

SOP 21: Operations and Maintenance of Municipal Vehicles and Equipment

Introduction

Regular maintenance of both municipal and contracted vehicles and heavy equipment not only prolongs the life of municipal assets but also helps reduce the potential for leaking of fluids associated with normal wear and tear. Potential pollutants include fuels, oil, antifreeze, brake fluid, solvents, and battery acid. The goal of this written Standard Operating Procedure (SOP) is to provide guidance to municipal employees to help reduce the discharge of pollutants from the MS4 as a result of leaks from vehicles and equipment. If services are contracted with respect to vehicles and equipment, this SOP should be provided to the contractor. The contract should also specify that the contractor is responsible for compliance with all applicable laws.

The Town of Spencer undertakes various procedures in regards to its municipal vehicles and equipment.

Police, Fire, Water, Sewer, and Town Hall assigned vehicles are maintained by third party vendors at the vendor's locations. Highway Department repairs their own vehicle's in house. Vehicle maintenance includes regular oil changes, tune-ups, replacing wearing items (belts, plugs, pullies etc.), all but electronic components are repaired/replaced inhouse. Leak checks are performed by all drivers on a daily basis. The town has one central fueling station located at the Highway Garage. The fuel is stored in a above ground concrete tank that is located in such a way are to prevent any spill from entering a catch basin or open drainage swale. Fueling occurs on a concrete pad with spill containment groves, the fueling pad is checks regularly for cracks and other weaknesses which are patches by Highway Staff when discovered. Police vehicles utilize a commercial car wash facility (scrub-a-dub) located in town. Fire Department washes vehicles inside the garage, wash water is collected in a floor drain the is sent to the sanitary sewer system. Highway Department washes vehicles outside in a designated area. The wash area is located such that wash water cannot enter the storm drain system, washing occurs on a pervious surface such that water is infiltrated into the ground, runoff if it occurs is directed into a bioretention swale then into a unlined rain garden.

Within two years of the effective date of the MS4 Permit, the Town of Specner will create an inventory of all municipal vehicles and equipment and update this inventory annually (refer to the attached vehicles and equipment inventory template).

Procedures

The Town of Spencer will implement the following procedures for municipally owned and operated vehicles and equipment to reduce the discharge of pollutants from the MS4:

Vehicle and Equipment Maintenance

Vehicle Storage

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

- Store and park vehicles on impervious surfaces and/or under cover or indoors whenever possible.

Vehicle Maintenance

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

Body Repair and Painting

- Conduct all body repair and painting work indoors.
- Minimize waste from paints and thinners. Calculate paint needs based on surface area.
- Use dry cleanup methods (vacuum, sweep) to clean up metal filings and dust and paint chips from grinding, shaving and sanding. Sweep debris from wet sanding after allowing it to dry overnight on the shop floor. Dispose of waste properly; never dump waste into storm or sanitary sewers.
- Use sanding tools equipped with vacuum capability to pick up debris and dust.

Fueling

- Fueling areas owned or operated by the municipality should be covered.
- Fueling areas should be evaluated to ensure that pollutants (e.g., gasoline or oil) do not enter the MS4. Follow the procedures in SOP 7: Fuel and Oil Handling.

Material Management

- Store materials and waste in labeled containers under cover and in secondary containment.
- Chemicals should not be combined in containers.
- Hazardous waste must be labeled and stored according to hazardous waste regulations. Follow the procedures in SOP 17: Hazardous Materials Storage and Handling.
- Carefully transfer collected fluids from containers into designated storage areas as soon as possible.
- Store new and used batteries securely to avoid breakage. Store indoors or in secondary containment to contain potential acid leaks. Recycle used batteries.
- Conduct periodic inspections of storage areas to detect possible leaks.
- Do not wash or hose down storage areas unless there is prior approval to collect and discharge the water into the sanitary sewer. Use dry cleanup methods whenever possible.
- Keep lids on containers. Store them indoors or under cover to reduce exposure to rain.
- Inspect and maintain all pretreatment equipment, including interceptors, according to the manufacturer's maintenance schedule and at least once per year.
- Proper spill protocol should be followed to prevent chemicals from entering the stormwater system. Follow the procedures in SOP 4: Spill Response and Cleanup.

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 then capture parts cleaning fluids.
- Recycle cleaning solution. Never discharge waste to the sanitary sewer or storm sewer.
- Use steam cleaning or pressure washing of parts instead of solvent cleaning. Cleaning equipment must be connected to an oil/water interceptor prior entering the sanitary sewer.
- When using solvents for cleaning, drain parts over the solvent tank to avoid drips to the floor. Catch excess solutions and divert them back to tank. Allow parts to dry over the hot tank.

Vehicle and Equipment Washing

Vehicle washing can result in the discharge of nutrients, sediment, petroleum products, and other contaminants to a surface water body or to a stormwater system. The MS4 Permit does not authorize the discharge of municipal vehicle washing byproducts into the MS4.

Outdoor Vehicle Washing Procedures

Outdoor washing of municipal vehicles should be avoided unless wash water is contained in a tight tank or similar structure. Where no alternative wash system is available, and full containment of wash water cannot be achieved, adhere to the following procedures:

- Avoid discharge of any wash water directly to the storm drainage system or surface water (e.g., stream, pond, or drainage swale)
- Minimize the use of water to the extent practicable.
- Where the use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of a biodegradable, phosphate-free detergent is preferred.
- Do not use solvents except in dedicated solvent parts washer systems or in areas not connected to a sanitary sewer.
- Do not power wash, steam clean, or perform engine or undercarriage cleaning.
- Grassy and pervious (porous) surfaces may be used to promote direct infiltration of wash water, providing treatment before recharging groundwater and minimizing runoff to an adjacent stormwater system. Pervious surfaces or other infiltration-based systems should not be used within wellhead protection areas or within other protected resources.
- Impervious surfaces discharging to the storm drainage system should not discharge directly to a surface water unless treatment is provided. The treatment device should be positioned such that all drainage must flow through the device, preventing bypassing or short-circuiting.
- Periodic sweeping and/or cleaning should be completed to prevent accumulation from forming on the washing area.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Follow the procedures in SOP 4: Spill Response and Cleanup.
- Heavily soiled vehicles or vehicles dirtied from salting or snow removal efforts should follow the SOPs in the “Heavy Equipment Washing Procedures” below.

Indoor Vehicle Washing Procedures

- Vehicles and equipment should be washed inside whenever possible to reduce runoff to the stormwater system.
- Where the use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of biodegradable, phosphate-free detergent is preferred.
- Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.
- Floor drains should be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface water bodies or engineered storm drain systems should be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
- Designate separate areas for routine maintenance and vehicle cleaning. This helps prevent

contamination of wash water by motor oils, hydraulic lubricants, greases, or other chemicals.

- Dry cleanup methods are recommended within garage facilities. Do not wash down floors and work areas with water.
- Bring smaller vehicles to commercial washing stations.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Follow the procedures in SOP 4: Spill Response and Cleanup.

Heavy Equipment Washing Procedures

- Mud and heavy debris removal should occur on impervious surfaces or within a retention area.
- Maintain these areas with frequent mechanical removal and proper disposal of waste.
- Impervious surfaces with engineered storm drain systems should not discharge directly to a surface water.
- Floor drains should be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface waterbodies or engineered storm drain systems should be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
- Where the use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of biodegradable, phosphate-free detergent is preferred.
- Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Follow the procedures in SOP 4: Spill Response and Cleanup.

Engine and Steam Washing Procedures

- Do not wash parts outdoors.
- Maintain drip pans and smaller containers to contain motor oils, hydraulic lubricants, greases, etc. and to capture and collect spills or noticeable leaks observed during washing activities, to the extent practicable. Follow the procedures in SOP 4: Spill Response and Cleanup.
- Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of a biodegradable, phosphate-free detergent is preferred.
- Avoid cleaning with solvents except in dedicated solvent parts washer systems. Make use of pressure washing and steam cleaning.
- Recycle clean solutions and rinse water to the extent practicable.
- Wash water should discharge to a tight tank or a sanitary sewer via an oil/water separator. Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.

Employee Training

- Employees who perform work on/with municipal vehicles or equipment are trained ##NUMBER times per year on these procedures and the proper operation of related equipment.
- Employees are also trained on stormwater pollution prevention, illicit discharge detection and elimination (IDDE) procedures, and spill and response procedures.
- If services are contracted, the contractor should be given a copy of this and any applicable SOPs to ensure compliance with MS4 regulations.

Attachments

1. Inventory of Municipal Vehicles and Equipment

Related Standard Operating Procedures

1. SOP 4: Spill Response and Cleanup
2. SOP 7: Fuel and Oil Handling
3. SOP 17: Hazardous Material Storage and Handling

TOWN OF SPENCER, MA FLEET SCHEDULE

TOWN HALL

Year	Make	Model
2012	ROYAL	UTILITY TRAILER
2015	FORD	FOCUS

HIGHWAY DEPARTMENT

Year	Make	Model
1970	HOMEMADE	TRAILER
1977	HOMEMADE	ROLLER TRAILER
1990	GMC	C6500 TOOL TRUCK
1994	INTERNATIONAL	20S254
1995	ATLAS	COMPRESSOR XAS90DS
1996	JOHN DEERE	LOADER
1996	INTERNATIONAL	DUMP TRUCK
1997	MTW (TRACKLES)	TRACTOR
1998	INTERNATIONAL	DUMP TRUCK
2002	BANDIT	BRUSH CHIPPER
2000	INTERNATIONAL	DUMP 2554
2000	KOBELCO	EXCAVATOR
2001	CAM SUPERLINE	UTILITY TRAILER
2002	INTERNATIONAL	DUMP TRUCK
2005	ELGIN	PELICAN SWEEPER
2005	EAGER	20-TON TRAILER
2007	INTERNATIONAL	7400 DUMP TRUCK
2007	INTERNATIONAL	CATCH BASIN CLEANER
2009	CHEV	SILVERADO 25
2008	CAT	BACKHOE
2009	CAT	LOADER
2008	CHALLENGER	BRUSHMOWER MT445B
2011	CHEV	K2500
2012	INTERNATIONAL	20 TON DUMP TRUCK
2012	CROSS COUNTY	FLAT BED TRAILER
2011	WACKER	WL30 LOADER
2012	FORD	F350 DUMP
2014	SURETRAC	LANDSCAPE TRAILER
2010	RINGO	UTILITY TRAILER
2017	INTERNATIONAL	DUMP 7400
2017	FORD	F350 DUMP
2010	KUBOTA	TRACTOR/FRONT END LOADER
2019	FORD	F350 DUMP
2019	STEPP HOT PACK	DUMP TRAILER/POTHOLE PATCH
2020	FORD	F250 PICKUP
2020	INTERNATIONAL	HV507

TRANSFER STATION

Year	Make	Model
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1987	MCCLA	TRAILER
1987	MCCLA	TRAILER
1988	ACCU	TRAILER
2000	DAEWOOD	G2DE FORKLIFT
2003	SPEC	UTILILITY BOX

WATER DEPARTMENT

Year	Make	Model
1989	FORD	TRACTOR
2004	CHEV	SILVERADO K2500
2010	FORD	RANGER
2011	FORD	F450 SUPER CAB
2016	CHEV	SILVERADO K2500
2016	CHEV	SILVERADO 3500HD
2019	CARRY-ON	UTILITY TRAILER

SEWER DEPARTMENT

Year	Make	Model
1989	FORD	LOADER
2011	CHEV	K2500
2015	SURE TRAC	UTILITY
2019	CHEVY	SILVERADO 2500 TRUCK
2009	CHEVY	COLORADO PICKUP

ANIMAL CONTROL

Year	Make	Model
2008	FORD	EXPEDITION - ACO1
2011	FORD	INTERCEPTOR - ACO2

PARKS & RECREATION

Year	Make	Model
2005	FORD	F150 PICKUP
2018	JOHN DEERE	1025R UTILITY TRACTOR
2019	SURE TRACK	TRAILER ST8216TAT

POLICE DEPARTMENT

Year	Make	Model
1999	FORD	CUTVAN - SPECIAL OP
2003	FORD	TAURUS
2009	KRISTI	K 7 X 14 TRAILER
2012	FORD - CAR #4	EXPEDITION
2013	FORD - CAR #7	INTERCEPTOR

2013	FORD - CAR #9	INTERCEPTOR
2015	FORD - CAR #6	INTERCEPTOR SUV
2016	FORD - CAR #3	INTERCEPTOR SUV
2017	FORD - CAR #5	INTERCEPTOR SUV
2017	FORD - CAR #8	INTERCEPTOR SUV
2018	FORD - CAR #2	INTERCEPTOR SUV
2019	CHANGZHOU	UTILITY/RADAR TRAILER
2020	FORD - CAR #	INTERCEPTOR SUV

FIRE DEPARTMENT

Year	Make	Model
1986	CHEV	D-30 (Forestry 2)
1986	DUPLEX	FIRE TRUCK (Engine 3)
1986	AM	GENERAL 5-TON (Forestry 3)
1987	FORD	LOWTIL (Engine 1)
1995	INTERNATIONAL	40S490 (Engine 4)
2000	PIERCE	RESCUE TRUCK
2000	POLARIS	ATV
2003	UNITED	UTILITY TRAILER
2004	FORD	E-450 (SEMA)
2005	FORD	F350 (Forestry 1)
2005	FORD	F-450 (Squad 1)
2005	TRITON	OPEN BOAT
2005	NATIONAL	BOAT TRAILER
2006	INTERNATIONAL	TANKER 1
2008	ASTI	ELECTRIC SIGN BOARD
2008	MANG	LIGHT TOWER
2009	SPART	LADDER TRUCK 1
2014	SMEA	PUMPER (Engine 2)
2015	MISS	UTILITY TRAILER
2017	FORD	EXPEDITION (Car 2 - Deputy)
N/A	HOMEMADE	HAND TUB/TRAILER
2020	CHEVY	TAHOE (Car 1 - Chief)