Stormwater Pollution Prevention Standard Operating Procedure (SOP)

Road, Street, Parking Lot, and Sidewalk Maintenance	
Date:	July 31, 2015
Purpose of SOP:	To minimize or prevent pollutant discharge from daily operations associated with road, street, parking lot, and sidewalk maintenance.
MS4 Permit Reference	Section II.B.6.a
Responsible Party	Robert B. Boxer, PE, Director of Public Works

Roads, streets, parking lots, and sidewalks can become a source of pollution during maintenance and construction activities if proper pollution prevention measures are not implemented. This SOP has been designed to minimize or prevent pollutant discharges from these activities.

1. Responsible Parties

a) Town Staff. The Street Maintenance and Construction Activity Center of the Department of Public Works is responsible for the maintenance and repair of approximately 128 lane miles of the road system within the Town. Work is completed in accordance with Virginia Department of Transportation (VDOT) and Town of Herndon standards. Street Maintenance and Construction is also responsible for filling potholes and fixing damaged asphalt, sidewalks, or curbs.

b) Contractors. This SOP must be adopted by reference or otherwise incorporated into all contracting agreements dealing with road, street, parking lot, and sidewalk maintenance and construction. The requirements of this SOP will be discussed with contractors in project contract discussions, pre-construction meetings, or other appropriate venues to ensure a complete understanding of the details of this SOP.

2. General Procedures

a) Spill Response. Ensure spill response material/equipment is readily available when work activity requires the use of paints, chemicals, or other materials that could harm human health or the environment and any time that equipment is used that involves hydraulic fluids or other fluids that may leak.

b) Storm Inlet Protection. Provide for storm drain inlet protection when working in close proximity and there is a potential for a discharge as the result of a spill or a precipitation event.

c) Safety Data Sheets. Ensure that safety data sheets (SDSs) are available for all materials used during surface repair and maintenance activities. SDS should be readily available and accessible to all Town and contractor personnel handling chemicals or other potentially harmful materials.

d) Weather Conditions. To the extent possible, construction and maintenance activities should only be scheduled and conducted during dry weather. All possible precautions should be used to avoid conducting potential pollution generating construction and maintenance activities immediately before or during times when precipitation is likely to occur.

e) Routine Inspections. During periods of construction and/or maintenance, the work area should be routinely inspected for signs of spills, leaks, trash accumulation, illicit discharges from the site, buildup of sediment, or other conditions that may result in the discharge of pollutants from the site to the storm drainage system.

f) Clean Surfaces. To the extent possible, broom sweep or vacuum all surfaces periodically to keep the work area clean and free from pollutants. Hosing down surfaces should be avoided unless the area is completely contained so that all drainage is directed to the sanitary sewer. Water may also be directed to grass surfaces where it can infiltration into the ground.

3. Asphalt Surface Repair and Maintenance

a) Store mixed asphalt under cover and protected from precipitation and extreme temperatures.

b) Reduce the amount of asphalt materials stored onsite. When possible, purchase only the amount of materials necessary to complete a project.

c) If bulk material storage is necessary, locate storage area outside of the drainage conveyances and away from storm drain inlets. Ensure a tarp is available in case the materials need to be protected from precipitation.

d) Minimize the amount of water used when conducting asphalt cutting, grinding, or milling. Water should only be used in amounts necessary to control dust and provide lubrication, and should never be used in amounts that would result in a flow that could discharge to the drainage system.

e) All sediment and debris resulting from cutting, grinding, milling, or other repair and maintenance shall be contained, swept up, and disposed of properly.

f) The use of tar-based products is strongly discouraged since they contain higher levels of polycyclic aromatic hydrocarbons (PAHs) that harm fish and other aquatic organisms.

g) Apply sealants or other liquid surface treatments with care, avoiding misapplication to a storm drain or other non-asphalt surface. When conditions require application adjacent to a storm drain inlet, consider the use of an impervious inlet cover to prevent unintended spray into the storm drain.

4. Surface Painting/Striping

a) When removing old paint, contain the removed paint to the extent possible and dispose of as appropriate. If there is a potential to encounter lead-based paint, additional precautions not outlined in this SOP may be required.

b) When using high pressure water to remove old paint, protect nearby inlets to prevent the discharge of waste paint, sediment, or other pollutants into the storm drainage system. Use perimeter control around the work area to collect removed paint and dispose of as appropriate.

c) When surface grinding or sand blasting to remove paint, sweep up the paint debris immediately. If water is used for grinding, minimize the amount of water used and provide proper containment to prevent any discharge to the drainage system.

d) When possible, use thermoplastic markings instead of paint for all surface striping.

e) All paint should be stored inside and protected from precipitation.

f) To the extent practical, handle paint in a contained area, under cover from precipitation. If secondary containment is not available, use temporary structural best management practices to protect storm drain inlets and prevent the discharge of paints in the event of a spill.

g) Apply paint at an appropriate rate to prevent excess paint from running off the site.

h) In the event of a spill, containment materials should be deployed to contain the spill and prevent paint from entering the storm drain.

i) Dispose of all waste material in an appropriate manner.

   i. Excess latex and water based paint that is not able to be used elsewhere can be allowed to dry, under cover from precipitation, and disposed of as solid waste. Refer to product information for specific requirements for disposal.

   ii. Leftover oil based paints and solvents must be disposed of as household hazardous waste according to federal and state environmental regulations.

j) Paint equipment should be washed after use in a designated wash area that is plumbed to a sanitary sewer, or approved containment structure.

5. Concrete Surface Repair and Maintenance

a) Store dry concrete material inside, under cover from precipitation.

b) Minimize the amount of concrete material stored onsite. If possible purchase only the amount of concrete material needed for a particular job.

c) Locate storm drain inlets in the vicinity of the work site. Storm drain inlets should be protected with a barrier if the work is in close proximity to the inlets and there is a reasonable chance for material to discharge to the inlet as the result of a spill or precipitation event.

d) To control dust, "wet" cutting methods should be used when practicable. Minimize the amount of water used when conducting cutting to prevent a discharge to the storm drain system. Saw cut slurry shall be contained and properly disposed. Using a vacuum to contain slurry in the saw cutting process is an effective way to ensure that pollutants are not allowed to enter storm drains or other stormwater infrastructure.

e) Remove demolished concrete or related debris and dispose of at a solid waste facility that accepts construction and demolition debris. Dry clean-up methods (broom and shovel) should be used to manage concrete debris to the extent practicable.

f) A concrete washout shall be clearly established and identified at any location where concrete is to be mixed or poured. The concrete washout shall be constructed with an impervious material and in a manner that would prevent washout material from discharging to the storm system. Guidance can be found at www.epa.gov/npdes/pubs/concretewashout.pdf.

g) Excess material that cannot be used at another location or project can be discharged into the designated concrete washout facility, if adequate capacity exists, where it should be allowed to dry and then be disposed as construction waste.

6. Porous Concrete, Porous Pavers, and Similar Structures

a) Prior to conducting any construction or maintenance work, locate and identify any stormwater management facilities within the project area, including but not limited to pervious or porous pavement, rain gardens, etc.

b) Clearly delineate porous pavement, pervious pavers, and similar structures that are not easily distinguishable from traditional surfaces, to increase awareness of their existence.

c) Surface vacuuming should be performed on a routine basis and in the event of a spill of any material that may clog pore spaces. Sweeping is not the preferred method since it can lead to clogging of pores with sediment and other granular material.

d) Do not locate staging areas, equipment or material storage areas on top of porous pavement.

7. Vegetation Management

a) During routine mowing operations, minimize the amount of clippings with the potential to enter the storm drain by directing clippings away from impervious surfaces whenever possible.

b) Do not purposefully sweep, blow, or dump clippings or any vegetated waste into storm inlets. Either blow clippings into grassy areas or collect the clippings or vegetated waste for composting.

8. Training

This SOP will be incorporated into annual training for applicable employees in accordance with the Town's MS4 Program Plan that involve road, street, parking lot, and sidewalk maintenance. Documentation of the training, including sign-in sheets and materials used, will be included in the Town's MS4 annual reports.