation of natural vegetation.	☐	☐	☐	☐	☐
2. Surface area is regularly inspected to determine if re-vegetation is needed.	☐	☐	☐	☐	☐
3. Geosynthetics are used as an alternative for the surface area.	☐	☐	☐	☐	☐
4. Sandbags or berms are needed to prevent stormwater pollution.	☐	☐	☐	☐	☐
Building and Grounds Maintenance					
1. Pesticides and fertilizers are used and properly stored.	☐	☐	☐	☐	☐
2. Paved areas are swept instead of washed down.	☐	☐	☐	☐	☐
3. Wash water, sweepings, and sediments are properly discarded.	☐	☐	☐	☐	☐
4. Planting of natural vegetation reduces water, fertilizer and/or pesticide needs.	☐	☐	☐	☐	☐
Building Repair, Remodeling and Construction					
1. Materials used in repair and remodeling (paints, etc.) are stored properly.	☐	☐	☐	☐	☐
2. Soil erosion control techniques are used.	☐	☐	☐	☐	☐
3. Good housekeeping practices are used.	☐	☐	☐	☐	☐

* NO = No BMPs used and stormwater pollution likely.
SO = Some BMPs used but not effective.
MO = Some BMPs used and moderately effective.
SC = Source-control BMPs used and very effective/structural BMPs needed.
VE = All necessary BMPs used and very effective.

APPENDIX C

Training Documentation

Roanoke County

Stormwater (MS4) Training Log

For

Department of General Services

Permit Year 2

July 1, 2014 – June 30, 2015

Roanoke County
Required Stormwater (MS4) Training for General Service Employees
Due By July 1, 2015

Recognition and Reporting of Illicit Discharges			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Custodian	4781	Gail Graves	5/12/2015
Custodian	475	Sharon Griffin	5/12/2015
Custodian	1408	Edith Jones	5/12/2015
Custodian	697	Surja Malakar	5/12/2015
Refuse Collector	20	Ricky Akers	6/11/2015
Refuse Collector	339	Kenny Johnson	6/11/2015
Refuse Collector	72	David Hunt	6/11/2015
Refuse Collector	1177	John Snider	6/11/2015
Refuse Collector	322	Paul Romano	6/24/2015
Solid Waste Equipment Operator	326	Carolyn Altice	6/11/2015
Solid Waste Equipment Operator	2646	Don Bryant	6/11/2015
Solid Waste Equipment Operator	409	Willie Bryant	6/11/2015
Solid Waste Equipment Operator	1007	Tim Burford	6/11/2015
Solid Waste Equipment Operator	127	David Cochrane	6/11/2015
Solid Waste Equipment Operator	114	David Ford	6/11/2015
Solid Waste Equipment Operator	1044	Tony Frymier	6/11/2015
Solid Waste Equipment Operator	1383	Tony Grubb	6/11/2015
Solid Waste Equipment Operator	4854	Chuck Hall	6/11/2015
Solid Waste Equipment Operator	59	Gene Kendall	6/11/2015
Solid Waste Equipment Operator	468	Joe Laduke	6/11/2015
Solid Waste Equipment Operator	7808	Chuck Lawhorn	6/11/2015
Solid Waste Equipment Operator	506	Phillip Luckado	6/11/2015
Solid Waste Equipment Operator	7990	Jeff McCoy	6/11/2015
Solid Waste Equipment Operator	8107	WC Nimmo	6/11/2015
Solid Waste Equipment Operator	357	Paul Ragland	6/11/2015
Solid Waste Equipment Operator	6888	Marc Rucker	6/11/2015
Solid Waste Equipment Operator	4860	Angie Simmons	6/11/2015
Solid Waste Equipment Operator	3610	Dean Smith	6/24/2015
Solid Waste Equipment Operator	469	Stacy Statzer	6/11/2015
Solid Waste Equipment Operator	909	Steve Washington	6/11/2015
Solid Waste Equipment Operator	5376	Tim Young	6/24/2015
Solid Waste Equipment Operator		Ralph Jackson	Left
Crew Leader	1366	Billy Greenway	5/12/2015
Crew Leader	3143	Joyce Muse	5/12/2015
Crew Leader	5327	Kenny Thurman	5/12/2015

Building Maintenance Technician II	1666	Jim Skinner	5/5/2015
Building Maintenance Technician II	1702	Roger Reed	5/5/2015
Building Maintenance Technician II	7763	Garry Viar	5/5/2015
Building Maintenance Technician II	65	Phillip Boblett	5/8/2015
Building Maintenance Technician II	880	Marvin StClair	5/19/2015
Solid Waste Collection Foreman	57	Frank Greenway	6/11/2015
Solid Waste Collection Foreman	692	James Hairston	6/11/2015
Solid Waste Operations Supervisor	198	Charles Paitsel	6/24/2015
Building Maintenance Technician I	7192	Barry Bradley	5/13/2015
Building Maintenance Technician I	5125	Toby Gilbert	5/19/2015

Good Housekeeping and Pollution Prevention Practices & Employee Has Read SOPs

Job Class	Employee #	Employee Name	Date Taken
Custodian	4781	Gail Graves	5/12/2015
Custodian	475	Sharon Griffin	5/12/2015
Custodian	1408	Edith Jones	5/12/2015
Custodian	697	Surja Malakar	5/12/2015
Refuse Collector	20	Ricky Akers	6/11/2015
Refuse Collector	339	Kenny Johnson	6/11/2015
Refuse Collector	72	David Hunt	6/11/2015
Refuse Collector	1177	John Snider	6/11/2015
Refuse Collector	322	Paul Romano	6/24/2015
Mechanics Helper	7618	Josh Clevenger	6/11/2015
Parts and Service Specialist	5016	Beth Williams	6/11/2015
Solid Waste Equipment Operator	326	Carolyn Altice	6/11/2015
Solid Waste Equipment Operator	2646	Don Bryant	6/11/2015
Solid Waste Equipment Operator	409	Willie Bryant	6/11/2015
Solid Waste Equipment Operator	1007	Tim Burford	6/11/2015
Solid Waste Equipment Operator	127	David Cochrane	6/11/2015
Solid Waste Equipment Operator	114	David Ford	6/11/2015

Solid Waste Equipment Operator	1044	Tony Frymier	6/11/2015
Solid Waste Equipment Operator	1383	Tony Grubb	6/11/2015
Solid Waste Equipment Operator	4854	Chuck Hall	6/11/2015
Solid Waste Equipment Operator	59	Gene Kendall	6/11/2015
Solid Waste Equipment Operator	468	Joe Laduke	6/11/2015
Solid Waste Equipment Operator	7808	Chuck Lawhorn	6/11/2015
Solid Waste Equipment Operator	506	Phillip Luckado	6/11/2015
Solid Waste Equipment Operator	7990	Jeff McCoy	6/11/2015
Solid Waste Equipment Operator	8107	WC Nimmo	6/11/2015
Solid Waste Equipment Operator	357	Paul Ragland	6/11/2015
Solid Waste Equipment Operator	6888	Marc Rucker	6/11/2015
Solid Waste Equipment Operator	4860	Angie Simmons	6/11/2015
Solid Waste Equipment Operator	3610	Dean Smith	6/24/2015
Solid Waste Equipment Operator	469	Stacy Statzer	6/11/2015
Solid Waste Equipment Operator	909	Steve Washington	6/11/2015
Solid Waste Equipment Operator	5376	Tim Young	6/24/2015
Solid Waste Equipment Operator		Ralph Jackson	Left
Automotive Mechanic	4823	Lester Harmon	6/11/2015
Automotive Mechanic	7333	Mike Johnson	6/11/2015
Crew Leader	1366	Billy Greenway	5/12/2015
Crew Leader	3143	Joyce Muse	5/12/2015
Crew Leader	5327	Kenny Thurman	5/12/2015
Equipment Technician	4669	Joe Evans	6/23/2015
Building Maintenance Technician	7192	Barry Bradley	5/13/2015
Building Maintenance Technician	5125	Toby Gilbert	5/19/2015
~~Building Maintenance Technician~~			
Heavy Truck Mechanic	1878	Russ Lane	6/18/2015
Heavy Truck Mechanic	8120	Kelly Kendrick	6/11/2015
Heavy Truck Mechanic	7018	Andy Rice	6/11/2015
~~Heavy Truck Mechanic~~			
Building Maintenance Technician II	1666	Jim Skinner	5/5/2015
Building Maintenance Technician II	1702	Roger Reed	5/5/2015
Building Maintenance Technician II	7763	Garry Viar	5/5/2015
Building Maintenance Technician II	65	Phillip Boblett	5/8/2015
Building Maintenance Technician II	880	Marvin StClair	5/19/2015
Welding Shop Foreman	771	Steve Wilson	6/23/2015
Solid Waste Collection Foreman	57	Frank Greenway	6/11/2015

Solid Waste Collection Foreman	692	James Hairston	6/11/2015
Lead Heavy Truck Mechanic	3938	Tim Bobbitt	6/11/2015
Solid Waste Operations Supervisor	198	Charles Paitsel	6/24/2015
Facilities Manager	1470	John Patten	5/14/2015
Solid Waste Manager	1967	Nancy Duval	6/11/2015
Fleet/Garage Manager	6889	Kevin Glass	6/11/2015
Fleet/Office Coordinator	2080	Kim Artherhults	6/11/2015

Contractor Oversight for Environmental Compliance

Job Class	Employee #	Employee Name	Date Taken
Facilities Manager	1470	John Patten	5/14/2015
Assistant Director/Acting Director of General Services	5733	Rob Light	6/23/2015

Submitted by _____ **Date** 6/24/15

Director of General Services

For questions about this form, please contact Cindy Linkenhoker, Stormwater Program Manager, (540) 772-2096, ext. 245.

Roanoke County

Stormwater (MS4) Training Log

For

Department of Community Development

Permit Year 2

July 1, 2014 – June 30, 2015

Roanoke County
Required Stormwater (MS4) Training for Community Development
Due By July 1, 2015

Recognition and Reporting of Illicit Discharges			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Motor Equipment Operator I	7692	Roger Blankenship	4/22/2015
Motor Equipment Operator II	3761	James Fralin	4/22/2015
Motor Equipment Operator II	5550	Jimmy Sutphin	4/22/2015
Motor Equipment Operator III	1362	Richard Adkins	4/22/2015
Stormwater Maintenance Foreman	1551	Frank Neighbors	4/22/2015
Stormwater Maintenance Foreman	1674	Ray Leonard	4/22/2015
Combination Code Compliance Inspector	4351	Bruce Peters	2/11/2015
Combination Code Compliance Inspector	805	Curtis Carroll	2/11/2015
Combination Code Compliance Inspector	4999	Robert Fuller	2/11/2015
Combination Code Compliance Inspector	288	Steve Carper	2/11/2015
Combination Code Compliance Inspector	745	Jimmy Bowles	2/27/2015
Combination Code Compliance Inspector	248	Dale Holland	2/25/2015
Combination Code Compliance Inspector	1034	Dan Brokaw	2/27/2015
Combination Code Compliance Inspector	413	Larry Waldren	2/25/2015
Combination Code Compliance Inspector	3188	Morgan Yates	2/25/2015
Combination Code Compliance Inspector	1749	Bill Fowler	2/25/2015
Planner I	796	Bill Richardson	3/18/2015
Planner I	8176	Brian Hughes	4/15/2015
Chief Inspector/Field Supervisor	732	Randy Wimmer	2/25/2015
Stormwater Operations Supervisor	1755	Jeffrey Altice	4/22/2015
Civil Engineer I	4473	Matt Cooper	2/11/2015
Project Engineer	5366	Bob Atkinson	5/4/2015
Stormwater Program Manager	7729	Cindy Linkenhoker	9/8/2015
Principal Development Engineer	7823	Angie Gwynn	4/16/2015
County Engineer	7312	David Henderson	9/8/2015
Deputy Director of Development Service	4735	Tarek Moneir	9/8/2015

Good Housekeeping and Pollution Prevention Practices & Employee Has Read SOPs			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Motor Equipment Operator I	7692	Roger Blankenship	4/22/2015

Motor Equipment Operator II	3761	James Fralin	4/22/2015
Motor Equipment Operator II	5550	Jimmy Sutphin	4/22/2015
Motor Equipment Operator III	1362	Richard Adkins	4/22/2015
Stormwater Maintenance Foreman	1551	Frank Neighbors	4/22/2015
Stormwater Maintenance Foreman	1674	Ray Leonard	4/22/2015
Stormwater Operations Supervisor	1755	Jeffrey Altice	4/22/2015
Civil Engineer I	4473	Matt Cooper	2/11/2015
Transportation Engineer	1968	Brian Epperly	4/16/2015
Asst. Building Commissioner/Sr. Plans Examiner	3188	Morgan Yates	2/25/2015
Project Engineer	5366	Bob Atkinson	5/4/2015
Stormwater Operations Manager	117	Butch Workman	4/22/2015
Stormwater Program Manager	7729	Cindy Linkenhoker	9/8/2015
Principal Development Engineer	7823	Angie Gwynn	4/16/2015
County Engineer	7312	David Henderson	9/8/2015

Contractor Oversight for Environmental Compliance

Job Class	Employee #	Employee Name	Date Taken
Stormwater Operations Supervisor	1755	Jeffrey Altice	4/22/2015
Civil Engineer I	4473	Matt Cooper	2/11/2015
Project Engineer	5366	Bob Atkinson	5/4/2015
Stormwater Operations Manager	117	Butch Workman	4/22/2015
Stormwater Program Manager	7729	Cindy Linkenhoker	9/8/2015
Principal Development Engineer	7823	Angie Gwynn	4/16/2015
County Engineer	7312	David Henderson	9/8/2015
Deputy Director of Development Services	4735	Tarek Moneir	9/8/2015

Submitted by _____ **Date** 5.27.15

Director of Community Development

Deputy - TAREK MONEIR

For questions about this form, please contact Cindy Linkenhoker, Stormwater Program Manager, (540) 772-2096, ext. 245

Roanoke County

Stormwater (MS4) Training Log

For

Department of Parks, Recreation, and Tourism

Permit Year 2

July 1, 2014 – June 30, 2015

Roanoke County

Required Stormwater (MS4) Training for Department of Parks, Recreation, and Tourism

Due By July 1, 2015

Recognition and Reporting of Illicit Discharges			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Parks Maintenance Worker	588091	Elliott Agnor	May 1, 2015
Parks Maintenance Worker	588260	James McDaniel	May 1 2015
Parks Maintenance Worker (PT)	587840	Anthony Sowers	May 1 2015
Parks Maintenance Worker	5877164	Trell Foster	May 1, 2015
Parks Maintenance Worker	588262	CALEB HUTTON	MAY, 1, 2015
Parks Maintenance Worker		Adam Coleman	May, 1, 2015
Parks Maintenance Worker	588263	Jon Wisniewski	May, 1 2015
	587417	Phillip Hughes	May 1, 2015
Motor Equipment Operator I	58-4955	D. Bergeron	1 May 2015
Motor Equipment Operator I	58-7028	Donald Cook	May 1 2015
Motor Equipment Operator I	5030	Emmett Smith	5/1/15
Motor Equipment Operator I			
Motor Equipment Operator I			
Recreation Technician			
Motor Equipment Operator II	8180	Andrew Fuller	May 1, 2015
Motor Equipment Operator II	4660	Chris Jewell	May 27, 2015
Motor Equipment Operator III	7027	Jerod K. Ray	5/1/15
Motor Equipment Operator III			
Parks Crew Leader	2837	Les Hutchinson	5/1/15
Parks Crew Leader	5033	Dickie Shuffler II	5/1/15
Parks Crew Leader	582824	Dwayne Wyrick	5-1-15
Parks Crew Leader	583802	Brian Bartley	05/01/15
Parks Crew Leader	584349	Edward Reese	5-28-15
Parks Crew Leader			
	2954	EDDIE GOODE	5.1.15
Parks Maintenance Service Specialist	2202	Andrew Lewis	5-1-15
Parks Maintenance Foreman	580048	Chuck Wilson	5-1-15
Parks Maintenance Foreman	580477	WALT Mundy	5-1-15
Parks Administrator			
Parks Manager	6955	Eric Vest	5/1/15
Parks Manager	363	Mick Brizendine	5-29-15
Greenway Planner	5348	Lindsay Blankenship	5/1/15
Greenway Coordinator	04006	Liz A. Belcher	5/28/2015
Parks Planning and Development Manager	4464	Lon Williams	5/28/15
Assistant Director of Parks			
part time South	8261	Sam Smith	5-1-15
Parks Maintenance Worker (Full time)	5873	Steve Brammer	5-1-15

Good Housekeeping and Pollution Prevention Practices & Employee Has Read SOPs			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Building Operations Supervisor (Greenridge)	2956	Allen Mcgrady	2/12/2015
Maintenance Technician (Greenridge)	8229	Greg Reep	3/24/2015
Parks Maintenance Worker	588091	Elliott Agnor	May 1, 2015
Parks Maintenance Worker	588260	James McDaniel	May 1, 2015
Parks Maintenance Worker	587840	Anthony Sowers	May 1, 2015
Parks Maintenance Worker	588262	Caleb Hutton	May 1, 2015
Parks Maintenance Worker		Adam Coleman	May 1, 2015
Parks Maintenance Worker	588263	Jon Wisniewski	May 1 2015
Parks Maintenance Worker	58-7417	Phillip Hughes	May 1, 2015
	587764	Trell Foster	May 1, 2015
Motor Equipment Operator I	58-4955	D. Borgeron	1 May 2015
Motor Equipment Operator I	58-7028	Donald Cook	May 1 2015
Motor Equipment Operator I	5030	Emmett Smith	5/1/15
Motor Equipment Operator I			
Motor Equipment Operator I			
Recreation Technician			
Motor Equipment Operator II	8180	Andrew Fuller	May 1, 2015
Motor Equipment Operator II	4660	Chris Jewell	May 27, 2015
Motor Equipment Operator III	7027	Jerad K. Ray	5/1/15
Motor Equipment Operator III			
Parks Crew Leader	2837	Les Hutchinson	5/1/15
Parks Crew Leader	5033	Richie Shepherd	5/1/15
Parks Crew Leader	582824	Dwayne Wyrick	5-1-15
Parks Crew Leader	584349	Edward Keesee	5-28-15
Parks Crew Leader			
Parks Crew Leader			
	2954	EDDIE GOODE	5.1.15
Parks Maintenance Service Specialist	2202	Andrew Lewis	5-1-15
Parks Maintenance Foreman	580048	Chuck Wilson	5-1-15
Parks Maintenance Foreman	580477	WALT Mundy	5-1-15
Parks Administrator			
Parks Manager	6955	Eric Vest	5/1/15
Parks Manager	363	Mick Brizendine	5-28-15
Assistant Director of Parks			
Greenway Planner	5348	Lindsay Barkenbus	5/1/15
Parks Planning & Development Manager	4464	Lon Williams	5/28/15
RV Greenway Coordinator	04616	Liz Belcher	5/28/15

Contractor Oversight for Environmental Compliance			
Job Class	**Employee #**	**Employee Name**	**Date Taken**
Center Manager (Greenway)		R. Scott Shiflett	3/25/2015
Parks Manager	6955	Eric Vest	5/4/15
Parks Manager			
Assistant Director of Parks			
PT Maintenance Worker		Matt Nantsky	5/28/15
PT Maintenance Worker		Alex Short	5/28/15
PT Maintenance Worker		Nick Houck	5/28/15
PT Maintenance Worker		Daniel Gallegos	5/28/2015
PT Maintenance Worker		Russell Woody	5/28/2015
PT Maintenance Worker		Chris Thomas	5/28/2015
		Nick Blackwell	5/28/15

Submitted by _____ **Date** 5/28/15

Director of Parks, Recreation, and Tourism

For questions about this form, please contact Cindy Linkenhoker, Stormwater Program Manager, (540) 772-2096, ext. 245.

APPENDIX D

SWPPP Amendment Log

SWPPP Amendment Log

No.	Description of the Amendment	Date of Amendment	Amendment Prepared by *(List Name(s) and Title)*

APPENDIX E

Municipal Separate Storm Sewer System (MS4) Permit

07-03-13 14:48 IN

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
TDD (804) 698-4021
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

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

July 1, 2013

Mr. B. Clayton Goodman, III, County Administrator
County of Roanoke, Virginia
5204 Bernard Drive
Roanoke, Virginia 24018

RE: General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems
General Permit No. VAR040022
Roanoke County

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 Blue Ridge Regional Office at the following address:

DEQ Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke, VA 24019

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. Kip Foster, Water Permits Manager, at (540) 562-6782 or kip.foster@deq.virginia.gov .

Sincerely,

Melanie D. Davenport

Melanie D. Davenport, Director
Water Division

Enc. General Permit No. VAR040022

Cc. Kip Foster, DEQ-BRRO

COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

General Permit No.: VAR040022

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 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.

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.

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

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 affects 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.