City Of Suffolk, Virginia

Operations and Maintenance:

Pollution Prevention Guide

2015

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Introduction

Through day to day operations, City of Suffolk staff conducts a variety of operations that have the potential to pollute surface waters. The purpose of this manual is to provide guidance to those staff on Best Management Practices (BMPs) to reduce pollutant runoff during municipal operations. These procedures are required to be developed as a condition of the City's MS4 General Permit (MS4 Permit), which has the purpose of reducing pollutant runoff in stormwater to the Maximum Extent Practicable (MEP). This manual will address municipal operations conducted inside and outside of municipal facilities. The City's MS4 permit is issued through the Virginia Pollutant Discharge Elimination System (VPDES) administered by the Virginia Department of Environmental Quality (DEQ) and overseen by the United States Environmental Protection Agency (EPA).

The City's Good Housekeeping and Pollution Prevention Program is designed to address the following areas of concern:

- Illicit discharge prevention, detection, and reporting
- Proper waste disposal
- Proper Vehicle washing procedures
- BMPs for water from utility construction or maintenance activities
- Proper bulk storage protocols (salt, soil, etc)
- Vehicle Fueling
- Vehicle maintenance
- Pesticide and Fertilizer application
- Staff Training

Site Specific Stormwater Pollution Prevention Plans (SWPPPs) and Nutrient Management Plans (NMPs) will be developed for high risk sites within the City's regulated MS4 area.

An MS4 is a conveyance or system of conveyances that is:

- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.;
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.);
- Not a combined sewer; and
- Not part of a Publicly Owned Treatment Works (sewage treatment plant).

http://water.epa.gov/polwaste/npdes/stormwater/Municipal-Separate-Storm-Sewer-System-MS4-Main-Page.cfm

Illicit Discharges

An illicit discharge is anything other than stormwater, groundwater, or other treated or clean waters that enter the stormwater system or natural streams, channels, or estuaries. Illicit discharges do not have to be intentional; they can occur due to negligence or a lack of understanding of what is and is not considered a pollutant. “When in doubt keep it out” of the stormwater system and receiving channels.

Every effort should be taken to prevent wastewater discharges from entering the MS4 or natural channels, from any activity. Wastewater discharges that cannot be prevented must have authorization under a separate VPDES permit.

Preventing Illicit Discharges

Public Works Stormwater Division staff conducts biennial trainings for operations and maintenance staff across all departments that covers illicit discharges, and is available to answer questions that may arise at any time. The main function of preventing illicit discharges is recognizing and understanding the nature of an Illicit Discharge. Other Sections of this document go into detail for different types of operations and tasks and describe what actions and measures can be taken to reduce the chance of pollutants entering the stormwater system and receiving channels.

Examples of Illicit Discharges:

- Petroleum products
- Automotive fluids
- Tires and automotive parts
- Cooking oil
- Untreated sewage
- Detergent or wash water
- Leaf litter or yard waste
- Industrial waste
- Shop floor drains
- Sewage straight pipes and cross connections
- Improperly applied pesticides and herbicides

Reporting Illicit Discharges

For any major spill or illicit discharge that has the potential to cause injury, death, or substantial property damage call 911 immediately. If the spill does not pose an immediate threat to life or property, take immediate action to contain and clean the spill. Consult the Material Safety Data Sheet (MSDS) for the substance spilled for emergency procedures, protective equipment, and proper methods of containment and cleanup. If necessary call an environmental services contractor for spill cleanup.

Spills and discharges to the stormwater system or environment should be reported to Public Works Engineering Stormwater Staff, whether caused by City staff or a third party. If an illicit discharge or evidence of an illicit discharge is noticed, contact Public Works Stormwater staff so than an investigation can be conducted.

Calls to Public Works Engineering, Stormwater Division regarding illicit discharges should be directed to:

- Environmental Specialist 514-7627
- Environmental Technicians 514-7073 or 514-7677
- Environmental Programs Manager 514-7678
- Stormwater Engineer 514-7675
- Public Works Engineering front desk at 514-7725.

Emails regarding illicit discharges can be sent to idischarge@suffolkva.us.

Proper Waste Disposal

Wastes can be in many different forms, and proper disposal varies by the type of wastes. Many wastes cannot be accepted by municipal landfills or be treated at publicly owned treatment works, and must be disposed of through a separate waste management system.

General Best Management Practices for Waste Disposal :

- Ensure that regular, non-hazardous garbage makes it into a trash can both on and off jobsites and within operations yards.
- Dumpsters should be placed on a concrete pad and should always be kept covered.
- Hazardous wastes should be disposed of in accordance with the Resource Conservation and Recovery Act (RCRA).
    - Refer to 40 CFR Part 261- IDENTIFICATION AND LISTING OF HAZARDOUS WASTE
- Landscape wastes should be carried away for proper disposal. Dumping of grass clippings or other landscape wastes in storm drains is not acceptable.
- AA, AAA, C, D, and 9V alkaline batteries are collected for recycling at several sites throughout the City by the Suffolk Clean Community Commission. Locations can be found at http://www.suffolkva.us/pub_wks/litter-control/ or by calling the Litter Control Coordinator at 514-7604.

Vehicle Washing

Whenever possible, vehicles should be washed on a designated wash rack with wash waters directed to a sanitary sewer. Wash racks directed to sanitary sewer are located at Refuse on Pine St and Fleet Maintenance on Forest Glenn Rd. Phosphate free detergents should be used for all vehicle washing where just water proves insufficient. If a vehicle cannot be washed on a designated wash rack it should be washed on grass or gravel so that wash water has a chance to infiltrate instead of running directly off, and the use of soap avoided. Wash racks and pads should be swept periodically to prevent sediment runoff, and the clogging of wash rack drains. Any materials and sediments left on wash racks after washing should be swept or vacuumed up.

Water Discharges from Utility Construction and Maintenance

Construction and maintenance operations on utility systems have the potential to pollute sediments, nutrients, chemicals, or pathogens. Construction activities should follow site specific SWPPPs. Follow the Virginia Erosion and Sediment Control Manual for operations that have the potential to contribute sediments to the stormwater system or receiving channels.

General Best Management Practices

- When dewatering an open trench or hole; filter water, such as through a filter bag, to remove sediments before discharging.
- De-chlorinate water flushed from water supply lines before discharging.
- Sanitary sewer overflows (SSOs) should be contained and the affected area cleaned immediately and to the maximum extent practicable.
- Cleaning of stormwater pipes and infrastructure should be done in such a way that flushed sediments and debris are captured and not discharged to the stormwater system.

Bulk Material Storage

Materials that will be stored long term such as soil, mulch, sand, and salt that have the potential to erode from where they are stored should be contained and/or covered. Because of the large amounts of these materials that are usually stored, robust measures are required to reduce chances of materials entering the stormwater system or receiving channels.

Best Management Practices for Bulk Material Storage:

- Salt used in deicing operations should be stored in salt barns until ready for use. Salt stored outside should be kept securely covered with tarps in serviceable condition.
- Abrasive mix left over after a storm event should be stored in the salt barn if there is room, otherwise, piles should be securely covered with a tarp in serviceable condition.
- Other erodible materials that are stored outdoors long term should be kept inside containment.
- Containment areas should be placed so that they are on a slight slope with the access opening at the uphill end.
- Containment structures should be a reasonable height so that they are not overtopped by the stored materials.
- Care should also be taken when dumping materials so they do not spill over the back or sides of containment walls. Any materials spilled outside of containment areas should immediately be cleaned up and placed inside containment.
- Materials such as gravel or stone that are not at risk of eroding do not need to be contained, but should be stored in such a way that there is no risk of blocking drainage.

Vehicle Fueling

Vehicle fueling happens at several locations in the City. Because of the large number of employees using fueling stations, it is important that the following Best Management Practices be posted to ensure safe and responsible vehicle fueling.

Best Management Practices for Vehicle Fueling:

- Conduct all vehicle fueling at designated fueling stations.
- Use only containers designed for the fuel used.
- Use care when filling vehicles or containers to avoid dripping or spilling.
- Never “top off”; that is, never fill a container past its intended capacity.
- Never leave nozzle unattended while fueling.

Best Management Practices for Fuel Spills:

- Clean affected area thoroughly and promptly.
- Divert away from storm drains, ditches, or receiving waters if necessary.
- Clean up all spills immediately with rags or other absorbent material and dispose of properly.
- Fueling pads should always be swept or vacuumed and never hosed down.

Vehicle Maintenance

Vehicle maintenance often involves working with and handling petroleum products and other toxic materials that should not be allowed to enter the stormwater system or receiving waters.

Best Management Practices for Vehicle Maintenance:

- All vehicle maintenance should be conducted indoors or under cover, with the exception of emergency repairs.
- Leaking vehicles should be repaired immediately. Notify someone at Fleet Maintenance when a leaking vehicle is dropped off for repairs.
- Leaking vehicles or equipment should be kept indoors or under cover unless drip pans are used to catch any leaking fluids.
- Spills both indoors and out should be cleaned promptly and thoroughly.
- Oil and gas filters should be punctured or crushed and allowed to drain for at least 24 hours.
- Capture all drained fluids and dispose of in the appropriate manner.
- Store vehicle batteries in secondary containment and indoors or under cover.
- Scrap metal and parts dumpster should be kept on a concrete pad and under cover.

Liquid and Drum Storage

A large variety of liquids are stored in the city for a variety of reasons. Chemicals should be clearly labeled and stored in such a way that they do not pose a risk of contaminating stormwater systems or receiving waters.

Best Management Practices for Liquid and Drum Storage:

- Keep in original container.
- If container is damaged, immediately move to new container that is clearly marked as to its contents.
- Empty containers should be clearly marked “Empty” and promptly disposed of in the appropriate manner.
- Containers or drums with waste chemicals/liquids/materials should be clearly marked to avoid mixing of wastes.
- Drums should be stored on secondary containment and indoors or under cover.

Pesticide and Herbicide Application

Due to their high mobility, pesticide and herbicide chemicals pose a significant threat to water quality if not applied in an appropriate manner. While it is best to only use chemicals after natural approaches fail, this section provides basic guidelines and practices that will reduce the chances of pesticides and herbicides from being washed into the stormwater system and receiving channels.

Pesticide and Herbicide Application Best Management Practices:

- Use only application equipment that is in serviceable condition.
- Ensure all mixing, storage, and holding tanks are free of leaks.
- Follow manufacturer’s recommendations for application rates.
- Assess weather conditions to ensure application consistent with product label requirements.
- Application of pesticides and herbicides on water bodies is regulated under 9 VAC 25-800 and requires a separate VPDES permit.
- Store containers indoors or under cover.

Fertilizer Application

Fertilizers, like pesticides and herbicides, are highly mobile. Nutrients, especially phosphorus and nitrogen, are pollutants of primary concern to water quality in the Chesapeake Bay and its tributaries. Due to their attributes, these chemicals should be applied with care and concern.

Fertilizer Application Best Management Practices:

- Test soil conditions before fertilizing to determine if nutrient application is necessary, or to determine the appropriate amount of nutrients to apply.

- Do not apply immediately before rain events.
- Avoid applying within 5 feet of pavement, 25 feet of storm drain inlets, and 50 feet of water bodies.
- Store containers indoors or under cover.

Training

In accordance with the City's MS4 Program plan, Stormwater Division staff conducts biennial training sessions for all maintenance and operations staff in Public Works, Public Utilities, and Parks and Recreation. The work these staff members do both in and outside of maintenance yards has the potential to pollute, and the training is designed to make them aware of their role in eliminating non-stormwater discharges into the City's stormwater system as well as surface and ground waters.

The training includes a brief summary of the MS4 program and an explanation of municipal separate storm sewer systems. Staff will receive training on: identifying, responding to, and reporting an illicit discharge; how to eliminate non-stormwater discharges from municipal facilities; waste disposal procedures; proper vehicle washing procedures; leak and spill response; drum storage; salt and deicer storage; and soil stockpiling procedures. In addition to focused training to operations personnel, Stormwater Division staff attends events targeted to all City employees such as the annual Health and Wellness Fair to educate employees on environmental issues and also to raise awareness of non stormwater discharge detection and reporting.

Requests for additional training or refreshers can be made to the Stormwater Division of Public Works Engineering.