

POLLUTION PREVENTION/GOOD HOUSEKEEPING

FOR MUNICIPAL OPERATIONS:

STANDARD OPERATING PROCEDURES



WNY
Stormwater
Coalition



**Erie County Department of Environment and Planning
Division of Environmental Compliance Services**

POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS:

STANDARD OPERATING PROCEDURES

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INTRODUCTION

This group of (17) Pollution Prevention/Good Housekeeping Standard Operating Procedures that relate to municipal operations and their potential effects on stormwater have been developed and assembled by a group of municipal officials that have a wealth of experience pertaining to operations and maintenance within municipalities. This information, which has been formulated as guidance material for implementation of the Stormwater Phase II Municipal Separate Storm Sewer System Permit, **has not** been designed to be comprehensive in all aspects of each topic. Municipalities should adapt this information as it pertains to their own unique municipal operations.

Standard Operating Procedures for:

Landscaping and Lawn Care

Purpose: to prevent contamination of stormwater by minimizing contact with fertilizer and by using innovative landscaping techniques

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| 1. | Plant vegetation that needs minimal amounts of care (i.e. water, fertilizer) | Suggested frequency – at time of initial landscaping |
| 2. | Implement landscaping techniques that minimize water usage | Suggested frequency – at time of initial landscaping |
| 3. | Water just enough to supplement rainfall – use drip irrigation techniques | Suggested frequency - always |
| 4. | Minimize fertilizer application, use slow release fertilizers | Suggested frequency – always |
| 5. | Mow with blades set high, leave grass clippings on lawn | Suggested frequency – always |
| 6. | Use compost or natural (organic) fertilizers | Suggested frequency - always |

Standard Operating Procedures for:

Spill Prevention

Purpose: to prevent contamination of stormwater by using proper washing techniques, proper washing locations, and proper disposal of wash water

1. Monitor equipment storage areas, materials storage areas, and waste storage areas, checking for: fluid leaks, uncovered containers, and deteriorating labels and/or containers, and correct any problems that are noted. Suggested frequency- daily
2. Inspect secondary containment systems (i.e. oil, fuel storage tanks) as necessary, and empty them as necessary. Suggested frequency- monthly
3. Monitor oil/water separators and their downstream discharges. An oily discharge indicates that the unit is either not functioning properly or needs to be “pumped out”. Suggested frequency- monthly
4. Install oil absorbent materials in floor drains and/or catch basins, and inspect, remove/replace as appropriate. Suggested frequency- monthly
5. Monitor floor drains and storm receiver inlets and outlets for excessive amounts of contaminants, and clean out as necessary. Suggested frequency - monthly
6. Remove spilled salt from salt loading area, and use or store Suggested frequency - daily
7. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Spill Response

Purpose: to prevent contamination of stormwater by using proper washing techniques, proper washing locations, and proper disposal of wash water

1. *Municipal* personnel will close (or limit traffic flow around) the affected portion of any municipal roadway or right-of-way to the extent necessary.*
2. *Municipal personnel are to provide written information (Attachment #1) to the spiller of the material which informs the "spiller" of legal responsibilities to report the spill to the New York State Department of Environmental Conservation (NYSDEC) and to clean up the spill.*
3. *Municipal personnel are to assist by providing any available communications equipment (phone, portable radio, etc.) to the "spiller" for notification to his supervisor, the NYSDEC (1-800-457-7362), and/or the cleanup contractor of the occurrence of the spill.*
4. *No municipal personnel are to engage in spill abatement, remediation, or any other spill cleanup activities.*
5. *No municipal personnel are to allow contaminated debris/material to be staged or stored at any municipal facility.*
6. *A Spill Information Form (Attachment #3) is to be completed by municipal personnel that respond to the spill.*
7. *A copy of the completed Spill Information Form is to be filed and maintained at a central repository at a dedicated municipal location within five working days of the incident.*

(* The word "municipal" in 1-5 above should be replaced by the name of your municipality)

ATTACHMENT #1

NOTIFICATION OF SPILLS SHOULD BE MADE WITHIN 2 HOURS OF THE OCCURRENCE

OF THE SPILL TO:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

716-851-7220 (Region 9 office)

OR

1-800-457-7362 (24 HOURS)

ATTACHMENT #2

SPILL INFORMATION FORM

<u>Spiller</u>		<u>Spill Logistics:</u>
Company _____	Street _____	Location: _____
City _____	State/Zip _____	Street: _____
Municipality: _____	Contact _____	Phone _____
Vehicle License# _____	Date/Time of Spill _____	

Additional Information: _____

Cause of Spill: _____

Product Spilled: _____ Quantity: _____

Notification to (Your) Municipality (date/time): _____ Person Notified: _____

Cleanup Contractor: _____ Phone: _____

Resource Affected? (Yes/No)

Land: _____

MS4: (identify section/outfall) _____

Surface Water: (name of waterbody) _____

Standard Operating Procedures for:

Pest Control

Purpose: to prevent contamination of stormwater by pesticides which can be toxic to aquatic life and may contaminate receiving waters

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| 1. | Purchase only enough pesticides for 1 year, and store properly | Suggested frequency – always |
| 2. | Adopt Integrated Pesticide Management techniques | Suggested frequency – always |
| 3. | Adopt alternatives to pesticides options | Suggested frequency - always |
| 4. | Eliminate food, water, harborage for pests by implementing routine inspections | Suggested frequency – once/week |
| 5. | Inspect pest traps regularly, remove and properly dispose of dead pests | Suggested frequency – once/week |
| 6. | Minimize pesticide application, use non toxic/lowest toxicity pesticides - (glue boards) | Suggested frequency – as warranted |
| 7. | Do not apply pesticides immediately before/during rain events | Suggested frequency - always |

Standard Operating Procedures for:

Pet Waste Collection

Purpose: to prevent contamination of stormwater via contact with pet related wastes

1. Check for pet waste (i.e. feces, food wastes) each day; once at the beginning of the work day, once at the end of the work day.
Suggested frequency – 2x per day
2. Remove all pet waste, and dispose of properly. Preferred method of disposal is into a toilet for disposal at either a municipal wastewater treatment plant or a septic system.
Suggested frequency – 2x/day
3. Wash the affected areas with a disinfectant soap and hot water, and rinse to a sanitary sewer (if available) or to a vegetated area.
Suggested frequency – 2x/day
4. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Septic System Management

Purpose: to prevent contamination of stormwater that may contact septic system effluents

1. Physically mark the locations of each of the appurtenances that make up the system - septic tank/lid, distribution lines, distribution box, absorption field or sand filter, chlorination tank, and outlet. Then, make a site sketch of the system, and file that document
Suggested frequency – at time of construction/replacement
2. To prevent damage, never allow heavy equipment to travel on top of the system
3. Prevent materials that are not readily decomposed (i.e. cigarette butts, plastic items, trash) from entering the system
Suggested frequency – continuous
4. Minimize solids loading by avoiding the use of a garbage disposal, and minimize hydraulic loading by “spreading out” the processes that use water
Suggested frequency – continuous
5. Maintain vegetation (optimally, grass) that grows on the system by mowing regularly. Remove all woody vegetative growth.
Suggested frequency – as needed
6. Inspect the system, looking for evidence of problems, such as sewage odors, backup of wastewater in sewer lines or the distribution box, “ponding” of wastewater on the ground’s surface at the system’s components
Suggested frequency- monthly
7. Pump out the septic tank as needed
Suggested frequency– once/year
8. Maintain records of inspections, pump outs. Store ontractor information where it is readily available.
Suggested frequency - continuous
9. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Vehicle and Equipment Maintenance

Purpose: to prevent contamination of stormwater by using proper maintenance techniques, proper maintenance locations, and retrofitting infrastructure

1. Conduct maintenance work indoors – dedicate specific vehicle bays, seal floor drain systems
Suggested frequency – at time of construction/replacement
2. If work is performed outside, protect stormwater drainage conveyances from spills
Suggested frequency – continuous
3. Clean up spilled materials immediately, using dry methods (absorbents)
Suggested frequency – continuous
4. Install oil/water separators where necessary
Suggested frequency – at time of construction
5. Rinse grass from lawn care equipment over permeable, vegetated areas
Suggested frequency – continuous
6. Never leave vehicles/equipment unattended while refueling
Suggested frequency - continuous
7. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Vehicle and Equipment Washing

Purpose: to prevent contamination of stormwater by using proper washing techniques, proper washing locations, and proper disposal of wash water

1. Designate a specific vehicle washing bay/facility – the wastewater from the floor drain should flow into an oil/water separator – the treated wastewater should flow to a municipal sanitary sewer line, if possible. If a sanitary sewer is not available, a wastewater permit must be obtained for the floor drain discharges.
Suggested frequency – at time of construction/modification
2. Close unneeded floor drains
Suggested frequency – at time of construction/modification
3. Wash vehicles indoors, using only water for washing – DO NOT USE DETERGENTS, as they emulsify oils thereby making the oil/water separator ineffective
Suggested frequency – continuous
4. Equip hoses with automatic shutoff devices and spray nozzles
Suggested frequency – continuous
5. Inspect oil/water separators and floor drain systems periodically to determine maintenance needs
Suggested frequency– once/year
Suggested frequency – continuous
6. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Roadway and Bridge Maintenance

Purpose: to prevent contamination of stormwater as it flows over debris that is deposited on road infrastructure and bridges

Roadway Maintenance

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| 1. | Pave only in dry weather | Suggested frequency – always |
| 2. | Cover manholes and catch basins prior to paving, patching, etc. | Suggested frequency – always |
| 3. | Clean all fluid leaks immediately | Suggested frequency - always |
| 4. | Maintain roadside vegetation – restrict pesticide use | Suggested frequency – whenever possible |
| 5. | Sweep/vacuum roadways and shoulders to remove debris, particulate matter | Suggested frequency – whenever possible |

Bridge Maintenance

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| 1. | Install catch basins instead of scuppers | Suggested frequency – at time of construction |
| 2. | Direct runoff from bridge scuppers/catch basins to vegetated areas | Suggested frequency – at time of construction |
| 3. | Remove debris from bridge scuppers/catch basins routinely | Suggested frequency - always |
| 4. | Sweep bridge deck and structure prior to washing | Suggested frequency - always |
| 5. | Use tarps and vacuums during sandblasting/painting activities | Suggested frequency - always |
| 6. | If bird nests are occupied (includes eggs & chicks) do not perform maintenance | Suggested frequency - always |
| 7. | If flaking paint is present, do not wash | Suggested frequency - always |

Standard Operating Procedures for:

Alternative Discharge Options for Chlorinated Water

Purpose: to prevent contamination of stormwater that may come into contact with pool water or with treated waters from municipal systems

1. For each source of chlorinated water which will be discharged, determine whether (or not) a sanitary sewer system is available for that discharge.
Suggested frequency – at time of construction
2. Prior to discharge, allow disinfectant in the pool to dissipate, or dechlorinate. The disinfectant will break down more quickly in sunny conditions. Check the residual with the proper test kit –the target residual is 0.2 ppm or less
Suggested frequency – as needed
3. If a sanitary sewer is available for discharge, contact the sewer authority/wastewater treatment plant personnel and obtain their guidelines for this activity.
Suggested frequency – as needed
4. If no sanitary sewer is available, discharge the water at a slow rate (i.e. using a siphon hose) to a vegetated area so that it can be filtered and absorbed, not to a surface water, storm sewer, or ditch where it can potentially harm aquatic life.
Suggested frequency - as needed
5. Discharge during dry weather conditions only.
6. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Hazardous and Waste Materials Management

Purpose: to prevent contamination of stormwater by properly storing, handling, and disposing of hazardous and waste materials

1. Store all materials/wastes in closed, labeled containers – if outside storage is necessary, the storage area should be sheltered from the weather
Suggested frequency – continuous
2. Designate storage areas away from floor drains (if inside) and storm receivers (if outside) Suggested frequency – continuous
3. Install a pretreatment system (oil/water separator) where a potential exists for petroleum products to enter floor drains. Eliminate floor drains if possible
Suggested frequency –at time of construction
4. Reduce stocks of materials where viable - use “first in/first out” management techniques Suggested frequency – as needed
5. Use least toxic materials Suggested frequency- continuous
6. Install secondary containment devices where appropriate Suggested frequency– at time of construction
7. Recycle/dispose of materials properly Suggested frequency – continuous
8. Do not mix dissimilar wastes in the same containers Suggested frequency - continuous
9. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Operational By Products/Wastes

Purpose: to prevent contamination of stormwater by preventing “illegal” disposal, and by properly storing, handling, and disposing of facility generated and wastes

FOR FACILITY GENERATED WASTES:

1. Develop a list of wastes, with associated procedures for handling/storage/recycling/disposal, and provide to staff. Instruct all staff to adhere to this information, and to inform the facility manager if new wastes are generated. Suggested frequency – initially, with annual reviews/updates
2. Secure the facility to prevent access (fence/lock gates) Suggested frequency – at close of business

FOR MUNICIPAL AREAS THAT ARE SUSCEPTIBLE TO ILLEGAL DUMPING:

1. Post/maintain “NO DUMPING” signs, erect barriers to prevent access, illuminate area Suggested frequency – as needed
2. Patrol areas Suggested frequency – as needed
3. Maintain areas/remove illegally dumped trash/debris Suggested frequency – as needed
4. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Catch Basin and Storm Drain System Cleaning

Purpose: to prevent contamination of stormwater via contact with debris which has been deposited in storm drain systems by performing periodic maintenance

Catch basins

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| 1. | Identify catch basins that need frequent maintenance, and prioritize | Suggested frequency – always |
| 2. | During cleaning, identify the need for repair of structure (also pertains to manholes, piping) | Suggested frequency - always |
| 3. | Clean catch basins when debris has filled it 1/3 of the way to the outlet | Suggested frequency – always |
| 4. | Inspect/determine the need for cleaning after storm events | Suggested frequency - always |
| 5. | Coordinate catch basin cleaning with related street sweeping events | Suggested frequency – always |

Ditches

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| 1. | When cleaning, remove obstacles/debris | Suggested frequency - always |
| 2. | Cut/remove vegetation (as opposed to ditch scraping) to allow capture of sediment | Suggested frequency – whenever possible |
| 3. | ID excessive siltation in ditch - may indicate the need to re-grade the ditch | Suggested frequency - always |
| 4. | During ditch scraping, maintain vegetation (downstream in ditch) to capture sediment | Suggested frequency – always |

Standard Operating Procedures for:

Street Cleaning and Maintenance

Purpose: to prevent contamination of stormwater as it comes into contact with debris that has been deposited on roadways

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| 1. | Consider shouldered roads instead of curbed roads | Suggested frequency – at time of construction |
| 2. | Coordinate activity with catch basin cleaning | Suggested frequency – always |
| 3. | Prioritize street cleaning, perform maintenance routinely | Suggested frequency – always |
| 4. | Maintain roadside vegetation, re-seed as necessary | Suggested frequency – whenever possible |
| 5. | Maintain equipment – address fluid leaks immediately | Suggested frequency – at scheduled times |
| 5. | Cover catch basins/storm inlets prior to street maintenance | Suggested frequency - always |
| 6. | Collect leaves (Autumn) | Suggested frequency – as warranted |
| 7. | Sweep sand/salt residues (Spring) | Suggested frequency – as warranted |

Standard Operating Procedures for:

Road Salt Storage and Application

Purpose: to prevent contamination of stormwater by using proper storage techniques, and improving application techniques of deicing materials

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| 1. | Store road salt, road salt/sand mixtures in properly sized, covered structure | Suggested frequency – at time of construction |
| 2. | Order/request salt delivery prior to the onset of winter weather to enable immediate storage (i.e. in salt barn, under tarp) to prevent runoff | Suggested frequency – at time of purchase |
| 3. | Unload salt deliveries directly into barn, or move inside immediately | Suggested frequency each delivery |
| 4. | Store salt on highest ground possible | Suggested frequency – continuous |
| 5. | Cover salt loading area or “build into” storage shed | Suggested frequency – at time of construction |
| 6. | Control spreading speeds, use a wetting agent to minimize “bounce” | Suggested frequency- as needed |
| 7. | Control spread patterns to concentrate material where it is most effective | Suggested frequency – continuous |
| 8. | Inspect salt storage area, salt loading area to ensure that salt is not exposed to weather | Suggested frequency– once/day |
| 9. | Minimize salt usage by calibrating salt application equipment periodically | Suggested frequency - weekly |
| 10. | Minimize salt spillage by not exceeding capacities of equipment (i.e. front end loader, truck bed) during loading operations | Suggested frequency – always |
| 11. | Always plow when de-icing roads | Suggested frequency - continuous |
| 12. | Reference/use Chemical Application Rate Charts | Suggested frequency – continuous |
| 13. | Consider alternative treatments (plow only, erect snow fence) that do not require the application of materials | Suggested frequency – as applicable |
| 14. | Document any/all inspection activities on the proper forms | Suggested frequency – continuous |

Standard Operating Procedures for:

Road Kill Composting Operations

Purpose: to prevent contamination of stormwater that may come into contact with compost piles

1. Identify the proper location for siting the compost pile/windrow. It should be on a well drained, impervious surface with minimal slope, at least 200 ft. from a receiving water body or wetland. Also, determine the types of materials/dead animals that will be composted.
Suggested frequency – prior to construction
2. Obtain the proper materials to construct the compost pile
Suggested frequency – prior to construction
3. Perform visual inspections regularly – check for odors, exposed carcasses, leachate, and utilize the inspection checklist
Suggested frequency – as needed
4. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:

Marina Operations

Purpose: to prevent contamination of stormwater via contact with debris, wastes, fuels, or other materials that are used at marinas

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| 1. | Site boat maintenance areas away from the water and from storm sewer receivers | Suggested frequency- at time of construction |
| 2. | Stabilize shoreline | Suggested frequency- at time of construction |
| 3. | Install vegetated buffer strips to minimize impervious areas | Suggested frequency- at time of construction |
| 4. | Inspect/maintain trash cans, pump out stations, fish cleaning stations | Suggested frequency- daily |
| 5. | Inspect fueling stations for leaks, spills other problems | Suggested frequency- daily |
| 6. | Check educational display – ensure that educational brochures are well stocked | Suggested frequency- daily |
| 7. | Document any/all inspection activities on the proper forms | |

Standard Operating Procedures for:

Construction and Land Disturbance

Purpose: to prevent contamination of stormwater runoff by preventing contact with barren soils and/or capturing silt and sediment prior to leaving the site

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| 1. | Install sediment barriers prior to land disturbance, and maintain | Suggested frequency – always |
| 2. | Maintain native vegetation, if possible | Suggested frequency – always |
| 3. | Install sediment control devices prior to land disturbance, and maintain | Suggested frequency – always |
| 4. | Stabilize site | Suggested frequency - always |
| 5. | Maximize opportunities for infiltration | Suggested frequency - always |
| 6. | Minimize compaction of soils, limit grading to small areas | Suggested frequency – whenever possible |
| 7. | Divert stormwater away from barren slopes | Suggested frequency – whenever possible |