

---

# **STANDARD OPERATING PROCEDURES (SOPs)**

**for**

## **Stormwater Pollution Prevention**

---

**Town of Derry, New Hampshire**


Revised June 2021

The Standard Operating Procedures (SOPs) for Stormwater Pollution Prevention are developed to meet requirements of USEPA's Municipal Separate Storm Sewer System General Permit (MS4GP) issued to the Town of Derry. The primary purpose of these SOPs is to protect surface water quality and stormwater runoff through the prevention or minimization of effects of Town operations on stormwater runoff.

## **Table of Contents**

### **SOPs for Stormwater Pollution Prevention**

- Waste Management
- Fueling
- Material Storage
- Vehicle and Equipment Cleaning
- Transporting Equipment
- Vehicle and Equipment Storage
- Parks and Open Space Maintenance
- Parking Lot Maintenance
- Chemical Application Pesticides, Herbicides, Fertilizers – Grounds Maintenance
- Landscape Maintenance – Material Storage
- Mowing and Trimming – Grounds Maintenance
- Catch Basin Cleaning
- Swale and Ditch Maintenance
- Street Sweeping
- Planned Excavation Repair/Replacement
- Unplanned Excavation Repair/Replacement
- Vehicle and Equipment Maintenance
- Outdoor Vehicle and Equipment Maintenance

	<b>S TANDARD O PERATING P ROCEDURE</b>	<b>SOP Name:</b> Waste Management
Town of Derry, NH	Stormwater Management	All Departments

## Description

All solid and liquid wastes must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste.

## Procedures

### General

- Provide cover, if feasible, for all waste storage areas including keeping dumpster lids closed.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- Follow the Spill Prevention and Response procedure to respond to and clean up any spills or leaks.
- Clean storage areas when necessary, using dry cleanup methods (except in areas where the wash water is necessary, and wastewaters will enter the sanitary sewer).
- Properly handle and dispose of all universal and hazardous wastes. See the Outdoor Material Storage procedure for more information.

## Standard Operating Procedure

### Solid Waste

- Solid waste that cannot be recycled should be disposed of in the trash dumpster.
- Recycle solid and universal wastes when possible, including the following:
  - Glass
  - Plastic containers
  - Cardboard and Paper
  - Yard Wastes (brush, leaves)
  - Scrap metal
  - Wood/Demolition debris
  - Used batteries (Automotive, rechargeable)
  - Fluorescent Light bulbs

## Liquid Waste

- Never place liquids in a dumpster.
- If unable to recycle, old latex paints should be given to transfer station personnel for proper handling and disposal, allow to air dry, or add hardener or other adsorbent material to solidify prior to disposal in the trash.
- Oil-based paints should be applied to cardboard, newspaper, or similar materials and allowed to dry prior to disposal in the trash.
- Recycle liquid wastes, including the following:
  - Used oil
- Hazardous liquid wastes, including the following:
  - Used antifreeze
  - Used solvents
  - Old gasoline
  - Unused/waste herbicides/pesticides

## Employee Training

- Train applicable employees who handle and/or dispose of wastes on this written procedure, proper storage and disposal, and how to avoid, respond to, and report spills.
- Periodically conduct refresher training on the SOP for applicable employees who handle and dispose of wastes.

## Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Fueling
Town of Derry, NH	Stormwater Management	All Departments

## FUELING

### Description

The Town's vehicle fleet, heavy equipment, and gas-powered tools are required to be fueled. The fueling process has the potential to contribute to stormwater pollution if not performed properly or if spills occur during the fueling process and are not immediately properly addressed. Fleet fueling occurs off-site at either the NH-DOT Patrol Shed or at commercial fueling stations in town. Heavy equipment including bucket loader, backhoes, bobcat, and sidewalk plow are primarily fueled at the on-site diesel fuel AST or using mobile refuelers.

#### 1. Preparation

- a. Train employees on proper fueling methods and spill cleanup techniques.
- b. Install a canopy or roof over aboveground storage tanks and fuel transfer areas, if feasible.
- c. Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on mobile fueling vehicles and shall be disposed of properly after use.

#### 2. Process

- a. Shut off the engine.
- b. Ensure that the fuel is the proper type of fuel for the vehicle.
- c. Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut off to prevent overfill.
- d. Fuel vehicle carefully to minimize drips to the ground.
- e. Fuel tanks shall not be 'topped off'.
- f. Mobile fueling shall be minimized. Whenever practical, vehicles and equipment shall be transported to the designated fueling location. It is understood mobile refueling is necessary for economic and logistical reasons.
- g. When fueling small equipment from portable containers, fuel in an area away from storm drains and water bodies.

#### 3. Clean Up

- a. Immediately clean up spills using dry absorbent (e.g., Speedy-dry, kitty litter, sawdust, etc.). Sweep up absorbent material and properly dispose of contaminated clean up materials.
- b. Large spills shall be contained as best as possible, and a cleanup contractor should be notified ASAP.

#### 4. Documentation

- a. Comply with storage tank records and monitoring requirements.
- b. Document training of employees.

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Material Storage
Town of Derry, NH	Stormwater Management	All Departments

## Description

The responsible management of potentially hazardous materials (automotive products, fertilizers, pesticides, paints, chemicals) and inert construction or other materials at a Town facility can significantly reduce polluted stormwater runoff and groundwater contamination. All materials should be handled properly including unloading, use, storage, and disposal. Proper management of materials can also reduce the likelihood of accidental spills or releases.

## Procedures

### General

- Establish material storage and inventory controls to minimize the quantity of materials used and stored.
- Periodically inspect material storage areas to ensure that all materials are being stored properly when not in use.
- Clean the material storage area when necessary, using dry cleanup methods.
- Properly dispose of unused or waste materials.
- Store materials in a manner that reduces exposure to precipitation and the potential for transport in stormwater flows (Run-on and run-off).

### Materials Stored in Containers

- Whenever possible, containerize and cover stored materials to prevent exposure to precipitation. Secondary containment may be required.
- Store containers in a location where they will not be accidentally damaged by equipment or vehicles.
- Provide tight-fitting lids for all containers.

### Standard Operating Procedure

- Inspect storage containers regularly for signs of leaking or deterioration.
- Replace or repair leaking storage containers.
- Use care to avoid spills when transferring materials from one container to another.
- Use powered equipment or get assistance when moving materials to and from a storage area. Handle containers appropriately and get help if needed. Use care to prevent punctures in the containers from equipment.
- Follow the Spill Prevention and Response procedure to respond to and clean up any spills or leaks.

### Loose Materials

- Consolidate loose material (gravel, mulch, etc.) and berm where needed to prevent run-on of stormwater or to protect materials from being washed away by stormwater.

- Follow the Salt Storage procedure for piles of salt.
- Large inert materials such as materials for storm drain, water, and sewer projects including piping, hydrants, and concrete structures can be stored outside without a protective covering. These materials do not impact stormwater quality.

### **Hazardous Materials**

- Identify all hazardous materials stored at the facility.
- Maintain a Material Safety Data Sheet (MSDS) for each hazardous chemical.
- All containers must be labelled with the name of the contents.
- All containers used to collect, and store waste hazardous material must be labelled with the accumulation start date.
- Provide special handling, storage (flammable storage cabinets, secondary containment pallets), and disposal for all hazardous materials.

### **Employee Training**

- Train applicable employees on this written procedure. Information on how to respond to spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform outdoor material storage activities.

### **Records**

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.
- Facility inspections records.
- MSDSs.
- Packing lists, purchasing records, inventory records.

	<p style="text-align: center;"><b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE</p>	<p style="text-align: center;"><b>SOP Name:</b> Vehicle and Equipment Cleaning</p>
<p style="text-align: center;">Town of Derry, NH</p>	<p style="text-align: center;">Stormwater Management</p>	<p style="text-align: center;">All Departments</p>

## VEHICLE AND EQUIPMENT WASHING

### Description

Vehicles and equipment encounter and accumulate materials deemed pollutants including petroleum products and sediment when washed off. The proper management of these potential pollutants is necessary to prevent them from contributing to stormwater pollution.

#### 1. Preparation

- a. Provide wash areas for small vehicles and equipment inside the facilities that have a drain system which is attached to either the sanitary sewer system or a holding tank.
- b. No equipment and/or vehicle washing will be done where the drain system is connected to the storm sewer system or outside where runoff may enter storm drains, surface water or wetlands.

#### 2. Process

- a. Use biodegradable soap when washing vehicles outside.
- b. Use hoses with automatic shut off nozzles to minimize water usage.
- c. Never wash vehicles over a storm drain or allow wash water to drain to a storm drain or surface water.

#### 3. Clean Up

- a. Sweep wash areas after every washing to collect solids and to prevent or minimize solids from washing down the floor drain system.
- b. Clean solids from the floor drains on an as needed basis.



	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Transporting Equipment
Town of Derry, NH	Stormwater Management	All Departments

## TRANSPORTING EQUIPMENT

### Description

The Town is required to transport equipment to job sites. Often times this equipment and associated materials have the potential to contribute to stormwater pollution if not properly secured during transport. Materials transported can include fuel containers, road marking paint, or fertilizer. Properly securing these materials during transport minimizes the risk of spills

#### 1. Preparation

- a. Determine equipment needed for transport and method (trailer, truck bed) needed to transport equipment.
- b. Conduct pre- trip inspection of equipment, checking for leaks before transport.

#### 2. Process


- a. Load and secure equipment on trailer or truck
- b. Load and secure fuel containers for equipment usage ensuring all lids and covers are secured tight.

#### 3. Clean-up

- a. Off load equipment
- b. Store equipment and trailer in proper location
- c. Conduct post-trip inspection of equipment
- d. Wash equipment, if needed, according to the SOP for Cleaning Equipment

#### 4. Documentation

- a. NA

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Vehicle and Equipment Storage
Town of Derry, NH	Stormwater Management	All Departments

## VEHICLE AND EQUIPMENT STORAGE

### Description

The Town's vehicle fleet, heavy equipment, gas-powered tools, and materials handling equipment can be sources of stormwater pollution if not stored properly or stored where they are exposed to precipitation. Vehicles and equipment with leaks or in need of repair should be properly stored and leaks addressed to minimize or eliminate pollutants entering stormwater.

#### 1. Preparation


- a. Inspect parking areas for stains/leaks on a regular basis.
- b. Provide drip pans or adsorbents for leaking vehicles.

#### 2. Process

- a. Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer system.
- b. When inside storage is not available, vehicles and equipment will be parked in the approved designated areas.
- c. Maintain vehicles to prevent leaks as much as possible.
- d. Address any known leaks or drips as soon as possible. When a leak is detected a drip pan will be placed under the leaking vehicle to collect the drip.
- e. The shop will provide a labeled location to empty and store drip pans.
- f. If any leaks are discovered, a drip pan will be used to collect the fluids and vehicle will be scheduled for repairs.
- g. Clean up all spills using dry methods.
- h. Never store leaking vehicles over or near a storm drain.

#### 3. Clean Up

- a. Any leaks that are spilled on the asphalt will be cleaned up with dry absorbent; the dry absorbent will be swept up and disposed of in the garbage.
- b. The paved surfaces around building will be swept periodically, weather permitting.

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Parks and Open Space Management
Town of Derry, NH	Stormwater Management	Parks and Recreation

## Description

Parks and open space maintenance activities involves the disposal of clippings from mowing, planting, weeding, trees, hedges and shrubs; raking of leaves; disposal of garbage and litter; spraying of pesticides, fertilizing; and the cleaning and upkeep of park restrooms, buildings, and tables. Refer to the Fertilizer, Pesticide, and Herbicide Application procedure for information on the application of landscape chemicals.

## Procedures

### General

- Inspect newly landscaped areas on a regular basis after installed until the appropriate timing of maintenance is established.
- Report and/or address damage to landscape areas or bare areas void of vegetation that may result in sediment being transported off site.
- Collect and dispose of sediment from walkways and parking areas.
- Collect and dispose of trash from landscaped areas.
- Control run-off to limit soil erosion; do not use plastic under mulch, bark or wood chips, only use permeable fabrics.
- Do not attempt to clean up any unidentified or possibly hazardous materials found on or around landscaped areas during maintenance; notify the supervisor immediately upon discovery of hazardous materials.
- Refer to the Fertilizer, Pesticide, and Herbicide Application procedure for information on the application of landscape chemicals.

## Standard Operating Procedure

### Mowing

- Remove paper, debris, and trash from the landscaped and surrounding areas and dispose of properly prior to mowing activities.
- Mulch-mow grasses whenever possible, do not allow any grass clippings to wash off into any drainage ways.
- Properly dispose of vegetation and other wastes after mowing, pulling weeds, and trimming.

### Irrigation

- Any obvious problems such as broken sprinkler heads, ponded water, and dry, un-watered areas need to be reported immediately.
- Only irrigate at a rate which can infiltrate into the soil, limit run-off from watering lawns, and landscaping.

### **Landscape Equipment**

- Brush off mowers and tractors over grassy areas. Leave clippings on grassy areas or dispose of with yardwaste or by composting. Do not hose off mowers over paved areas that drain to the storm drain system.
- Fuel all equipment following the Vehicle Fueling procedure.
- Maintain (including washing) all equipment by following the Heavy Equipment and Vehicle Maintenance procedure.

### **Potentially Hazardous Material**

- Unidentifiable materials: DO NOT HANDLE OBJECT – Call Supervisor.
- Used vehicle oil or batteries - Take to Recycling Facility.

### **Other Activities**

- All port-a-potties should be placed in flat, secure locations where they are less likely to be knocked over. All port-a-potties should be in a location that would retain any spillage opposed to washing into storm sewer or waterway.
- (Optional) Install pet waste stations with bags and trash receptors in locations where pet waste has shown to accumulate.

### **Employee Training**

- Train applicable employees who are involved with parks and open space maintenance activities on this written procedure. Information regarding proper storage practices and how to prevent and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who are involved with parks and open space maintenance activities.

### **Records**

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Parking Lot Maintenance
Town of Derry, NH	Stormwater Management	Streets and Sanitation

## PARKING LOT MAINTENANCE

### Description

Parking lots owned and maintained by the Town can accumulate sediment, salt, trash and vehicle fluids. These materials are pollutants that can contaminate stormwater, enter the town's storm drain system and enter surface water or wetlands. Routine seasonal sweeping of parking lots and proper handling of the materials reduces the amount of pollutants impacting stormwater.

#### 1. Preparation

- a. Conduct regular employee training to reinforce proper housekeeping.
- b. Restrict parking in areas to be swept prior to and during sweeping using regulations as necessary.
- c. Contract with an outside vendor for routine sweeping of municipal parking lots. Provide a location for dewatering, stockpiling, and disposing of sweepings.

#### 2. Process

- a. Sweep parking areas in accordance with established, contracted schedule, or as needed or directed.
- b. Hand sweep sections of gutter if soil and debris accumulate.
- c. Pick-up litter as required to keep parking areas clean and orderly.

#### 3. Clean-up

- a. Dispose of sweepings properly (appropriate solid waste facility).
- b. Street sweepers to be cleaned out in a manner as instructed by the manufacturer and in a location that swept materials cannot be introduced into a storm drain.
- c. Swept materials will not be stored in locations where storm water could transport fines into the storm drain system or directly to surface water or wetlands.

#### 4. Documentation

- a. Keep work orders to track swept parking areas and approximate quantities.

	<b>S TANDARD O PERATING P ROCEDURE</b>	<b>SOP Name:</b> Chemical Application (Pesticides, Herbicides and Fertilizers)
Town of Derry, NH	Stormwater Management	Grounds Maintenance

## CHEMICAL APPLICATION PESTICIDES, HERBICIDES, FERTILIZERS

### Description

Grounds maintenance requires the use of pesticides, herbicides, and fertilizers. These materials have the potential to be contributors to stormwater pollution if not properly used or stored. Proper use includes using only the type and quantities necessary as well as timing to avoid precipitation events that could wash these materials into storm drains or surface water.

### 1. Preparation

- a. Determine type of fertilizer is needed for the project: Use only non-phosphorus fertilizer for regular operations. Fertilizer with phosphorus should only be used when planting new seed.
- b. Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- c. Use pesticides only if there is an actual pest problem.
- d. Time and apply the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendation for best results ("Read the Label").
- e. Know the weather conditions. Do not use pesticides if rain is expected within a 24-hour period. Apply pesticides only when wind speeds are low (less than 5 mph).

### 2. Process

- a. Follow the manufacturer's recommendations for mixing, application, and disposal. ("Read the Label").
- b. Do not mix or prepare pesticides for application near storm drains, preferably mix inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.
- c. Employ techniques to minimize off-target application (e.g., =spray drift, over broadcasting.) of pesticides and fertilizers.

### 3. Clean-up

- a. Sweep or blow pavements or sidewalks where fertilizers or other solid chemicals have fallen, back onto grassy areas before applying irrigation water.
- b. Triple rinse pesticide and herbicide containers and use rinse water as product.
- c. Store all unused products indoors in their original containers indoors
- d. Dispose of unused or waste pesticide, herbicides, or fertilizer as hazardous waste.
- e. Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and their containers. ("Read the Label")

### 4. Documentation

- a. Keep copies of MSD sheets for all pesticides, fertilizers and other hazardous products used.
- b. Record fertilizing and pesticide application activities, including date, location/facility where applied, individual who did the application, and product used.

	<b>S TANDARD O PERATING P ROCEDURE</b>	<b>SOP Name:</b> Landscape Maintenance- Materials storage
Town of Derry, NH	Stormwater Management	Grounds Maintenance

### General Landscaping Maintenance

- a. Remove litter, debris, and trash from the landscaped and surrounding areas prior to mowing activities. Properly dispose of the materials in a designated receptacle.
- b. Protect catchbasins where applicable.
- c. During blowing operations take care not to blow clippings, dirt, sand, or debris into storm drains or stormwater conveyance structures.
- d. After mowing activities collect all clippings/trimming/waste and take to the designated area. Do not hose down outside areas.
- e. Five-day weather forecast is checked to avoid fertilizing before heavy rain or during a drought. Fertilizers applications are made during period of maximum plant uptake based on plant species.
- f. Whenever possible control soil erosion by seeding, sod, mats, mulching, terracing or other approved methods.
- g. Do not apply bark or mulch on top of plastic sheeting unless the area is enclosed. Bark or mulch on plastic is easily washed off by heavy rainfall.

### Landscaping Materials Storage

- a. All bagged materials (i.e., fertilizer, ice melt, etc.) must be stored indoors whenever possible. If they must be stored outdoors, place them under cover to prevent exposure to precipitation.
- b. All dry inert materials stored outside (sand, topsoil, mulch) should be placed where stormwater precipitation run-on and run-off cannot transport material to stormwater drain system or surface water or wetlands and covered to prevent materials from being carried with stormwater run-off.
  - i. When storing stockpiles of sand, salt, topsoil, mulch, and gravel, cover piles with a tarp. Tie or weigh down the tarp to prevent movement during wind events.
  - ii. Contain stormwater run-off from stockpiles using a barrier or berm if there is potential for stormwater to carry materials away.
- c. Place containers on paved or impervious surfaces and as far from (or at a lower elevation than) storm drain inlets and drainage ditches as possible.
- d. Inspect all containers stored outdoors regularly
- e. If a container is found to be leaking, either empty the contents into a leak-tight container or place entire leaking container inside of a larger leak-tight container. Clean up any spills or leaks promptly.

## Contractors

- a. Contracts should include Stormwater pollution prevention language (e.g. The contractor, including any associated subcontractors, shall use the correct controls to ensure that all activities do not cause stormwater pollution).
- b. Ensure that contractors implement proper Best Management Practices (BMPs) to prevent stormwater pollution and know whom to contact in case of spill.



	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Mowing and Trimming
Town of Derry, NH	Stormwater Management	Grounds Maintenance

## **MOWING AND TRIMMING**

### **1. Preparation**

- a. Review the overall process with all employees.
- b. Check the oil and fuel levels of the mowers and other equipment; fill if needed.

### **2. Process**

- c. Protect catch basins where applicable.
- d. Wear safety equipment as needed (eye, hand, and hearing protection).
- e. Mow and trim the lawn.
- f. Sweep or blow clippings to grass areas. Do not blow into catchbasins or surface waters.
- g. Remove inlet protection.

### **3. Clean-up**

- a. Mowers should be scraped and brushed off on site in grassed areas or at shop where dry spoils are dry swept and disposed of properly.
- b. Wash equipment in unpaved areas away from storm drains to allow infiltration or wash inside where floor drains capture wash water.
- c. Store all oil and fuel indoors in assigned flammable cabinet.

	<b>S TANDARD O PERATING P ROCEDURE</b>	<b>SOP Name:</b> Catch Basin Cleaning
Town of Derry, NH	Stormwater Management	Streets and Sanitation

**Purpose of SOPs:**

Procedures for the operation and maintenance of catchbasin cleaning equipment including vacuum trucks, frequency of catchbasin cleaning, disposal of debris, and recordkeeping to prevent pollution from entering the stormwater sewer systems.

**Coordination**

Superintendent of Operations contracts with outside vendor to do cleaning. Typically, 750 catchbasins are cleaned each year. The catchbasins selected for cleaning are based on location and frequency of required cleaning or each one. Some are cleaned annually while others are cleaned on a rotating basis. Town personnel accompanies contractor for traffic control and inspection.

**Cleaning**

**1. Preparation**

- a. Clean sediment and trash off grate.
- b. Do visual inspection on outside of grate.
- c. Make sure nothing needs to be replaced.
- d. Do inside visual inspection to see what needs to be cleaned.
- e. Measure and record depth to outlet pipe and average depth to sediment.

**2. Process**

- a. Clean using a high-powered vacuum truck to start sucking out standing water and sediment.
- b. Inspect catchbasin sump for integrity or required maintenance.
- c. After catch basin is clean and inspected, decant water from vacuum truck back into catchbasin.
- d. Move truck downstream of pipe to next catch basin.

**3. Clean-up**

- a. When vacuum truck is full of sediment take it to the designated location at Transfer Lane to dump all the sediment out of truck to dry.
- b. Cleanings not exhibiting signs of contamination may be screened to remove trash and debris and reused as fill for road shoulders and base material.

**4. Documentation**

- a. Record all information on a daily form including number of catch basins cleaned.
- b. Record the amount of waste collected for the day.
- c. Keep any notes or comments of any problems or required maintenance.

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Swale and Ditch Management
Town of Derry, NH	Stormwater Management	Streets and Sanitation

## SWALE AND DITCH MANAGEMENT

### 1. Preparation

- a. Monitor drainage swales and roadside ditches on a regular basis.
- b. Maintain access to swales and ditch channels wherever possible.
- c. Contact affected property owners and utility owners if issues arise or maintenance is required.

### 2. Process

- a. Identify areas requiring maintenance
- b. Determine what manpower or equipment will be required.
- c. Identify access and easements to area requiring maintenance.
- d. Determine method of maintenance that will be least damaging to the channel and adjacent properties or utilities and improving, if feasible, the pollutant reduction potential of the swale.

### 3. Clean-up

- a. Stabilize all disturbed soils.
- b. Remove tracked materials from paved surfaces near maintenance site, if applicable.
- c. Haul all debris or sediment removed from area to approved dumping site.

### 4. Documentation

- a. Keep log of actions performed including date and individuals involved.
- b. Record the amount of materials removed or imported.
- c. Keep any notes or comments of any problems.
- d. Use “before” and “after” photographs to document activities as applicable

	<b>S TANDARD O PERATING P ROCEDURE</b>	<b>SOP Name:</b> Street Sweeping
Town of Derry, NH	Stormwater Management	Streets and Sanitation

**Purpose of SOP:**

Procedures for the operation and maintenance of street sweepers, frequency of sweeping, disposal of debris, and recordkeeping to prevent pollution from entering the stormwater sewer systems.

The Town of Derry does not own street sweeping equipment. Each year the Town hires and approved contractor to conduct street sweeping. Contractor is required to properly maintain their own equipment.

**Operation and Maintenance of Equipment**

1. Vendors are contractually obligated to operate and maintain all sweepers and equipment according to the manufacturer’s recommended settings, standards, and procedures.
2. Sweeping operations will occur when weather conditions permit. Factors which may delay sweeping operations include temperatures below 32°F, wind, rain, snow, and frozen gutter lines.

**Schedule**

1. Street sweeping will begin when streets are primarily clear of snow and ice, usually late March or early April, after significant risk of later snowfall and freezing of the water from the street sweepers has passed. Street sweeping continues into the fall. Street sweeping occurs in early morning (3am) before roads become congested.
2. Priority roads and parking lots are identified based on urban compact, inspections, adjacent land use with pollutant loads and reduction potential, catch basin cleaning or inspection results, locations relative to impaired or TMDL waters.
  - a) Annual Cleaning - Approximately 40 miles of roads within the urban compact and nearby roads with closed drainage systems (curbing and catchbasins) are cleaned each year.
  - b) Weekly Cleaning - Approximately 6 miles of main roads (urban compact, high traffic count) are swept on a weekly basis.
  - c) Bi-Weekly Cleaning - Transfer Lane (the main road leading to the Transfer Station, Highway garage, vehicle maintenance, and wastewater treatment facility) is swept every other week.
3. Annually – Five municipal parking lots in the urban compact/downtown area are swept once in the spring and as needed during the year The list of roads and parking lots swept, and their frequency of sweeping are maintained by the Superintendent of Operations. The list of priority roads and parking lots and their sweeping schedule is reassessed annually and updated as necessary.

Special Circumstances requiring unscheduled sweeping: Incident response sweeping may be required due to certain incidents such as debris spills, storm cleanup, automobile accidents, or

cleaning up residual absorbents following oil spills in roadways.

## **Storage and Disposal**

### Street Sweepings

1. Solid sweeping debris is transported and stored next to the Yard Waste Drop Off area on Transfer Lane away from surface water or storm drainage structures.
2. Solid sweeping debris from regularly scheduled sweeping may be screened and reused as fill for Town projects, filling shoulders of roadways, or as a road base.
3. The total amount of solid swept debris will be calculated by the volume transported per day or per street sweeper. Weight cannot be measured as the Town's scale house is not open during street sweeping and is closed on one weekday.

### Debris or Potentially contaminated sweepings

Miscellaneous debris sweepings and/or absorbent material is transported to the Transfer Station recycling facility and placed inside the facility with household waste.

Note: Oil-saturated absorbent materials with free dripping liquids must NOT be placed in household waste but must be containerized and stored inside pending proper off-site disposal.

### **Documentation**

1. Keep accurate logs to track streets and parking lots swept.
2. Log the amount of debris collected and hauled off.

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Planned Excavation Repair / Replacement
Town of Derry, NH	Stormwater Management	Water/Sewer Maintenance

## PLANNED EXCAVATION REPAIR / REPLACEMENT

### 1. Preparation

- a. Determine where discharge flow will go
- b. Place inlet protection at nearest downstream storm drain inlet
- c. Clean gutters leading to inlet
- d. Isolate area to be worked on
- e. Neutralize any chlorine residual/pathogens before discharging water

### 2. Process

- a. Make efforts to keep water from pipeline from entering the excavation
- b. Direct any discharge to pre-determined area
- c. Backfill and compact excavation
- d. Haul of excavated material or stockpile nearby

### 3. Clean up

- a. Clear gutter/waterway where water flowed
- b. Clean up all areas around excavation
- c. Clean up travel path of trucked material

### 4. Documentation

- a. Complete work order

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Unplanned Excavation Repair / Replacement
Town of Derry, NH	Stormwater Management	Water/Sewer Maintenance

## UNPLANNED EXCAVATION REPAIR / REAPLACEMENT

### 1. Preparation


- a. Make sure service trucks have wattles, gravel bags, or other materials for inlet protection.

### 2. Process

- a. Slow the discharge.
- b. Inspect flow path of discharged water
- c. Protect stormwater inlet areas
- d. Follow planned repair procedures.
- e. Haul off spoils of excavation
- f. Consider use of silt filter bags on pumps

### 3. Clean-up

- a. Repair eroded areas as needed
- b. Follow planned repair procedures
- c. Clean up the travel path of trucked excavated material

	<b>S</b> TANDARD <b>O</b> PERATING <b>P</b> ROCEDURE	<b>SOP Name:</b> Equipment and Vehicle Maintenance
Town of Derry, NH	Stormwater Management	Fleet

## Description

Regular maintenance of town vehicles and equipment, or town-contracted vehicles and equipment prolongs the life of the Town's assets and prevents the leaking of hazardous fluids commonly associated with normal wear and tear of vehicles and equipment. Potential pollutants generated at vehicle maintenance facilities include oil, antifreeze, hydraulic fluid, brake fluid and cleaner, solvents, batteries, and fuels.

## Procedures

Maintenance and repair activities should be performed inside a municipal facility such as a Vehicle Maintenance Facility or Highway Garage unless the equipment is too large to fit inside, temporary repairs need to be made before the equipment can be moved to the maintenance building, or the repair can be completed on site with no stormwater exposure concern. Consult the Outdoor Fleet Maintenance procedure when it is necessary to perform repairs outside of the facility (breakdowns, service calls, etc.).

## Vehicle Storage

- Monitor vehicles and equipment closely for leaks and use drip pans as needed until repairs can be performed.
- When drip pans are used, check frequently to avoid overtopping and properly dispose of fluids.
- Drain fluids from leaking or wrecked vehicles and from motor parts as soon as possible. Dispose of fluids properly.

# Standard Operating Procedure

## Vehicle Maintenance

- Conduct routine annual inspections of heavy equipment and vehicles to proactively identify potential maintenance needs.
- Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
- Recycle or dispose of all wastes properly and promptly.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches. Sweep and pick up trash and debris as needed.

## Body Repair and Painting

Body repair and painting of the Town's fleet is performed offsite by outside vendor/contractor. Whenever possible, conduct all body repair and painting work indoors.

If performed by the Town, the following procedures should be followed:

- Use dry cleanup methods such as vacuuming or sweeping to clean up all metal filings, dust, and paint chips from grinding, shaving, and sanding, and dispose of the waste properly. Debris from wet sanding can be allowed to dry overnight on the shop floor,



then swept or vacuumed. Never discharge these wastes to the storm or sanitary sewer system.

- Minimize waste from paints and thinners by carefully calculating paint needs based on surface area and using the proper sprayer cup size.
- Do not use water to control over-spray or dust in the paint booth unless this wastewater is collected. This water should be treated and permission must be granted by the wastewater treatment plant prior to discharge into the sanitary sewer system.
- Do not dispose of spray gun cleaner waste in the storm drain.
- Use sanding tools equipped with vacuum capability (if available) to pick up debris and dust.

### **Material Management**

- Store maintenance materials and waste containers (e.g., used oil and antifreeze) in labeled containers under cover or in secondary containment (e.g., double-walled tanks). Chemicals should not be combined in containers.
- All hazardous wastes must be labeled and stored according to hazardous waste regulations.
- Carefully transfer fluids from collection devices to designated storage areas as soon as possible. Do not store the transferred fluids adjacent to the containers (for example, oil drip pans with used oil in them should not be placed next to the used oil tank).
- Store new batteries securely to avoid breakage and acid spills.
- Store used batteries indoors or in secondary containment to contain potential leaks. Recycle used batteries at the Recycling Facility.
- Conduct periodic inspections of storage areas to detect possible leaks.
- Do not wash or hose down storage areas except where wash water will enter the sanitary sewer as an approved discharge. Use dry clean-up methods whenever possible.
- Keep lids on waste barrels and containers and store them indoors or under cover to reduce exposure to rain.

### **Parts Cleaning**

- Use designated areas for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors. If parts cleaning equipment is not available, use drip pans or other containment to capture parts cleaning fluids.
- Use steam cleaning or pressure washing of parts whenever possible instead of solvent cleaning.
- When steam cleaning or pressure washing, only discharge wastewater to an oil/water separator connected to the sanitary sewer.
- When using solvents to clean parts, rinse and drain parts over the designated solvent tank so that fluids will not drip or spill onto the floor. Use drip boards or pans to catch excess solutions and divert them back to the tank. Allow parts to dry over the hot tank.
- Recycle cleaning solution when it becomes too dirty to use. Never discharge cleaning waste to the sanitary sewer or storm sewer.

### **Vehicle and Equipment Washing**

- Vehicles should be washed indoors in a Town facility equipped with a floor drain connected to the sanitary sewer or taken to a commercial car wash.

## Employee Training

- Train applicable employees who perform heavy equipment and vehicle maintenance on this written procedure. Information regarding how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform heavy equipment and vehicle maintenance.

## Records

The following records could be used to document activities performed:

- Record of any major spills and the action taken.
- Records of employee training with sign-in sheet.
- Heavy equipment and vehicle maintenance logs or work orders.

	<b>S TANDARD O PERATING P ROCEDURE</b>	<b>SOP Name:</b> Outdoor fleet Maintenance
Town of Derry, NH	Stormwater Management	Fleet

## Description

Although it is recommended that fleet maintenance activities be conducted indoors or under cover, it is sometimes necessary to perform fleet maintenance outdoors (e.g., equipment is too large to fit inside the maintenance building, temporary repairs need to be made before the equipment can be moved to the maintenance building, breakdowns and emergency repairs on site, service calls).

Some potential pollutants typically associated with outdoor fleet maintenance activities include oil, antifreeze, brake fluid and cleaner, solvents, and fuels.

## Procedures

### Fleet Maintenance

- Fleet maintenance should be performed inside whenever possible.
- If indoor maintenance is not possible, ensure maintenance is performed in a location where contact with stormwater is minimized or eliminated.
- Provide inlet protection (berms, weighted inlet covers, etc.) for all adjacent inlets when work is occurring near a storm drain inlet.
- Have absorbent pads and drip pans accessible to capture leaks and spills during maintenance activities.
- Keep equipment clean and do not allow excessive build-up of oil and grease.
- Perform regular preventative maintenance to minimize the occurrence of leaks and major repairs.
- Recycle and/or dispose of all wastes properly and promptly.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches. Sweep and pick up trash and debris as needed.
- Clean up spills promptly using dry methods (do not hose down). Consult the Spill Prevention and Response procedure for more information. Cleanup is completed only after absorbent and rags are disposed of properly.

### Material Management

- Store maintenance materials and waste containers (e.g., used oil and antifreeze) in labeled containers under cover or in secondary containment (e.g., double-walled tanks). Chemicals should not be combined in containers.
- All hazardous wastes must be labeled and stored according to hazardous waste regulations.
- Carefully transfer fluids from collection devices to designated storage areas as soon as possible.
- Do not store the transferred fluids adjacent to the containers.
- Store new batteries securely to avoid breakage and acid spills.
- Store used batteries indoors or in secondary containment to contain potential leaks. Recycle used batteries.
- Conduct periodic inspections of storage areas to detect possible leaks.

- Do not wash or hose down the storage area except in areas where the wash water will only enter the sanitary sewer drain as an approved discharge. Use dry clean-up methods as often as possible.
- Keep lids on waste barrels and containers, and store them indoors or under cover to reduce exposure to rain.
- Periodically inspect and maintain all pretreatment equipment, including sumps, separators, and grease traps to ensure proper functioning.

## Employee Training

- Train applicable employees on this written procedure. Information regarding how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform outdoor vehicle maintenance.

## Records

The following records could be used to document activities performed:

- Record of any major spills and the action taken.
- Records of employee training with sign-in sheet.
- Heavy equipment and vehicle maintenance logs.