



STORMWATER STANDARD OPERATING PROCEDURE

GENERAL POLLUTION PREVENTION AND GOOD HOUSEKEEPING

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Implement the following City of Manassas Stormwater Standard Operated Procedures:
 - Non-Stormwater Discharges
 - Landscaping and Grounds Maintenance
 - Storm Sewer System Cleaning and Maintenance
 - Vehicle/Equipment Parking and Storage
 - Vehicle/Equipment Maintenance and Repair
 - Vehicle/Equipment Washing
 - Vehicle/Equipment Fueling
 - Road, Street, and Parking Lot Maintenance
 - Land Disturbance
 - Pool Operation and Maintenance
 - Material Storage
 - Loading/Unloading Operations
 - Salt and Brine Storage
 - Spill Response and Illicit Discharge

- When applicable, implement additional stormwater pollution prevention and good housekeeping practices required by a City permit or contract, State Virginia Pollutant Discharge Elimination System (VPDES), another permit, or City SOP. Examples include, but are not limited to the following:
 - Nutrient Management Plans (NMPs)
 - Byrd Park Ballfields
 - E.G. Smith Ball Fields
 - Jennie Dean Ballfields
 - Manassas Museum
 - Public Works – Hillside
 - Stormwater Pollution Prevention Plans (SWPPPs)
 - Public Works and Utility Maintenance Facility
 - Materials Reduction Site (MRS)
 - Facility-Specific Operating Procedures
 - Materials Reduction Site (MRS)
 - Street Sweeping SOP
 - Salt Usage SOP/Snow Removal Plan
 - Debris Management Plan
 - Solid Waste Management Plan
- House and maintain City vehicles, equipment, and materials at the Public Works and Utility Maintenance Facility when possible.
- Standard pollution prevention practices may include:
 - Protecting storm drain inlets during activities that cause potential pollutants;
 - Conducting activities on pervious areas away from storm drains, stormwater conveyances, or natural waterways, when possible;
 - Not hosing down spills or leaks; use “dry” cleanup methods.
 - Storing erosive or soluble materials that are temporarily being stored away from the City Public Works and Utility Maintenance Facility in such a manner as to prevent contact with precipitation and stormwater runoff.
 - Storing material containers in good condition and place them away from high traffic areas to minimize the potential for accidents that might result in a spill.
 - Conducting activities away from storm drains, stormwater conveyances (including downspouts), and adjacent natural waterways.

- Regularly inspect for leaks or stains around vehicles and equipment. Use a drip pan or absorbent material to collect dripping fluids. Clean up the absorbent immediately before a rain event.
- When power washing, do not use chemicals, and filter the wash water before it enters the storm drains. Use sandbags and other means to divert wash water into permeable (i.e., grass) surfaces. Sweep up debris, loose paint, and other trash, and dispose of it in a covered trash receptacle.
- Not emptying water from mop buckets or other sources of wastewater outside. Dispose of wastewater at an approved location that discharges to the sanitary sewer.
- When cleaning up from latex painting tasks, collect and discharge wash water associated with cleaning paint brushes, rollers, and other painting materials into a sink tied to the sanitary sewer. When possible, use disposable paint brushes and rollers.
- City personnel typically do not use oil-based paints. However, staff should coordinate with their supervisor and City stormwater staff to ensure proper cleanup and disposal before using oil-based paints. At no time should oil-based paints or chemicals used to clean up be discharged to either the storm sewer system or the sanitary sewer system.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

NON-STORMWATER DISCHARGES

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- General
 - Identify activities that may result in illicit discharges.
 - Report pollution or questionable discharges to the storm sewer system or local waterways to the Engineering Department at 571-383-7981.
 - When possible, conduct activities on pervious areas away from storm drains, stormwater conveyances, or natural waterways.
 - Do not hose down spills or leaks; use “dry” cleanup methods.
 - Ensure chemicals are properly managed.
 - Protect storm drain inlets during activities that cause potential pollutants. Activities include, but are not limited to, the following:
 - Concrete cutting
 - Vehicle/equipment washing
 - Waste management
 - Storm sewer system maintenance
 - Soil disturbing activities
 - Material stockpile storage
 - Hazardous material storage
 - Salt and brine storage
 - Swimming pool operation and maintenance

Refer to the appropriate SOPs for direction and guidance for minimizing pollution from these activities.

- Pressure Washing
 - Avoid pressure washing when possible.
 - Use mechanical cleaning methods such as sweeping or scraping (wire brushes). Water is conserved, and the sweepings can be placed in the trash.
 - If pressure washing occurs, manage wash water appropriately by:
 - Minimizing the volume of water used.
 - Installing inlet protection such as absorbent booms at storm drain inlets to prevent wash water from entering.
 - Using sandbags or other materials to divert runoff to a grassy or vegetated area that does not drain directly to a storm drain.
 - Using cleaners sparingly, if at all.
 - If chemicals, solvents, or hazardous materials are used, the wash water should be contained and disposed of properly.
 - Plug or place covers over drain openings in parking garages during cleaning to avoid discharging pollutants to the storm drain.
 - Clean up remaining residue or debris by sweeping.
- Painting
 - Use less toxic, water-based paints whenever possible. Look for the words “latex” or “cleans up with water” on the label.
 - Never clean paintbrushes or rollers or rinse out paint containers in the street or near a storm drain. Water-based paint can be washed off in a sink that is connected to the sanitary sewer system.
 - Filter and reuse thinners and solvents when cleaning up oil-based paints. Treat leftover cleaning fluids, materials, and oil-based paints as hazardous waste and dispose of properly.
 - Never dispose of unused paint, filters, thinners, and solvents in the street or storm drain.
- Sanitary Sewage Connections and Portable Toilets
 - Ensure that any temporary or permanent facility plumbed to the sanitary sewer is properly connected.
 - Ensure that sanitary/septic facilities are maintained in good working order, and that wastes are transported offsite by a licensed service.
 - Provide secondary containment pans under portable toilets, where possible.

- Provide tie-downs or stake downs for portable toilets in areas of high winds or heavy vandalism.
- Concrete Washouts
 - Retain all the concrete washout water in leakproof containers.
 - Allow the water to evaporate and collect the remaining solids.
 - Remaining solids may be recycled as construction materials.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

LANDSCAPING AND GROUNDS MAINTENANCE

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Implement Nutrient Management Plans (NMPs) at the following sites:
 - Byrd Park Ballfields
 - E.G. Smith Ball Fields
 - Jennie Dean Ballfields
 - Manassas Museum
 - Public Works – Hillsides
- Consider native vegetation as a way to reduce fertilizer and water usage.
- Grass clippings and other collected vegetation should be composted whenever possible to avoid direct disposal in a landfill.
 - Do not allow collected vegetation from mowing, trimming, and other landscape activities to collect in waterways or the storm drainage system.
- Perform mowing at optimal times when possible.
 - Do not mow prior to predicted significant storm events.
 - Ensure the mower's blower does not blow clippings onto paved areas or surface waters.
 - If clippings are blown onto paved surfaces, sweep or blow clippings back onto vegetated areas, not into storm drains.
- Use mulch or other erosion and sediment control measures on exposed soils.

- Use all surface-controlled chemicals (fertilizer, herbicides, pesticides, etc.) according to the manufacturer's instructions.
 - Minimize fertilizer usage whenever possible.
 - Do not apply during rain or 24 hours prior to a rain event.
 - Do not apply any chemicals (insecticides, herbicides, or fertilizer) directly to surface waters unless action is expressly permitted by the state.
 - When broadcast spreading, avoid hitting paved surfaces or use during high winds.
 - Calibrate application equipment at least annually.
 - Pesticide containers must be triple rinsed prior to disposal with municipal trash.
 - Spray the rinsate out in areas typically sprayed for pests.
- Use Integrated Pest Management (IPM) techniques (e.g., judicious use of pesticides), when possible.
- If using irrigation sprinklers, use timers to minimize runoff.
 - Apply water at rates that do not exceed the infiltration rate of the soil.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

LAND DISTURBANCE

OBJECTIVE

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RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- General
 - Identify and implement applicable stormwater pollution prevention and good housekeeping practices required by a City permit or contract, State Virginia Pollutant Discharge Elimination System (VPDES), another permit, or City SOP.
 - Use common erosion and sediment controls during those activities that may result in land disturbance including utility repairs (e.g., drainage system repairs), street repairs, sidewalk repairs, and landscaping (e.g., parks, buildings, and medians) to prevent or minimize contact with stormwater and the discharge of sediment.

Use Article 4 of the City's Construction Standards Manual (DCSM) and the Virginia Erosion and Sediment Control Handbook (VESCH) Standards and Specifications for further guidance regarding erosion and sediment control standards and specifications.

<https://files4.1.revize.com/manassasva/Community%20Development/development%20services/DCSM/Article%204.PDF>

<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/Publications/ESCHandbook.aspx>

- Erosion and sediment controls should be inspected and maintained frequently to identify maintenance needs and to remove accumulated sediment.
- Flow Diversion
 - Divert uncontaminated stormwater away from disturbed areas using berms, site grading, and redirection of roof downspouts (if applicable) to minimize stormwater

contact with bare soil. The less stormwater that comes into contact with bare soil the better.

- Temporary or Permanent Cover
 - Provide temporary or permanent cover (e.g., plastic sheeting, straw, or mulch) to prevent stormwater from mobilizing the disturbed soil.
- Sediment Barriers
 - Use sediment barriers (e.g., silt fence) to treat stormwater that has picked up sediment.
- Construction Entrances
 - Construction entrances (e.g., gravel, wheel wash, etc.) should be installed when construction traffic leaves a construction area and moves directly onto a public road or other paved areas to prevent the tracking of sediment.
- Dewatering
 - Dewatering devices should be used where sediment-laden water must be removed from a construction site by means of pumping that allows sediment to settle out before entering the storm sewer system.
 - Select proper dewatering structure(s) based upon site-specific features such as soils, topography, anticipated discharge quantities, and discharge location.
 - Pump sediment-laden water through properly selected, installed, and maintained controls.
 - Conduct dewatering activities away from drainage facilities and watercourses.
 - Properly dispose of dewatering bags.
 - Use a velocity dissipation device when discharging utility flushing water to non-paved areas to minimize scour potential at the discharge point.
 - Use the VESCH Standards and Specification (STD & SPEC 3.26) for further guidance regarding dewatering activity standards and specifications.
http://www.deq.virginia.gov/Portals/0/DEQ/Water/StormwaterManagement/Erosion_Sediment_Control_Handbook/Chapter%203%20-%203.26.pdf
- Inlet Protection
 - Inlet protection (e.g., filter log, gravel filter, etc.) should be used to slow down the water and allow sediment to settle out before the stormwater enters the storm sewer system.

LAND DISTURBANCE LAWS AND REGULATIONS

- Certain land disturbance laws and regulations are applicable to land disturbance activities depending on the size and location of the land disturbance:
 - Chesapeake Bay Preservation Act:
 - Greater than 2,500 square feet.
 - Virginia Erosion and Sediment Control Law:
 - Equal or greater than 10,000 square feet.
 - Federal Clean Water Act and Virginia Water Control Law:
 - Equal to or greater than 1 acre (43,560 square feet).
 - If activities will result in the disturbance of 2,500 square feet (e.g., 50 feet X 50 feet) check with your supervisor or City Engineering Department to ensure compliance with all land disturbance laws and regulations.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

VEHICLE/EQUIPMENT MAINTENANCE AND REPAIR

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Designate a parking area for vehicles/equipment awaiting maintenance or repair. Inspect stored vehicles/equipment for leaks regularly.
 - Clean up any leaked fluids immediately.
- Inspect stored vehicles/equipment for leaks regularly.
 - Use drip pans or absorbent material to capture leaking fluids.
- Attempt to perform maintenance/repair activities indoors or on an impervious surface.
 - Store vehicles/equipment awaiting maintenance/repair indoors or on an impervious surface.
 - If activities must be performed outside, immediately drain the source of the leak using a drip pan or bucket above the drop cloth.
- Keep designated maintenance areas and equipment clean.
 - Do not allow oil and grease to build up over time.
 - Do not hose down spills or leaks; use “dry” cleanup methods.
 - Clean up spills or leaks with rags and other absorbent materials.
- Empty contents of containers into the proper waste or recycling container.
 - Do not leave collected materials in containers in high-traffic areas to be spilled or kicked over.
- Keep waste oil, antifreeze, and other fluids properly covered and contained in tight-fitting labeled containers.
 - Keep different types of fluid separate and recycle them whenever possible.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

VEHICLE/EQUIPMENT FUELING

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- General
 - Vehicle/equipment fueling should be conducted at the Public Works and Utility Maintenance facility when possible.
 - Mobile fueling shall be minimized - whenever practical, vehicle/equipment shall be fueled at designated fueling area.
 - Ensure that the fuel is the proper type of fuel for the tank being filled.
 - Ensure spill kits are present, stocked, and accessible and location is known to all maintenance personnel.
 - Should there be evidence of spills or leaks from the fueling activities, locate the nearest spill kit and follow spill response procedures.
- Fuel Pump Operation
 - Know where the emergency shut-off switch is located.
 - Know to notify 911 quickly in case of an emergency spill.
 - Park as close as possible to the pump, do not stretch the hose to reach fill port.
 - Remain in the immediate vicinity of the pump during operation.
 - Fuel the vehicle/equipment until the pump automatically shuts off. Do not top off the vehicle/equipment fuel tank.
 - View the area around the fuel pump and vehicle/equipment to ensure no leaks or spills are present.

- Mobile Fueling
 - Mobile fueling should be minimized.
 - Whenever practical, vehicles/equipment should be transported to a designated fueling area.
 - Locate the fueling operation on an impervious surface (i.e., pavement) away from storm drains, stormwater conveyances, and adjacent surface waters to ensure leaks or spills will not be discharged to the storm sewer or local waterways.
 - Store and maintain appropriate spill cleanup materials in the mobile fueling vehicle.
 - Secure mobile fueling containers during transport and storage.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

VEHICLE/EQUIPMENT PARKING AND STORAGE

OBJECTIVE

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RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- General
 - Vehicles and equipment should not be stored adjacent to a storm drain, stormwater conveyance, or adjacent natural waterways whenever possible.
 - Sweep parking lots, storage areas, and driveways as needed to collect dirt, waste, and debris.
 - Do not hose down spills or leaks; use “dry” cleanup methods.
 - If washing/pressure washing of the parking lot or storage area occurs, water containing oils, greases, etc. must be collected and discharged to the sanitary sewer or another treatment system.
 - There are services that will clean parking lots and collect water for off-site disposal.
 - Never drain wash water to the storm sewer system.
 - Use drip pans or absorbent material to capture leaking fluids.
 - Clean up any spilled or leaked fluids immediately.
 - Keep waste oil, antifreeze, and other fluids properly covered and contained.
- Active Fleet/Equipment
 - Use drip pans or absorbent material to capture leaking fluids.
 - Clean up any spilled fluids immediately.
 - Individual vehicles and equipment should be consistently stored or parked in the same area to allow for consistent controls.
 - Properly dispose of all waste oil, antifreeze, and other fluids.

- Keep different types of fluids separate and recycle whenever possible.
- Surplus Fleet/Equipment
 - Inventory all surplus vehicle/equipment.
 - Drain all fluids from surplus vehicle/equipment to prevent drips and leaks, prior to storage.
 - Minimize contact with rain by keeping metals/equipment stored inside to the maximum extent possible.
 - Do not store surplus equipment for extended periods of time (i.e., more than 180 days) or allow for an excessive amount of equipment to build up prior to removal/disposal.
 - If an extended period of time is expected or exceeded, disassemble useable motors and parts and place in appropriate indoor storage locations.
 - Remaining machinery should be disposed of as scrap.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

VEHICLE/EQUIPMENT WASHING

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Wash vehicles/equipment in designated wash areas (e.g., bus wash facility) at the Public Works and Utility Maintenance Facility that are designed to collect and hold wash water before it is discharged to the sanitary sewer system.
 - Designated areas must discharge to a zero discharge, or closed-loop, water recycling system or the sanitary sewer system.
 - Wash water should pass through a pretreatment unit such as an oil/water separator or filtration system before discharging to the sanitary sewer system, etc.
- If access to a designated wash area is not an option, the following alternatives should be used:
 - Use a mobile vehicle washing service. Washing should be performed by commercial washing contractors who temporarily set up washing at City facilities.
 - All wash water must be contained and removed by the washing contractor.
 - City staff must oversee the activities to ensure proper containment and removal of all water and associated wastes.
 - Use a commercial washing facility.
- If no soap or detergent is used and washing is done on a flat, grassy area away from storm drains, stormwater conveyances, or natural waterways, dirty vehicles or equipment may be washed off without the above-noted containment measures.
 - Washing, in this case, must be done only for dirt and may not include salt, fuels, oil, etc.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

ROAD, STREET, AND PARKING LOT MAINTENANCE

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Sweep roads, streets, and parking areas on a regular schedule.
 - Cleaning should be based on usage and field observations of waste accumulation.
 - Implement activities in accordance with the Street Sweeping SOP.
- Provide a sufficient number and type of litter receptacles to reduce the amount of trash and litter in the area, where appropriate.
- General Clean-up Methods
 - A light water spray may be used to wash down areas of light trash, sediment, and debris (e.g., cigarette butts, etc.) after storm drains have been blocked to contain wash water and debris.
 - Spot clean heavy buildups of fuels and related materials where possible.
- Mechanical Sweeping
 - Clean roads, streets, and parking lots using mechanical sweepers equipped with a dust sprinkler.
 - Deposit debris collected by sweepers at the dewatering facility located at either the sweeper dumpster located in the northern part of the Public Works and Utility Maintenance Facility or at the Manassas Transfer Station.
 - Clean street sweepers in accordance with the Vehicle/Equipment Washing SOP.
- Concrete Sawing and Surface Repair
 - Schedule and conduct asphalt and concrete activities for dry weather.

- Take measures to protect any nearby storm drains, stormwater conveyances, and adjacent natural waterways before breaking up asphalt or concrete (e.g., place sandbags around inlets or work areas).
- When making saw cuts in the pavement, use as little water as possible and perform during dry weather.
 - Cover each storm drain inlet completely with filter fabric or plastic during the sawing operation and contain the slurry by placing straw bales, sandbags, or gravel dams around the inlets.
 - After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove it from the site.
 - Alternatively, a small onsite vacuum may be used to pick up the slurry as this will prohibit slurry from reaching storm drain inlets.
- Deicing
 - Follow procedures established in the City of Manassas Salt Usage SOP and the Public Works and Utility Maintenance Facility SWPPP.
 - Mix and store liquid and solid deicing products at the Public Works and Utility Maintenance Facility salt dome in accordance with the Salt and Brine Storage and Management SOP indoors or under cover when possible.
 - General Procedures
 - Reduce or eliminate the need for deicing products by manually clearing sidewalks and driveways prior to deicer use.
 - Follow the manufacturer’s instructions and use only enough to break the ice/pavement bond.
 - Calibrate application equipment at least annually.
 - Do not apply to vegetation or near waterways.
 - Clean equipment in accordance with the Vehicle/Equipment Washing SOP.
 - Do not use a deicer containing Urea.
- Pavement Painting/Marking
 - Schedule pavement painting/marketing activities during dry weather.
 - Load and transfer paint away from storm drains.
 - Use drop cloths and drip pans in paint-mixing areas.
 - Properly maintain application equipment.
 - Capture all clean-up water.
 - Dispose of clean-up water properly or allow it to evaporate.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

LOADING/UNLOADING OPERATIONS

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- An attendant should always be present when loading/unloading activities are being performed.
- Conduct loading/unloading activities under a roof or overhang whenever possible.
- Avoid loading/unloading during wet weather whenever possible.
- Load/unload only in designated areas to easily contain any spills or leaks.
- Be alert for dust or fumes during loading/unloading activities.
- Use berms, site grading, and redirection of roof downspouts to protect storm drains and direct stormwater away from loading/unloading areas.
- Use drip pans or absorbent material when conducting liquid transfer operations or making/breaking any hose and pipe connections where leaks may occur.
- Inspect loading/unloading areas after each use and clean as necessary using “dry” cleaning methods.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

STORM SEWER SYSTEM CLEANING AND MAINTENANCE

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Hand Cleaning
 - Mobilize all required vehicles/equipment and staff to the desired catch basin location.
 - Inspect the storm drain system to determine the level of cleaning necessary.
 - Clean the material from the catch basin.
 - Clean larger debris from open channels as needed (e.g., fallen trees, large branches, etc.)
- Vacuum Truck Cleaning
 - Mobilize all required vehicles/equipment and staff to the desired catch basin location.
 - Inspect the storm drain system to determine the level of flushing and cleaning necessary.
 - Place the hose into the storm drain system at the catch basin and discharge the hose upstream.
 - Use sandbags in the storm drain system, as needed, to divert and maximize water capture.
 - Remove the material from the catch basin.
 - Inspect the storm drain system to determine if additional flushing is necessary—flush and clean consistently with the previous steps.
- Disposal of Collected Materials
 - Dewater the removed material at the dewatering facility located at the Public Works and Utility Maintenance Facility in accordance with the Facility's SWPPP.

- Dispose of the dewatered material at either the sweeper dumpster located in the northern part of the Public Works/Utilities Compound or at the Manassas Transfer Station.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

WASTE MANAGEMENT

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

The City's **Solid Waste Management Plan** supersedes this document. See that plan for additional details regarding the City's waste management.

- Store waste containers indoors or undercover, where possible.
 - Prevent rain from coming in contact with waste materials, especially from washing waste out of holes or cracks in the bottoms of dumpsters.
- Recycle materials when possible (i.e., cardboard, bottles, cans, etc.).
- Ensure waste containers (e.g., drums) are clearly marked, stored with lids, and tops secured.
- Be familiar with the type (e.g., municipal trash or recycling) and location of waste receptacles to ensure that materials are put in the correct location(s).
- Do not mix waste types in different types of storage containers (e.g., liquids in solids waste receptacles).
- Triple rinse empty pesticide containers prior to disposal with municipal trash.
 - Spray out the rinsate in areas typically sprayed for pests.
- Do not overfill containers (e.g., municipal trash dumpsters).
 - If frequent overflow becomes a concern, enlarge the containers or check and empty more frequently.
- Waste storage areas should be bermed or surrounded by secondary containment whenever possible.
- Outside, waste piles should be covered with a roof or waterproof covering whenever possible.

- Non-weatherproof containers need a tarp or other cover on the top and all exposed sides.
- Secure tarps or other covers well and inspect for tearing.
- If waste material storage areas are too large to be covered or contained, erosion and sediment control measures must be placed at the perimeter of the site and at any catch basins to prevent erosion of waste products.
- Inspect storage areas, containers, and covers frequently (e.g., weekly).
 - Repair or replace any damaged items.
- Sweep up wastes regularly.
 - Use dry clean-up methods only, if possible.
 - Do not hose down the area to a storm drain.
 - Bag used absorbent and dispose of in municipal trash.
- Never dispose of waste in the storm sewer system (illegal dumping).
- Chemical/Hazardous Wastes
 - Designate hazardous waste collection areas on-site, when applicable.
 - Ensure that hazardous waste is collected, stored, and removed/disposed of only at authorized disposal areas.
 - It may be necessary to remove and dispose of any floatables (municipal trash) separately due to the presence of vehicle fluids and other petroleum products.
- When applicable, designate a spent fluorescent light bulb storage area and dispose of lights via an approved vendor (www.wmlamptracker.com)
 - Do not dispose of spent fluorescent light bulbs in municipal trash.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

MATERIAL STORAGE

OBJECTIVE

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RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Identify and implement applicable stormwater pollution prevention and good housekeeping practices required by a City permit or contract, State Virginia Pollutant Discharge Elimination System (VPDES), another permit, or City SOP.
- General
 - Store materials indoors, under cover, or in a leak-tight container designed for outside storage when possible.
 - Outside storage areas should be covered with a roof or waterproof covering whenever possible.
 - After each use, ensure that the material is fully contained within a roof or waterproof covering (e.g., sweep material back into bulk storage bay).
 - Salt and other deicers must be stored indoors or under a roof.
 - Materials must be stored in clean, sturdy, leak-tight containers that are designed to be stored outside.
 - Store liquid materials in secondary containment, where possible, in secure areas and away from traffic.
- Stockpiles
 - Material storage areas (e.g., stockpiles) must have a tarp or other cover on the top and all exposed sides.
 - Tarp or another type of cover must be secured well and be free of tears and rips.
 - If stockpiles are too large to be covered or contained, erosion and sediment control measures should be placed at the perimeter of the stockpile and/or at nearby catch basins to prevent the discharge of stockpiled materials.

- Materials should be bermed or surrounded by secondary containment whenever possible.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

POOL OPERATION AND MAINTENANCE

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure City owned and/or operated pool(s).

PROCEDURES

- Prevent algae problems with regular cleaning, consistent and adequate chlorine levels, and well-maintained water filtration and circulation systems.
- Manage pH and water hardness to minimize corrosion of any copper pipes.
- Avoid the use of copper-based algaecides, if possible.
- Do not clean pool filters in the street or near a storm drain.
 - Rinse cartridge filters onto a dirt area and spade filter residue into the soil.
 - If using diatomaceous earth filters, you can backwash onto the soil, but must dispose of spent earth as solid waste as it cannot be discharged to storm drains, stormwater conveyances, adjacent natural waterways, septic systems, or on the ground.
- Do not discharge to a street or storm drain when draining pools.
 - Discharge to a sanitary sewer if permitted to do so.
 - If water is de-chlorinated with a neutralizing chemical or through dissipation, it may be recycled/reused by draining it gradually onto a landscaped area.
 - Water must be tested prior to this discharge to ensure no chlorine is present and the results documented.
- Provide trash receptacles near the pool location.
 - Increase trash collection during peak visitation months if necessary.
- Store pool chemicals indoors or under cover.
- Inspect pools and related pipes, drains, and equipment for damage and leaks routinely and repair or replace them immediately.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff



STORMWATER STANDARD OPERATING PROCEDURE

SALT AND BRINE STORAGE AND MANAGEMENT

OBJECTIVE

It is the goal and intent of the City of Manassas to minimize or prevent pollutant discharges from those daily activities that could affect stormwater.

RESPONSIBILITY

City staff and associated contractors are responsible for executing the activities in this operating procedure at the Public Works and Utility Maintenance Facility, Materials Reduction Site (MRS), and around the City.

PROCEDURES

- Liquid Deicer
 - After loading/unloading activities, inspect pavement surfaces near the storage tanks for visible deicer residues and dispose of them properly.
 - After loading/unloading activities, inspect tanks, secondary containment, pipes, pumps, flanges, couplings, hoses, and valves for damage and leaks and repair as necessary.
 - Use caution when loading/unloading material from the tank.
 - Use secondary containment (i.e., drip pan or bucket) to contain leaks from hoses during loading/unloading activities.
 - Use secondary containment (i.e., kiddie pool, drip pan, bucket) to contain overspray from equipment testing and cleaning activities.
 - Return material collected in the secondary container to the storage container or product container to be used in spreading the liquid deicer.
 - Keep spill kits near the tanks in the event of a spill and clean up the spill properly.
 - Use dry cleanup methods (i.e., absorbent, cloths, brooms, and mops).
- Solid Deicer
 - Store all deicer within the salt dome or other covered facility.
 - After each use, sweep all loose products back into the facility to avoid tracking pollutants, particularly near the loading/unloading area.
 - Inspect pavement surfaces near the storage facility and throughout the site for loose deicer.

Drafted By:	Department of Engineering
Date of Implementation:	July 11, 2022
Approved By:	Susanna Orndorff