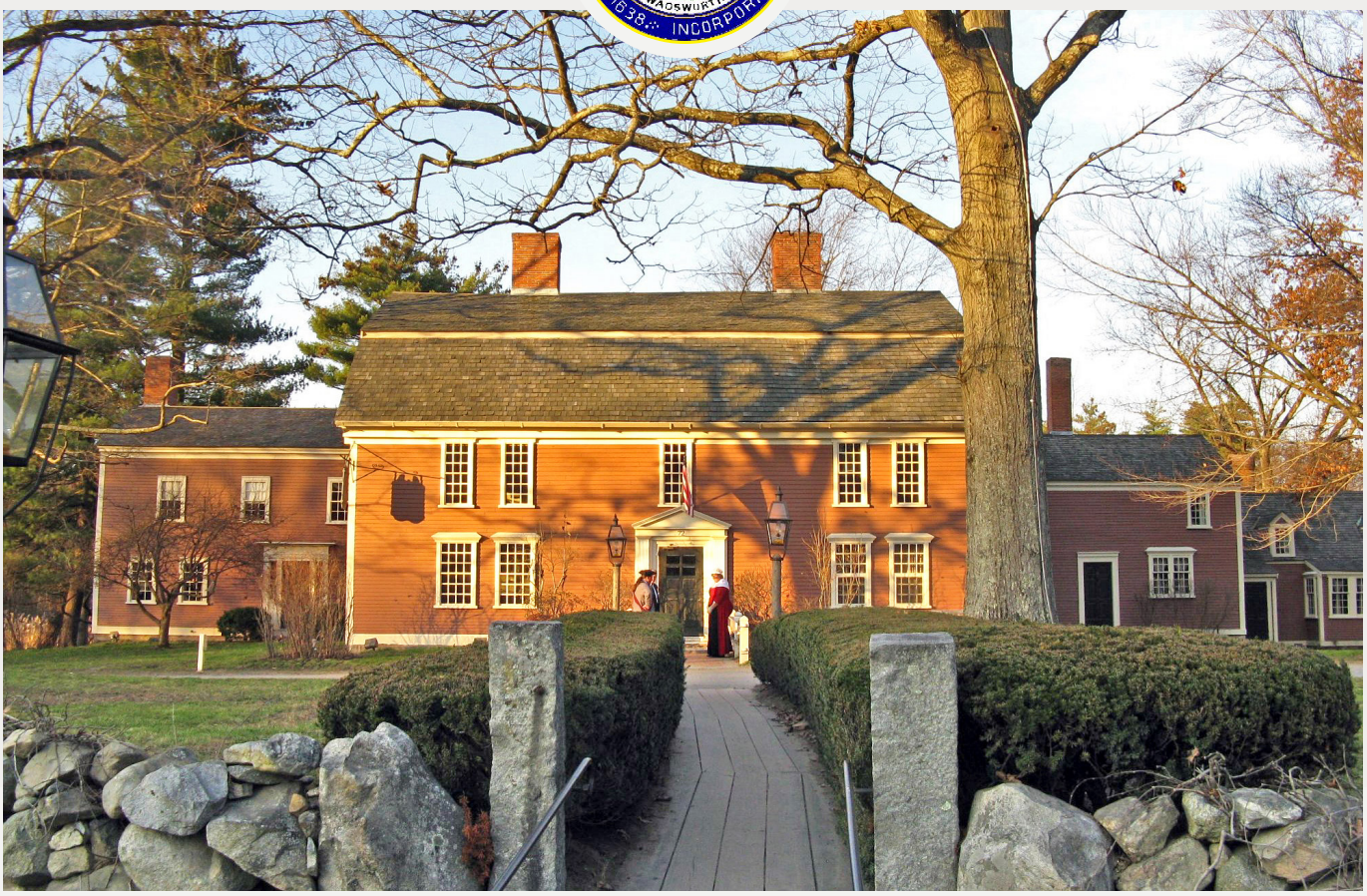
Clean Water Best Practices:

SUDBURY MUNICIPAL FACILITIES



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SECTION 1: INTRODUCTION

The objectives of this manual are to:

- Provide a general guidance document to reduce stormwater-transported pollution for typical activities on municipally-owned properties; and
- Promote behavior that will improve water quality in the Town of Sudbury.

This pollution prevention manual includes "best practices" for municipal facilities that are not typically regulated under specific EPA or state permit programs (i.e. wastewater treatment facilities, incinerators, etc.).

The focus of this manual is on facilities that may have activities that have the potential to contribute to stormwater pollutants through common day-to-day activities but are not considered industrial in nature.

This manual should be maintained by the appropriate facility manager or department lead of Town of Sudbury municipally-owned properties. It is the expectation of the Environmental Protection Agency (EPA) under your community's Clean Water Act permits, that staff, contractors, and operators of municipally-owned properties are informed of their role in pollution prevention and follow simple best practices to minimize the potential for pollution of surface waters and groundwater in Sudbury.

This pollution prevention manual has been developed to address the requirements of United States Environmental Protection Agency's (USEPA's) 2003 National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer System (MS4) Permit for Massachusetts, but it should be noted that individual facilities may require more specific stormwater pollution prevention plans under future permit conditions or at the request of regulatory agencies.

The table below lists facilities that are subject to the best practices in this manual and are common in many New England communities. Appendix 1 contains a list of Municipal Facilities in Sudbury where these best practices are applicable.

Table 1-1 Typical Municipal Facilities in New England Communities

Closed Municipal Landfills
Public Works and other Fleet Maintenance Facilities
Solid Waste Transfer Facilities
Airfields
Parks, Athletic Fields, Cemeteries, and Golf Courses
Public Buildings (Police, Fire, Schools, Libraries, Recreation, Stadiums)
Boat Launches, Natural Areas
Animal Shelters/Services
Public Parking Facilities
Fairgrounds
Public Housing

Impervious cover is any surface in the landscape that cannot effectively absorb or infiltrate rainfall. This includes driveways, roads, parking lots, rooftops, and sidewalks. When natural landscapes are intact, rainfall is absorbed into the soil and vegetation.

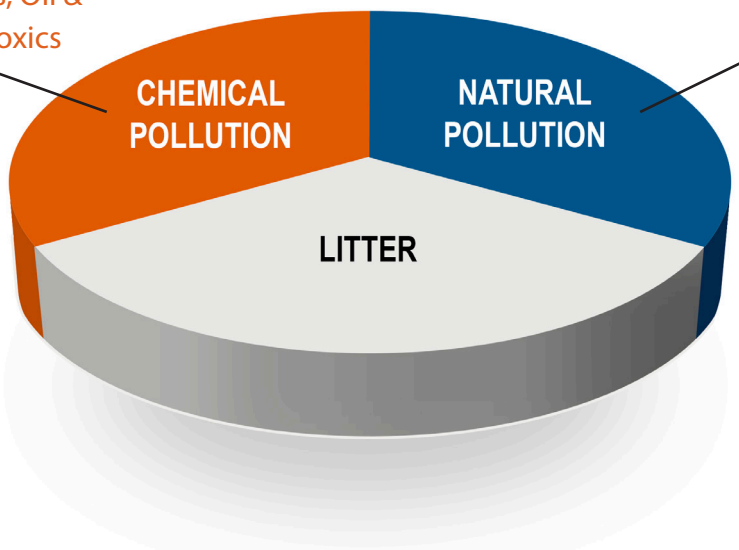
Stormwater is runoff water from rain or melting snow that flows across the landscape. Runoff flows off of rooftops, paved areas, bare soil, and lawns. Runoff gathers in increasingly large amounts from puddles, to ditches, to streams, to lakes and rivers.

Pollution transported during stormwater runoff is currently one of the most significant sources of pollutants to the nation's waters, but it is very difficult to manage. It is the responsibility of individuals to reduce many of these pollutants through best practices and pollution prevention.

Stormwater-transported pollution can be divided into three general categories: natural pollution, chemical pollution, and litter. Natural pollutants include organic material such as leaves and sediment. Chemical pollutants include things such as oil, grease, detergents, paint, and fertilizer. Litter such as plastic bags, cigarettes, and trash create yet another source of stormwater pollution. Table 1-2 explains the possible sources and impact these pollutants have on watersheds.

Table 1-2 Stormwater Pollution comes in Three General Forms

Fertilizers, Oil & Grease, Toxics



Organic materials or sediments that accumulate on paved surfaces.

Pollutants of Concern

Table 1-3 Common Stormwater Pollutant, Sources, and Impacts

Pollutant	Sources	Impacts
Sediment	Non-vegetated areas; eroding slopes or ditches; winter sand and salt application; vehicle/boat washing.	Destruction of plant and fish habitat; transportation of attached oils, nutrients and other pollutants; increased maintenance costs during drainage system cleaning.
Nutrients (phosphorus, nitrogen)	Rainfall; fertilizers; eroding soils, on-site wastewater systems; bird, wildlife and pet waste; vehicle/boat washing; grass and leaves; sewer leaks; leaking trash containers.	Increased potential for nuisance or toxic algal blooms; increased potential for hypoxia/ anoxia (i.e. low levels of dissolved oxygen which can kill aquatic organisms).
Hydrocarbons (Polycyclic Aromatic Hydrocarbons)	Vehicle and equipment leaks; vehicle and equipment emissions; pesticides; fuel spills; equipment cleaning; improper fuel storage and disposal.	Toxic.
Heavy Metals	Vehicle brake and tire wear; vehicle/ equipment exhaust; batteries; galvanized metal; paint and wood preservatives; light bulbs, e-waste; batteries; fuels; pesticides; cleaners.	Toxic; drinking water contamination.
Pathogens	Bird, wildlife, and pet wastes; on-site wastewater systems; sewer leaks and backups; leaking trash containers.	Risk to human health leading to closure of shellfish areas and swimming areas; drinking water contamination.
Toxic Chemicals	Herbicides, Pesticides, Dioxins, and PCBs, from landscape maintenance, equipment and vehicle maintenance/wear, spills, illegal discharges and leaks.	Toxic.
Debris/Litter	Improper waste disposal and storage; leaking rubbish containers; cigarette butts; littering.	Unsightly, nuisance for drainage system functionality and potential risk to human and aquatic life.

SECTION 2: OPERATIONS AND MAINTENANCE PROCEDURES

EROSION PREVENTION AND SEDIMENT CONTROL

Erosion Prevention Recommended Procedures:

Prevent erosion by maintaining vegetative cover through the growth and maintenance of healthy native or non-invasive plants that have extensive root structures.

- Prevent erosion by covering bare soil with either a mix of loam and seed, which will develop a vegetative cover, or cover bare soil with rocks, mulch, or other protective covering.
- Use erosion control techniques or devices to temporarily stabilize disturbed areas prior to vegetative establishment. This could include erosion control blankets or erosion control matting. Refer to the MassDOT's list of qualified construction materials to find a list of approved fabrics: http://www.mhd.state.ma.us/default.asp?pgid=research_materials/material s03i&sid=about
- Refer to the link below to find native plants with absorbent root structures. University of Massachusetts Agriculture & Landscape Program: "Right Plan, Right Place" – A Plant Selection Guide for Managed Landscapes: https://ag.umass.edu/fact-sheets/right-plant-right-place-plant-selection-guide-for-managed-landscapes
- Protect all stormwater drainage systems from scour. Scour is created when high velocity water erodes the soil that it is flowing over. This can be prevented by installing permanent reinforcing fabrics, crushed angular stone or reducing the velocity or volume of water within the drainage system. Extensive erosion control information can be found in the MassDOT's Drainage and Erosion Control Manual.http://www.massdot.state.ma.us/Portals/8/docs/designGuide/CH_8.pdf
- Inspect areas that abut snow plowing lanes for damage that may have taken place during the winter months as soon as possible after snowmelt. If damage has occurred, these areas will need to be revegetated or protected from further erosion with angular stone, curbing, or other reinforcement.

Sediment Control Recommended Procedures:

- Sweep up sediment and residue regularly from paved areas and frequently from loading/unloading operations and in high traffic areas .

Avoid washing of sediments into drainage systems.

- Keep paved areas adjacent to stockpiles and earthwork sites free from loose sediment and tracked materials. Establish temporary sediment control devices or stabilization in areas where these stockpiles may migrate into drainage systems.
- Keep stockpiled materials covered when not in use to minimize the transfer of sediment or other pollutants to the stormwater drainage system. This can be done with tarps, berming, or sandbags.
- Place stockpiled materials away from storm drain inlets, drainage paths, and natural waterways.
- Inspect stockpiles regularly and after significant rain events to ensure that the sediment or pollutant control procedures are functioning effectively.

LAWN CARE AND LANDSCAPE MAINTENANCE

The Town of Sudbury – Park Department Athletic Field Maintenance Plan (May 2006 or latest edition) will be the primary reference for maintenance and management of Sudbury Athletic Fields.

The goal of this document is to provide supplemental general guidance regarding turf and landscape management practices that may reduce stormwater-generated pollution from lawns and landscapes maintained by municipal staff.

Test your soil to find fertilization needs and application rates. The University of Massachusetts Soil and Plant Tissue Testing Lab provides these services:

203 Paige Laboratory
161 Holdsworth Way, Amherst, MA 01003

(413) 545-2311

https://soiltest.umass.edu/

Mowing Recommended Procedures:

- Perform mowing at optimal times. Mowing should not be performed if significant rain events are predicted to avoid rutting and creating erosion sensitive areas.
- Mow as high as possible, 3"– 4" is ideal.
- Vary mowing patterns.

Allow appropriate areas to go to meadow or field and mow once or twice per year rather than every week where possible.

- Keep mower blades sharpened to avoid damaging grass leaf tissue.
- Use a mulching mower blade and return all lawn clippings to the lawn area where appropriate.
- Sweep any clippings off impervious surfaces and away from storm drains back onto the lawn.

Irrigation Recommended Procedures:

- Irrigate only when necessary based on moisture content and not on a fixed schedule. Most lawns rarely need watering except for a few weeks in the summer.
- Irrigate at appropriate times when no rain is forecasted.

Fertilizing and Turf Health Recommended Procedures:

- Aerate grassy areas to improve infiltration and soil health.
- Soil testing should be performed before using a fertilizer. Using the right type and amount of fertilizer for the location will help ensure that the proper nutrients are absorbed by the plants and will reduce runoff.
- Fertilizer and pesticide should always be applied in strict accordance with the manufacturer's instructions and with local regulations, and these materials should never be over-applied.
- Choose a fertilizer that has at least 40–60% of the nitrogen in a slow-release form, such as sulfur-coated urea, polymer coated urea, composted organics, etc. Table 2-1 below gives an overview of the impact nutrients can have on aquatic environments. Refer to Penn State's College of Agricultural Sciences Center for Turfgrass Science for more information on fertilization: http://plantscience.psu.edu/research/centers/turf/extension/factsheets
- Fertilize when the soil is moist to help the fertilizer infiltrate into the root zone.
- Avoid broadcasting fertilizer near pavements. Sweep any fertilizer off pavements and dispose of according to manufacturer's specifications.
- Avoid applying fertilizer before heavy rain because too much rain will cause nitrogen to run off or leach below the root zone.
- Properly dispose of fertilizer bags according to manufacturer's specifications and applicable regulations.
- Municipal employees should always use the appropriate Personal Protective Equipment (PPE), which should be listed on the fertilizer label.

Table 2-1 Nutrient Benefits and Impacts to Aquatic Environments

Nutrient	Benefits to Plants	Impacts to Aquatic Environments
Nitrogen (N)	Needed for healthy green growth and regulation of other nutrients.	Increased potential for nuisance or toxic algal blooms in salt water; increased potential for hypoxia/anoxia (low levels of dissolved oxygen, which can kill aquatic organisms).
Phosphorous (P)	Helps seeds to develop proper roots and to resist disease.	Increased potential for nuisance or toxic algal blooms in fresh waters; increased potential for hypoxia/anoxia (low levels of dissolved oxygen which can kill aquatic organisms).
Potassium (K)	Important for root development and helps resist disease.	Slightly hazardous to aquatic organisms.

Pesticide labels with "caution" are less toxic than pesticide labels with "warning," which are less toxic than labels with "danger/poison." Refer to the Massachusetts Pesticide Program for more information on registered pesticide products:

http://www.mass.gov/eea/agencies/agr/pesticides/pesticide-product-registration.html

Weed and Pest Control Recommended Procedures:

- All pesticide (weed, insect, disease, or vertebrate control) applications (organic or conventional) must be by a licensed commercial pesticide applicator.
- Municipal employees must be trained, certified, and licensed in pesticide application before working with any pesticide. To find a list of licensed pesticide applicators in your region contact the Massachusetts Pesticide Program: http://www.mass.gov/eea/agencies/agr/pesticides/
- Consider seeding to prevent weed invasion and use only spot applications of low-risk products instead of broadcast applications of weed and feed products.
- Use nematodes or other beneficial organisms to control insect pests instead of pesticides. Only use pesticides as a last resort.
- Use the least toxic pesticide that targets the specific pest.
- Municipal employees should use the appropriate PPE, which should be listed on the pesticide label.
- Follow the label directions on the pesticide container.
- Place warning signs in areas where pesticides have been applied.
- Do not apply pesticides in areas where residents walk their pets.
- Determine appropriate setback distances from pavement, storm drains, and waterbodies to serve as a buffer between the pesticide/herbicide application and stormwater runoff. Never apply within five feet of pavement, 25 feet of a storm drain inlets, or 50 feet of a stream or waterbody.

- Wash hands and face after applying chemical pesticides.
- Clean any equipment that was used in the application of the pesticide in a proper manner only when necessary.

Fertilizer and Pesticide Storage and Disposal Recommended Procedures:

- Store fertilizers and pesticides in well ventilated, dry locations, according to the manufacturer's specifications and applicable regulations. Store in an enclosed area or in covered impervious containment.
- Label all containers with contents and purchase date.
- Cleanup spills and leaks of pesticides and fertilizers quickly to prevent them from reaching the stormwater drainage system.
- Properly dispose of fertilizers and pesticides according to the manufacturer's specifications and applicable regulations.
- Regularly inspect fertilizer and pesticide storage areas for leaks or spills.

If a spill or leak does occur with pesticides or fertilizers, follow the clean-up procedures described in the Spill Prevention and Cleanup section of this manual.

ATHLETIC FIELD MAINTENANCE

The Town of Sudbury – Park Department Athletic Field Maintenance Plan (May 2006 or latest edition) will be the primary reference for maintenance and management of Sudbury Athletic Fields.

The goal of this document is to provide supplemental general guidance regarding athletic field management practices that may reduce stormwater-generated pollution from facilities maintained by municipal staff.

Athletic Field Irrigation Recommended Procedures:

- Athletic Fields typically need an inch of water per week; sand-based fields may require more watering during hot weather months.
- Avoid over-irrigating the field.
- Irrigation should occur as needed. Soil moisture probes can be utilized to help determine when irrigation should occur.

Athletic Field Mowing Recommended Procedures:

- Sharpen blades and/or adjust reels prior to every mowing.
- Sweep any clippings off impervious surfaces back onto the lawn and away from storm drains.
    - Mow no more than one-third of the blade of grass at any given time.
- Optimum grass heights vary depending on sport and time of year, but should ultimately be shortest in the spring and longest in the summer months. Soccer fields typically benefit from shorter grass than baseball fields. Refer to the baseball field maintenance link below for more information and to review the common types of grasses and suggested mowing heights: http://web.mlbcommunity.org/programs/baseball_tomorrow_fund.jsp?content=field_maintenance_guide
- Weed control can be accomplished through physical or chemical means (as allowed by policies). If chemical weed control is performed, the chemical should be spot applied and special attention taken to the amount of downtime required after application. Extensive chemical weed control is most effective in the fall when play has ended and the vegetation is still actively growing.

Athletic Field Fertilizing Recommended Procedures:

- Follow the guidelines provided in the Fertilizing and Turf Health Recommended Procedures section of this manual.

VEHICLE AND EQUIPMENT WASHING

Vehicle and Equipment Washing Recommended Procedures:

- The discharge of vehicle or equipment wash water to the municipal storm drain is not permitted.
- Vehicle and equipment washing, particularly power washing, steam cleaning, and engine and undercarriage washing should not occur outdoors unless wash water is collected and contained in a manner that prevents discharge to the storm drain system. In this case, the wash water generated should be collected and recycled for reuse or collected for proper offsite disposal.
- The preferred means of discharging vehicle and equipment wash water is to the sanitary sewer system, with approval from the local sewer authority (typically in the form of a wastewater discharge permit). Pretreatment of the wash water prior to discharge to the sanitary sewer may be required by the sewer authority.
- If wash water is collected in a holding tank for subsequent shipment to a publicly owned treatment works (POTW), the Massachusetts Department of Environmental Protection (MassDEP) regulations in 314 CMR 18.00 apply (these include specific management requirements for holding tanks, recordkeeping requirements, and requirements for submitting a one-time Industrial Wastewater Holding Tank Certification to MassDEP).
- Wash water generated from rinsing vehicles with detergent-free, solvent-free water under low pressure for the purpose of removing surface dust (not including undercarriage or engine washing or washing of vehicles exposed to hazardous materials) may under certain circumstances be allowed to discharge into a vegetated area and infiltrate into the ground but only in accordance with the MassDEP requirements in 310 CMR 27.00 and 314 CMR 5.00 (registration with MassDEP or a permit may be required for this activity).
- Use biodegradable, phosphate free soaps, and use low-pressure techniques to minimize the potential for detaching oil and paint residues, heavy metals, or other potentially hazardous materials from vehicle surfaces.

Never perform engine or undercarriage washing outdoors.

- Wash all vehicles and equipment in an indoor area designed to collect and recycle wash water, or to discharge wash water to the sanitary sewer in accordance with a sewer discharge permit, or to a holding tank in accordance with the MassDEP regulations referenced above.
- All grease and spills in the wash area should be cleaned up before washing any vehicles or equipment. Refer to the Spill Prevention and Cleanup Procedures for proper cleanup guidelines.
- Contact your local landfill or transfer station to verify whether the grit removed from a wash water holding tank can be disposed of at the facility and if there are limits on the quantity that may be disposed. The MassDEP should also be contacted to verify whether there are permitting requirements for disposal or beneficial use of the material. Refer to the MassDEP's link below for a list of active landfills and transfer stations:

http://www.mass.gov/eea/agencies/massdep/recycle/solid/

Refer to the MassDEP's guidance on disposal of materials pumped from storm drain systems.

http://www.mass.gov/eea/agencies/massdep/recycle/regulations/management-of-catch-basin-cleanings.html

VEHICLE AND EQUIPMENT FUELING

Vehicle and Equipment Fueling Recommended Procedures:

- Train all municipal employees (including new/seasonal employees) on proper vehicle and equipment fueling and spill response procedures; conduct annual refresher trainings for all employees.
- Fueling area should be under cover and on an impervious surface.
- Fuel carefully to minimize leaks on the ground and never top off fuel tanks. If necessary use a funnel to ensure that leaks are minimized.
- Require that the person fueling must stay with the vehicle/equipment during the entire fueling operation.

Keep a spill kit, clearly labeled, at or near each fueling station and in all mobile vehicles and equipment.

- Locate the emergency shut off switch in an accessible location, and clearly labeled, near the fuel island and use it if necessary.
- Inspect fueling equipment in accordance with Spill Prevention Control and Countermeasure plans or at least monthly for cracks, leaks, corrosion or failure.
- Isolate storm drains from fueling areas using berms, dikes, or protective covers wherever possible.
- Fueling small equipment in the field should be done on an impervious surface whenever possible (i.e. pavement or concrete) and away from any storm drains or ditches. Use a funnel to ensure that leaks are minimized.
- Comply with applicable MassDEP Air Pollution Control Regulations in 310 CMR 7.00 regarding Stage I and II vapor recovery systems for gasoline dispensing facilities.

If a spill does occur while fueling vehicles or equipment, follow the clean-up procedures described in the Spill Prevention and Cleanup section of this manual.

Contact the MassDEP to report any size spill within two hours of occurrence:

MassDEP Emergency Response Program

Report a Spill of Oil or Hazardous Materials

888-304-1133

SPILL PREVENTION AND CLEANUP

Spill Prevention Recommended Procedures:

Develop and maintain a Spill Prevention Control and Countermeasure (SPCC) Plan in accordance with 40 C.F.R. Part 112 if the facility stores more than a total of 1,320 gallons of oil in above-ground storage tanks, containers, and oil-filled equipment. Written spill prevention and response plans/procedures may be required under other regulatory programs, such as hazardous waste contingency plans (310 CMR 30.000) and OSHA emergency response plans (29 C.F.R. 1910.120), if applicable.

- Train all municipal employees (including new/seasonal employees) on proper spill prevention, cleanup, and record keeping and conduct annual refresher trainings.
- Place a stockpile of spill cleanup materials in a location where they are readily available and well-marked.
- Check the spill kits on a monthly basis and keep them stocked with supplies.
- Label all containers so that they are easily identifiable.
- Check containers often to ensure that leaks or spills have not occurred.
- Relocate hazardous material management to an indoor location. If this is not possible, keep all materials that are outside under cover, and away from storm drains and water bodies.
- Keep rain off of materials in outside storage areas by installing either a permanent structure over these areas or by covering them with a tarp.
- Berm material storage areas so that if a leak or spill takes place it will be easily contained within the berm.
- Use absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or used absorbent materials should be reused/recycled or properly disposed of.
- Install a spill control device (such as catch basin outlet hood, such as the following: http://bmpinc.com/content/what-snout) in catch basins that collect runoff from storage areas where oil, gas, or other materials are present.
- Develop and implement standardized reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

Spill Cleanup Recommended Procedures:

For all leaks and spills, cleanup should be performed by municipal employees only to the extent that this can be done safely and in accordance with the level of training received (such as OSHA training pursuant to 29 C.F.R. 1910.120); for spills that cannot be safely handled by municipal employees a licensed spill cleanup contractor should be called.

- Stop the source of the spill if safe to do so.

Contact your immediate supervisor and department head to report the spill.

- Deploy containment booms if the spill could potentially reach a storm drain or nearby water body.
- Use an absorbent material for general cleanup of liquids in accordance with spill response training. Do not hose down the spill.
- Use brooms or shovels for the general cleanup of dry materials in accordance with spill response training. Never hose down or bury dry material spills.
- Use as little water as possible during the cleanup.
- For spills that cannot be safely handled by municipal employees in accordance with their level of spill response training, contact a licensed spill cleanup contractor.
- Contact the Public Works Department and the Fire Department as appropriate (including all spills that enter the sewer system or storm drain system).

  Public Works Department:
  978.440.5421

  Fire Department:
  978.443.2239

- Contact the MassDEP to report spills that exceed an applicable reportable quantity (for example, oil spills greater than 10 gallons to the land, or in any amount to surface water must be reported; refer to 310 CMR 40.000 for reportable quantities):

MassDEP Emergency Response Program
Report a Spill of Oil or Hazardous Materials 888-304-1133

- Depending on the size and severity of the spill, a Massachusetts Licensed Site Professional (LSP) may need to be hired to oversee the cleanup and follow-up activities.
- Other agencies may be required to be notified of releases depending on the material that spilled, how much spilled, and where it spilled. For example, a release of oil that causes a visible sheen on surface water is reportable to the National Response Center (and to MassDEP); a release of a hazardous chemical listed in 40 CFR 302.4 in an amount equal to or greater than its reportable quantity must be reported to the National Response Center; and a release of an extremely hazardous substance listed in 40 CFR 355 in an amount equal to or greater than its reportable quantity must be reported to the local emergency planning committee (LEPC) and the State Emergency Response Commission (SERC).
- Clean or dispose of the cleanup equipment, and properly dispose of all wastes generated during the cleanup with a licensed contractor. Refer to the MassDEP web page below for links to lists of Massachusetts licensed hazardous waste transporters and treatment, storage, and disposal facilities: http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/

After the spill has been properly cleaned, a detailed report about the incident should be completed and submitted to Sudbury Public Works.

- For additional MassDEP guidance for municipalities on management of spills refer to: http://www.mass.gov/eea/docs/dep/cleanup/laws/spillmgm.doc

PARTS CLEANING/STORAGE

Parts Cleaning Recommended Procedures:

- Do not clean parts outdoors.
- Perform cleaning in a designated area to minimize the potential for spills.

Use citrus-based cleaners whenever possible.

- Keep parts cleaner lids closed except when in use.
- Store waste parts cleaners indoors and in properly labeled containers in accordance with applicable regulations. Many waste parts cleaning solvents (including mineral spirits and petroleum naphtha) are regulated as hazardous waste in Massachusetts.
- Comply with applicable hazardous waste generator regulations in 310 CMR 30.000 for hazardous waste parts cleaners, and any other hazardous wastes (such as waste oil) that are generated. Different requirements apply depending on the amount and type of hazardous waste generated.
- Dispose of all waste parts cleaners properly with a licensed contractor. Store waste products in approved and well-marked containers. Refer to the MassDEP web page below for links to lists of Massachusetts licensed hazardous waste transporters and treatment, storage, and disposal facilities: http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/

Spare Parts Storage Recommended Procedures:

- Store spare parts in a designated area either inside or under cover.
- Clean petroleum products from the spare parts as much as possible prior to storage.

Use drip pans for any parts or vehicles that are dripping.

- Monitor storage areas for staining and leaking on a fixed schedule.
- Collect any waste oil in accordance with applicable MassDEP hazardous waste regulations in 310 CMR 30.000.

PETROLEUM AND CHEMICAL STORAGE/HANDLING/DISPOSAL

Petroleum and Chemical Storage Recommended Procedures:

- Develop and implement a Spill Prevention, Control, and Countermeasure (SPCC) plan if storing more than 1,320 gallons of oil in above ground tanks, containers, and oil-filled equipment (required).
- Store materials under cover and away from high traffic areas, posted with appropriate signage.
- Store materials according to the manufacturer's specifications.
- Be prepared for spills by having a spill kit nearby and clearly labeled.

Check the spill kits on a monthly basis and keep them stocked with supplies.

- Store incompatible hazardous materials in separate areas.
- Tanks should be bermed or surrounded by a secondary containment system such as dikes, liners, vaults, or double-walled tanks.
- The area inside the berm should slope to a drain with a dead-end sump that is periodically pumped out and properly disposed of.
- Visually inspect a new tank or container before use for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect storage areas monthly for leaks or spills.
- Inspect tank foundations, connections, coatings, tank walls and the piping system monthly. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Conduct routine inspections and check for structural failure, spills, and overfills due to operator error, or failure of the piping system.
- Check for leaks or spills during pumping of liquids or gases from trucks to a storage facility or vice versa.
- Petroleum and chemical storage tanks may be subject to additional permitting, licensing, and inspection requirements in accordance with Massachusetts Board of Fire Prevention Regulations, including requirements under 502 CMR 5.00 for aboveground storage tanks with capacities greater than 10,000 gallons holding any fluid other than water that require annual use permits and inspections by certified tank inspectors.

- Ensure that any underground storage tanks are managed in accordance with applicable Massachusetts Board of Fire Prevention regulations and MassDEP regulations in 310 CMR 80.000.

Petroleum and Chemical Handling Recommended Procedures:

Train employees in hazardous material handling, safety, spill cleanup, inspections, and reporting on an annual basis.

- Handle petroleum products and chemicals according to the manufacturer's specifications.
- Conduct oil changes indoors.
- Maintain material Safety Data Sheets (SDSs) for all chemicals used.
- Make SDSs available on materials that require special handling, storage and/or disposal.
- Transfer materials from one container to another indoors in a well-ventilated area.
- Properly label all containers in accordance with OSHA standards.
- Store all wastes in sealed containers constructed of a suitable material within secondary containment whenever possible. Keep waste containers closed except when adding or removing wastes.
- Identify whether any wastes are subject to hazardous waste regulations in 310 CMR 30.000, and identify the facility's hazardous waste generator status in accordance with these rules. If hazardous wastes are generated (including waste oil), the facility must either register or notify as a generator with MassDEP, and will need to comply with management standards applicable to their generator status. Management standards include requirements for storage and handling, container labeling, inspections, onsite storage time limits, recordkeeping, contingency planning, training, and offsite shipping requirements.
- Properly dispose of any rainwater that accumulates within secondary containment that may have mixed with the wastes. If petroleum products have mixed the rainwater they must be treated as waste and disposed of properly; this rainwater should not be discharged to storm drains.

- Do not mix wastes. This can cause dangerous chemical reactions, make recycling impossible, complicate disposal, and/or make disposal more costly.
- Label each waste container with its contents. Hazardous wastes are required to be labeled with the words "Hazardous Waste," the name of the waste, the hazard associated with the waste, and the accumulation start date.
- Store the waste containers away from storm drains, water bodies, and away from moving vehicles and equipment to prevent accidental spills.
- Arrange for regular waste collection before containers overflow and in accordance with applicable hazardous waste regulations (for example, large quantity generators may store wastes onsite for no more than 90 days; small quantity generators may store wastes onsite for 180 days).
- Transport used petroleum and chemical products with a licensed transporter. Refer to the MassDEP web page below for links to lists of Massachusetts licensed hazardous waste transporters and treatment, storage, and disposal facilities: http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/
- Hazardous wastes and waste oil must be shipped offsite using a uniform hazardous waste manifest. Maintain records of the transport of waste oil, hazardous wastes, and other wastes that are sent for disposal for three years.
- Dispose of all wastes in accordance with applicable state and federal regulations.

Hot-drain used oil filters for at least 12 hours before disposal.
(Disposal in the regular trash is allowed if no free liquids remain after hot-draining, or after draining and crushing or dismantling in accordance with MassDEP policy).

GARBAGE STORAGE

Garbage Storage Recommended Procedures:

- Keep all waste containers covered. Tarps or other covers may be used to cover large containers (e.g. 30-yard containers).
- Keep all container lids closed at all times, except when adding or removing material.
- All waste receptacles should be leak-tight with tight-fitting lids or covers.
- Never place liquids or liquid-containing wastes in a dumpster or trash receptacle.
- Place waste receptacles indoors or under a roof or roof overhang whenever possible.
- Do not place outdoor waste receptacles near storm drains or other drainage systems such as ditches.
- Sweep up around outdoor waste containers regularly and immediately before any expected storm event.
- Arrange for wastes to be picked up at least weekly and disposed at approved disposal facilities.

Consider adding locks to containers that are located in public areas.

PAINTING

Painting Recommended Procedures:

- Municipal employees performing renovation, repair, and painting projects that disturb lead-based paint in facilities built before 1978 must be certified and must follow specific work practices to prevent lead contamination. Refer to the EPA's link below for more information regarding the Lead-Safe Certification Program: http://www.epa.gov/lead/pubs/renovation.htm
- Contact the MassDEP to determine if air emission permits are required. Bureau of Air Quality: http://www.mass.gov/eea/agencies/massdep/air/
- Clean paint brushes and equipment within a contained area. Never rinse into stormwater drainage system.
- Store waste paints, solvents, and rags in covered fire- and explosion-proof containers and in compliance with applicable hazardous waste regulations in 310 CMR 30.000.
- Use drop cloths under any painting or preparation activity such as scraping or sandblasting. Clean up after exterior activities to avoid migration of chips and dust into storm drains.
- Use less toxic paints such as latex or water-based paints where appropriate.
- Waste paints, thinners, solvents, residues, and sludges that meet the definition of hazardous waste in 310 CMR 30.000 must be managed and/or disposed of as hazardous waste.

Refer to the MassDEP web page below for links to lists of Massachusetts licensed hazardous waste transporters and treatment, storage, and disposal facilities: http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/

- When thoroughly dry, nonhazardous latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.

Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream.

Street Painting Recommended Procedures:

- Develop paint-handling procedures for proper use, storage, and disposal of paints.
- Transfer and load paints and hot thermoplastic away from storm drain inlets.
- Replace paints containing lead and tributyltin with less toxic alternatives.
- Use water-based paints.
- Clean water-based paint application equipment in a sink that is connected to the sanitary sewer, or appropriate on-site wastewater disposal facility and in accordance with applicable wastewater discharge permits and regulations.
- Properly store leftover paints if they are to be kept for the next job.

Dispose of leftover paint properly. Some paints are hazardous wastes once they are no longer intended for use. When thoroughly dry, nonhazardous paint may be disposed of as solid waste.

FLOOR DRAINS

Floor Drains Recommended Procedures:

Know where all floor drains discharge. Interior floor drains should not be directly connected to a storm drain system.

- Floor drains servicing vehicle or equipment maintenance areas or other hazardous material storage with potential for spills should have labeled spill kits nearby.
- Check the spill kits on a monthly basis and keep them stocked with supplies.
- Maintain a regular inspection and clean-out procedure for floor drains and oil/water separators.
- Obtain and use drain mats or containment booms to cover floor drains if a spill occurs.
- Store hazardous materials away from floor drains.

Register all floor drains that are Class V Wells with the MassDEP.

Class V Well Registration:

http://www.mass.gov/eea/agencies/massdep/water/approvals/underground-injection-control-forms.html

ROAD MAINTENANCE

Snow Disposal Recommended Procedures:

- Identify sensitive ecosystems prior to disposal and avoid snow disposal in these areas.
- Follow MassDEP Guidance for snow disposal. Do not dispose of snow in salt-marshes, vegetated wetlands, certified vernal pools, shellfish beds, mudflats, drinking water reservoirs and their tributaries, Zone IIs or IWPAs of public water supply wells, Outstanding Resource Waters, or Areas of Critical Environmental Concern. Consult with the municipal Conservation Commission to ensure that snow disposal in open water complies with local ordinances and bylaws.

  Massachusetts Department of Environmental Protection Snow Disposal Guidance: http://www.mass.gov/eea/agencies/massdep/water/regulations/snow-disposal-guidance.html
- Avoid storing snow on disturbed, unstabilized or highly erodible sites.
- Avoid storing snow at a highpoint where runoff is likely to collect sediment and other pollutants as it melts and flows downhill to a storm drain or surface waters.
- Use bark mulch (i.e., erosion control mix) or silt fence to control sediment. Silt fences should be checked regularly to ensure they are still functioning properly.

Do not plow or push snow into treatment systems, streams, brooks, wetlands or other surface waters.

- Snow should be stored on paved areas or other stable area where spring cleanup can quickly remove deposited sediment.
- Establish a 15-foot boundary for stockpiles of snow next to waterways or wetlands and train municipal employees on this procedure.
- Remove trash/waste from snow dump areas as soon as possible after snow melt.

Deicing Material Storage Recommended Procedures:

- Follow MassDEP Guidance for Deicing Chemical Storage: http://www.mass.gov/eea/agencies/massdep/water/regulations/ guidelines-on-deicing-chemical-road-salt-storage.html
- Deicing materials shall not be stored outdoors without cover. Cover temporary sand and salt piles and place on impervious surfaces.
- Place salt/sand piles in areas not subject to flooding.
- Sweep up any deicing material after a storm that is tracked out of storage areas during loading/unloading procedures. Do not clean up with water.
- Use diversion berms to minimize run-on to storage areas. Salt Application Recommended Procedures:
- Train municipal employees on anti-icing practices. Refer to MassDOT for more information on Road Treatment Materials, Application Guidelines, and Reduced Salt Areas.

  Winter Road Treatment and Snow Removal: http://www.massdot.state.ma.us/highway/Departments/SnowIce/ WinterRoadTreatmentSnowRemoval.aspx
- Identify municipal roads that are candidates for anti-icing and pretreatment.
- Use the minimum amount of sand/salt necessary.

Consider using less harmful deicers such as calcium magnesium acetate, potassium acetate, or organic deicers.

- Consider road temperatures when determining how much deicer to apply.
- Control the rate of spreading by equipping trucks with ground-speed sensors.

APPENDICES

1) 2015 TOWN OF SUDBURY MUNICIPAL FACILITIES WITH POTENTIAL STORMWATER POLLUTING ACTIVITIES

Property Name	Location	Land Use Type	Map_Parcel	Activities on Site	Pollution Mitigation
FEATHERLAND PARK	491 CONCORD RD	Park	F10-0001	Pesticide/Herbicide/Fertilizer Use, Trash Receptacles, Vehicle Maintenance	Field Maintenance Manual
FEATHERLAND PARK	MORSE RD	Park	F09-0006	Pesticide/Herbicide/Fertilizer Use, Trash Receptacles, Vehicle Maintenance	Field Maintenance Manual
RAYMOND RESERVATION	RAYMOND RD	Conservation	L08-0002	Pesticide/Herbicide/ Fertilizer, Pet Walking	Field Maintenance Manual, Pet Waste Signage/Waste Bag
DAVIS FIELD	195 NORTH RD	Park	C10-0500	Pesticide/Herbicide/Fertilizer, Pet Walking	Field Maintenance Manual, Pet Waste Signage/Waste Bag
HASKELL FIELD	15 FAIRBANK RD	Park	F05-0005	Pesticide/Herbicide/Fertilizer, Trash Receptacle, Pet Walking	Field Maintenance Manual, Pet Waste Signage/Waste Bag
LINCOLN SUDBURY REGIONAL HIGH	390 LINCOLN RD	School	F10-0014	Fertilizer, Trash Receptacles, Vehicle Washing, Vehicle Maintenance, Salt/ Sand Storage	Field Maintenance Manual, Stormwater Treatment System
HOP BROOK MARSH CONSERVATION LAND	DUTTON RD	Conservation	H04-0009	Pet Walking	Pet Waste Signage/Waste Bags
	489 PEAKHAM RD	Conservation	H07-0025	Pet Walking	Pet Waste Signage/Waste Bags
PIPER LAND	RICE RD	Conservation	H10-0300	Pet Walking	Pet Waste Signage/Waste Bags
	NORTH RD	Conservation	D10-0300	Pet Walking	Pet Waste Signage/Waste Bags
	BRIMSTONE LN	Conservation	L04-0300	Pet Walking	Pet Waste Signage/Waste Bags
	BRIMSTONE LN	Conservation	L05-0300	Pet Walking	Pet Waste Signage/Waste Bags
	ADAMS RD	Conservation	L06-0001	Pet Walking	Pet Waste Signage/Waste Bags
FEELEY FIELD	200 RAYMOND RD	Park	L08-0012	Pesticide/Herbicide/Fertilizer, Trash Receptacles, Pet Walking	Field Maintenance Manual, Pet Waste Signage/Waste Bag
TRANSFER STATION BUILDING	20 BOSTON POST RD	Public	K12-0002	TBD - SWPPP	Site Specific SWPPP
NIXON SCHOOL	472 CONCORD RD	School	F10-0030	Trash Receptacle, Pet Walking, Minor Fuel Storage (<1320 gal)	Pet Waste Signage/Waste Bags, Enclosed Small Engine Fuel Storage
FIRE STATION - HQ	77 HUDSON RD	Fire	G08-0008	Trash Receptacle, Vehicle Washing, Vehicle Maintenance	Tight Tank Washing Area Storage - Pump, Only minor vehicle repair indoors
PETER NOYES SCHOOL	OLD SUDBURY RD	School	H10-0020	Trash Receptacles, E-Waste Storage	Enclosed E-Waste Storage
POLICE STATION	415 BOSTON POST RD	Police	K08-0006	Trash Receptacles	
TOWN HALL	322 CONCORD RD	Public	H09-0062	Trash Receptacles	
DPW TOWN OFFICES/ SALT SHED	275 OLD LANCASTER RD	Public	H08-0049	Trash Receptacles, Fueling, Vehicle Washing, Vehicle Maintenance, Salt/ Sand Storage	Site Specific SWPPP
CURTIS MIDDLE SCHOOL	22 PRATTS MILL RD	School	H07-0027	Trash Receptacles, Pet Walking	Pet Waste Signage/Waste Bags
JOSIAH HAYNES SCHOOL	169 HAYNES RD	School	D09-0004	Trash Receptacles, Pet Walking	Pet Waste Signage/Waste Bags
LORING SCHOOL	80 WOODSIDE RD	School	M09-0001	Trash Receptacles, Pet Walking	Pet Waste Signage/Waste Bags
FAIRBANK COMMUNITY CNTR	40 FAIRBANK RD	Public	F06-0001	Trash Receptacles, Pool Draining, Chlorine Storage	
FIRE STATION - NORTH RD	268 NORTH RD	Fire	C10-0022	Trash Receptacles, Vehicle Washing	Tight Tank Washing Area Storage - Pump, Only minor vehicle repair indoors
FIRE STATION - BOSTON POST RD	540 BOSTON POST RD	Fire	K07-0012	Trash Receptacles, Vehicle Washing, Vehicle Maintenance	Light Vehicle Maintenance Only

2) IMPORTANT CONTACTS

Organization/Agency	Phone Number
MassDEP Emergency Response Program - Oil and Hazardous Material Spills	888-304-1133
Massachusetts Pesticide Program	617-626-1776
University of Massachusetts Soil and Plant Tissue Testing Lab	413-545-2311

3) LINKS

University of Massachusetts Agriculture & Landscape Program: "Right Plan, Right Place" – A Plant Selection Guide for Managed Landscapes
https://ag.umass.edu/fact-sheets/right-plant-right-place-plant-selection-guide-for-managed-landscapes

MassDOT: Qualified Construction Materials List of Geotextile Fabrics
http://www.mhd.state.ma.us/default.asp?pgid=research_materials/ material-s03i&sid=about

Massachusetts Pesticide Program: Licensing and Certification
http://www.mass.gov/eea/agencies/agr/pesticides/

Massachusetts Registered Pesticide Products:
http://www.mass.gov/eea/agencies/agr/pesticides/pesticide-product- registration.html

University of Massachusetts Soil and Plant Tissue Testing Lab
https://soiltest.umass.edu/

Penn State's College of Agricultural Sciences: Center for Turfgrass Science
http://plantscience.psu.edu/research/centers/turf/extension/factsheets
http://plantscience.psu.edu/research/centers/turf/extension/factsheets/ turf-grass-fertilization.pdf

Baseball Tomorrow: Baseball Field Maintenance
http://web.mlbcommunity.org/programs/baseball_tomorrow_fund.jsp? content=field_maintenance_guide

Massachusetts Department of Environmental Protection:
Hazardous Waste Transportation
http://www.mass.gov/eea/agencies/massdep/recycle/hazardous/ hazardous-waste-transportation.html

Environmental Protection Agency: EPA Lead-Safe Certification Program
http://www.epa.gov/lead/pubs/renovation.htm

Massachusetts Department of Environmental Protection: Bureau of Air Quality
http://www.mass.gov/eea/agencies/massdep/air/

Massachusetts Department of Environmental Protection: Class V Well Registration
http://www.mass.gov/eea/agencies/massdep/water/approvals/underground-injection-control-forms.html

Massachusetts Department of Environmental Protection: Snow Disposal Guidance
http://www.mass.gov/eea/agencies/massdep/water/regulations/snow-disposal-guidance.html

Massachusetts Department of Environmental Protection:
Guidance on Deicing Chemical Storage
http://www.mass.gov/eea/agencies/massdep/water/regulations/guidelines-on-deicing-chemical-road-salt-storage.html

Massachusetts Department of Transportation: Winter Road Treatment and Snow Removal
http://www.massdot.state.ma.us/highway/Departments/SnowIce/WinterRoadTreatmentSnowRemoval.aspx

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New Hampshire Department of Environmental Services, 2006. Guidelines and Standard Operating Procedures: Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping. [Online] New Hampshire Estuaries Project. Available at: http://des.nh.gov/organization/divisions/water/stormwater/documents/nh_idde_sop.pdf [Accessed 25 May 2010].

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