

OPERATION, MAINTENANCE, AND INSPECTION PROGRAM FOR MUNICIPAL OPERATIONS

DOYLESTOWN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

February 2014

Revised September 2024

The goal of this updated Operations, Maintenance, and Inspection Program (O&M program) is to reduce or prevent pollutant runoff from municipal operations and minimize impacts to the storm sewer system and surrounding environment.

Pollution Prevention/Good Housekeeping Procedures for Municipal Operations: Pollution prevention and good housekeeping are essential to protect stormwater quality at municipal facilities. By following these procedures, the Township can prevent pollution from entering the waterways, reducing the need for costly clean-ups later on.

Maintaining a clean and orderly work environment is the first line of defense against stormwater pollution. These simple practices reduce the likelihood of accidents and spills:

- Regularly clean floors and surfaces with brooms, shovels, or cleaning machines.
- Sweeping should occur as needed, especially after loading/unloading activities.
- Dispose of garbage and waste materials promptly in proper receptacles.
- Participate in the Township's recycling program for paper, plastics, cans, and bottles.

Municipal Facilities

Doylestown Township's municipal facilities O&M Program highlights four essential areas: Hazardous Materials Storage, Materials Management, Municipal Facilities Management, and Spill Response and Prevention.

Hazardous Materials Storage

Proper storage of hazardous materials is critical to preventing accidental leaks or spills. The Township utilizes secure storage practices, including a Lockable Hazardous Materials Cabinet to ensure that dangerous chemicals are safely contained. Regular inspections and labeling procedures are followed to maintain compliance and safety.

The Township has acquired a Lockable Hazardous Materials Cabinet through a safety grant, ensuring secure storage for hazardous materials, accessible only to trained personnel. Additionally, the Township has a Quick Response Spill Trailer available to address spills promptly, further safeguarding the environment from potential hazardous material leaks.

- All containers, drums, and bags shall be stored away from direct traffic routes to prevent accidental spills.
- When practical, chemicals, fluids, and supplies should be kept indoors.

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- If containers containing chemicals are stored outside, they must be covered when not being used and placed on spill platforms.
- All containers shall be properly labeled or marked and kept in good condition and tightly closed when not in use.
- Perform regular inspections of all indoor and outdoor storage locations.

Material Management

All materials, including chemicals, fluids, and supplies, are managed with care to avoid contamination or pollution. This involves safe handling protocols, proper disposal of waste materials, and the use of phosphate-free biodegradable detergents and non-hazardous cleaning agents when possible. Employees are trained in safe material handling to reduce environmental impact.

Doylestown Township's public works facility follows maintenance protocols to ensure vehicles and equipment do not contribute to environmental contamination. The Fleet Maintenance Building is equipped with floor drains connected to an oil/water separator, and any outside vehicle leaks are immediately addressed with proper containment.

To minimize the risk of pollution:

1. Keep spill kits and absorbent materials near potential hazards.
2. Contain spills with dikes or absorbent materials and dispose of them properly.
3. In case of hazardous spills, notify the Township Manager, Facilities Manager, and emergency responders. Only trained personnel should handle hazardous materials.

Spill Response and Prevention

The Township is equipped with a Quick Response Spill Trailer, allowing for rapid containment of spills. Spill kits, absorbent materials, and containment devices are strategically placed throughout the facility to ensure any hazardous materials are managed promptly. Trained personnel oversee spill responses, and any significant incidents are escalated with the help of local contractors and emergency responders.

Municipal Vehicle / Equipment Operations and Maintenance

Vehicle Inspection

- Before operating any vehicle, conduct a thorough inspection to ensure all components are functioning properly:
- Check for signs of fluid leakage under parked vehicles. If leaks are detected, schedule maintenance immediately, and do not operate the vehicle until repairs are complete.

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Vehicle Operation

Doylestown Township owns a fleet of 22 trucks and heavy equipment, along with 36 vehicles (including, pickup trucks, cars, and SUV vehicles). All vehicles, including contractor-operated ones, must be used safely and legally to prevent pollution:

- Follow all traffic rules and avoid driving off-road when possible. Clean up any dirt tracked onto roadways promptly.
- In case of a fuel or cargo spill, take steps to prevent contaminants from entering storm drains or waterways. Use spill containment measures and ensure proper disposal of materials.
- Keep an updated list of contractors and emergency contacts for incidents beyond the Township's capacity.

Vehicle Maintenance

All maintenance activities should occur indoors at the Public Works facility on Wells Road:

- Inspect vehicles stored outdoors for leaks and use drip pans for any necessary repairs. Clean spills promptly with absorbent materials like Oil Dri.
- Ensure that all waste fluids are collected in properly labeled containers. Used oil should be stored in a designated tank and recycled.
- Hazardous waste, such as gasoline and solvents, should be disposed of through the county's Hazardous Waste Collection Program.

Vehicle Fueling

Fueling of Township vehicles occurs behind the Municipal Building, with two underground tanks (2,000-gallon diesel and 4,000-gallon gasoline) equipped with leak detection systems:

- Monitor fueling operations to prevent spills. Do not leave fueling or deliveries unattended.
- In the event of a spill, use oil dry or absorbent pads to clean up immediately. Never wash spills into storm drains.
- Conduct monthly inspections of fueling areas and storage tanks for signs of leakage. Maintain records of all inspection and repair activities.

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Vehicle and Equipment Washing

- Wash vehicles and equipment indoors at the Public Works Yard, where wash water is directed into the floor drain which is connected to public sewer system:
- Use biodegradable, phosphate-free detergents and collect wash water for proper disposal into the sanitary sewer system.
- Outdoor washing of vehicles or parts with solvents is prohibited.

Training and Inspections

Township employees and contractors must be trained regularly on pollution prevention and waste management. Routine inspections of vehicle storage and maintenance areas will ensure compliance with this program.

Roadways and Parking Lots

Doylestown Township owns and maintains approximately 77 miles of Township roadways and is responsible for repairs and maintenance of all Township roadways and parking lots. Roadway maintenance activities that can affect stormwater quality include roadway paving repair, traffic line painting, snow removal and de-icing, and street sweeping. If road paving, repairs or line painting is needed, the work will be performed by Township Public Works personnel or outside contractors.

There are approximately 33 miles of state owned and maintained roads that are located within the Township. These PennDOT roads include the following: Almshouse Road, Bristol Road, East State Street, Edison Furlong Road, Ferry Road, Limekiln Road, Lower State Road, Main Street, Old Dublin Pike, Pebble Hill Road, Pine Run Road, Route 202, Route 611, Sandy Ridge Road, Sugar Bottom Road, Swamp Road, Tamenend Avenue and York Road.

- The overall condition and cleanliness of Township roads and parking lots shall constantly be inspected and evaluated during routine travels by Township Public Works personnel, inspectors, and officials.
- Those areas with excessive staining, trash or sediment will be investigated and scheduled for cleaning or repairs as necessary.
- Appropriate corrective actions shall be considered for any areas exhibiting flooding or poor drainage patterns.

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Roadway Paving Repair

Avoid paving activities during wet weather.

Ensure that roadside ditches are protected. During wet weather on uncurbed roadways, use temporary berms or dikes at the edge of the road to prevent sediment, debris and waste materials from washing into roadside ditches.

- Ensure that storm drain inlets and open manholes are protected during road repair work to prevent slurry mixes, dust, and debris from entering the storm sewers.
- Avoid using water to clean up. Mechanically sweep and/or vacuum dust and debris following all activities. DO NOT wash residue into the storm drain system.
- Place stockpiles away from waterways and stormwater inlets to prevent materials from being washed into streams. Cover stockpiles or contain with berms.
- Contain water and wastes generated during cleaning and flushing of spray equipment and field servicing of equipment. Use inlet protection and allow area to dry before uncovering storm drain inlets.
- Recycle used materials such as asphalt. Store these materials properly.
- Use drip pans to contain leaks from vehicles and equipment parked at the site overnight.

Traffic Line Painting

- Develop paint-handling procedures for proper use, storage and disposal of paints to keep the material contained.
- Protect storm drain inlets, open manholes and roadside ditches during grinding and pressure washing activities.
- Avoid using water to clean up. Mechanically sweep and/or vacuum grindings and dust following all activities. DO NOT wash residue into the storm drain system.
- Contain water and wastes generated during cleaning and flushing of equipment and field servicing of equipment. Use inlet protection and allow area to dry before uncovering storm drain inlets.

Snow Removal and De-Icing

The storage and application of materials used for roadway de-icing or traction control shall be conducted in a manner that reduces the impact to the storm sewer system and the environment. Doylestown Township uses liquid calcium chloride, salt and cinders for de-icing.

All road salt is stored in a salt shed at the Public Works Yard on Wells Road. In 2022 the Township built a new salt shed. The site design for the salt storage includes 8 ft. of concrete walls and a dome

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tarp roof to enhance winter road maintenance and environment protection efforts. All salt storage is to be protected from precipitation.

During loading and unloading of road salt, prevent and/or minimize spills by utilizing safe work practices and sound judgment.

If any material is spilled, promptly collect it using dry cleaning methods on to prevent pollution runoff. At a minimum, clean up around the salt shed should happen at least once a day. All collected material shall be either reused or properly discarded.

- Minimize the tracking of materials from the storage area and the distance that road salt is transported during loading/unloading operations.
- All operators of snowplows/salt spreaders are to be trained in the proper application rates of road salt. The salt spreaders are to be examined before operating to ensure they are functioning properly.
- The application of road salt and other materials to roads or parking lots will be only enough to accomplish the task and will take into consideration site specific characteristics such as road width and design, traffic concentration, and proximity to surface waters.
- Road salt application should not occur until snow has started to fall, to help ensure that the dry salt is not swept off the roadways by vehicles.
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Street Sweeping

The Township's roads and parking lots are to be swept twice a year, in the spring and the fall. The Township's Street sweeping program helps to keep the streets and storm drain inlets clear of debris and occurs in coordination with the Township's street overlay activities.

Prior to the installation of new roadway overlay, the street is milled and swept as are the streets in the general area. The street sweeping program generally ensures that all streets in the Township are swept at least twice a year. Roadway cleaning will occur after the winter de-icing season is over, in order to remove accumulated materials. Roadway cleaning may also occur under conditions when oil spill cleanup materials such as sand or oil dry are applied. This will prevent these oil contaminated materials from being washed into the storm sewer system.

Stormwater Facility Operation, Inspection and Maintenance

All municipally owned stormwater facilities will be operated according to their design specifications and in a manner that prevents or reduces adverse environmental or public health and safety impacts.

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Stormwater Facility Inspection

Doylestown Township Public Works personnel or other designated Township representatives will conduct inspections to assess the performance of stormwater facilities and identify potential sources of pollutants, trash, and debris entering or exiting the stormwater system. Inspections are a routine part of the Township's job duties.

Inspections will check for issues such as excessive silt accumulation, erosion, collapsed pipes, misaligned joints, and water quality concerns like unusual algae growth, discolored water, water with a sheen, or suspect odors.

Where possible, inspections will occur following severe weather events, such as heavy rain, to ensure stormwater systems are functioning properly and free of debris. The frequency of inspections depends on factors like weather, available manpower, and the type of stormwater structure.

- Inspect stormwater inlets, outlets, and pipes for blockages, sediment buildup, or structural damage that could impede water flow.
- Check for vegetation growth, including invasive plants, that may obstruct water movement or damage stormwater infrastructure.
- Ensure all stormwater detention and retention basins are free from standing water, which could indicate drainage issues.
- Look for signs of wildlife interference, such as burrows or nests, which may compromise the structural integrity of stormwater systems.
- Confirm that stormwater ponds and wetlands have stable banks, preventing erosion and water quality degradation.
- Monitor stormwater swales and ditches for proper grading and flow direction, ensuring they divert water as intended.
- Verify that stormwater BMPs (Best Management Practices) like rain gardens, pervious surfaces, and bioswales are functioning as designed to treat and manage stormwater runoff.
- All inspection activities, findings, and recommendations must be documented and kept on file. Records should include logs of all inspections, repairs, and maintenance, inspection reports, work invoices, and photos of the facilities when possible.

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Storm Sewer Inlets, Piping, Drainage Channels, and Outfalls, BMPs, Basins

Inlets

Doylestown Township owns and maintains storm drain inlets located along roadways and in parking lots throughout the Township. They are primarily PennDOT Type C, PennDOT Type M.

- Inspect all Township storm drain inlets at least annually to determine the trash and sediment load and overall condition of the structure. If the depth of deposits is greater than or equal to one-third the depth from the basin bottom to the invert of the lowest pipe or opening into or out of the basin, cleaning will be scheduled.
- Storm drain inlets that accumulate trash and deposits quickly will be inspected more frequently, and the drainage area will also be inspected to determine possible causes.
- Inlet grates will be inspected to ensure that there is no trash blocking the inlets, especially before heavy rains.
- While inspecting storm drains inlets, Township personnel will check for evidence of illegal dumping or illicit discharges. If evidence of illegal dumping or illicit discharges is found, efforts are to be made to identify the source of these discharges.
- The storm drain inlets at the Public Works Yard are equipped with filters to catch debris that might run off from trucks and other equipment. All of these inlets are to be inspected on a regular basis and cleaned as necessary to ensure their proper operation.

Piping, Drainage Channels, and Outfalls

The Township owns bridge structures and underground storm sewer piping. The piping is constructed of a variety of materials.

- Open conveyances will be periodically inspected by public works personnel to check for trash, debris, sediment build-up, obstructions and general water quality conditions.
- Piping will be periodically inspected as needed to check for structural integrity, blockages, or any other unusual conditions such as improper cross-connections or excessive inflow/infiltration.

Similarly, storm sewer outfall structures are to be inspected in accordance with the requirements of the Township's NPDES MS4 permit to check for structural integrity and any erosion. While inspecting storm sewer outfall structures, Township public works personnel or other Township representatives are to check for evidence of dry weather discharges that may indicate an illicit

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discharge to the storm sewer system. If evidence of an illicit discharge is found, efforts are to be made to trace the dry weather flow and identify the source of this discharge.

Stormwater BMPs

The Township owns 27 stormwater basins located at:

These BMPs are to be inspected at least annually to check for sediment accumulation and overall conditions and they should be inspected after large rain events to evaluate overall performance and drainage characteristics. Sediment exceeding 10% of the designed basin depth will trigger sediment removal to the original basin shape and depth. The basins will be inspected for the presence of trash, yard waste or other non-degradable materials. The type and quantity of vegetation will be checked. Basin berms, outlet structures and spillways will be examined for structural integrity. The basins will be checked to determine if the trash racks are missing or plugged. The basins are to also be checked for evidence of water pollution such as algae growth, oil sheens, discolored water and unusual odors.

Stormwater Basins

Annual Inspections and Reporting

- A formal inspection of each basin will occur annually to assess structural integrity, vegetation health, and overall performance.
- Inspection reports will document conditions and identify any necessary maintenance or repairs, which will be scheduled accordingly.
- Photographic documentation will accompany inspection reports to provide visual proof of the basin's condition and to support record-keeping for compliance purposes.

Basin Cleaning and Waste Removal

- Yard waste, non-degradable waste, and exotic or invasive vegetation will be removed from stormwater basins as needed.
- Maintenance activities, including sediment removal, will occur during dry conditions whenever possible to minimize disturbance.
- Any vegetation disturbed or removed during cleaning or repairs will be immediately stabilized and re-vegetated to prevent erosion.

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Vegetation Management

Mowing and/or trimming of basin vegetation will occur as required to sustain the function of the basin.

- Plant material and debris will be removed from the site following maintenance activities.
- Areas of bare or sparse vegetation will be addressed by aerating and conditioning the soil, followed by reseeding and mulching to restore proper vegetative cover.

Basin Outlet Structure Maintenance

- Outlet structures will be inspected regularly and cleared of debris when needed to ensure unimpeded water flow through the basin.
- Any clogs or blockages will be promptly addressed to maintain the system's efficiency and prevent overflow.

Naturalization Efforts

- In line with local sustainability goals, stormwater basins will be naturalized where appropriate to encourage native vegetation growth and biodiversity.
- Naturalization efforts will include selective planting of native species and the removal of non-native invasive plants.

Municipal Park Maintenance / Landscaping

All municipally owned stormwater facilities will be managed according to their design specifications to prevent or reduce negative environmental, public health, and safety impacts. These facilities are maintained to ensure they operate efficiently and in line with regulatory requirements.

Fertilizers, Herbicides and Pesticides

- Any planned herbicide or pesticide application on Township lands or around any part of the storm sewer collection system will be reviewed by Doylestown Township personnel to assure compliance with all applicable regulations and to prevent adverse water quality impacts.
- Applications will only be conducted by Township personnel or contractors who have an appropriate applicators license from the PA Department of Agriculture.
- Fertilizers, herbicides, and pesticides shall be applied exactly according to manufacture guidelines, as more is not always better in the case of chemical application. The use of these chemicals will be limited as much as possible and non-hazardous alternatives shall be encouraged.

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Disposal of Debris

Any materials recovered from any part of the storm sewer collection system will be handled and disposed of in accordance with all applicable state and federal disposal regulations. All recovered materials, especially those from storm drain inlets and piping, will be evaluated to determine if it is municipal, residual or hazardous waste.

- The following are guidelines for the proper disposal of materials recovered from municipal operations. Recovered materials that need to be disposed of can be classified as municipal, residual or hazardous waste. Most of the typical materials recovered by Township personnel will be municipal wastes that can be discarded with the Township's normal waste stream. This includes street sweeping, storm drain inlet cleaning, sewage contaminated soils, and general trash that is not obviously or knowingly contaminated. If medical wastes are recovered, they are classified as "special handling municipal waste." If Township personnel discover waste that they believe to be hazardous or medical waste, they should immediately contact the Township Manager and inform her of the situation. The Township Manager is to contact the Fire Department and Haz-Mat team as appropriate for proper disposal of the waste.
- Recovered leaves will be brought back to the public works yard. Recovered trash, street sweeping, and general will be discarded along with normal Township waste stream. Any item that can be recycled (e.g. glass, paper, plastic, metal) should be recycled.
- Residual waste is nonhazardous industrial waste. Examples of residual wastes include oil contaminated materials, asbestos piping, and used tires and oils. Asphalt millings are classified as a co-product if stored and managed properly; otherwise, it is residual waste.
- Disposal of residual wastes will be subject to the requirements of the disposal facility. Chunks of cured asphalt are classified as clean fill and can be used as clean fill but cannot be placed in waterways (e.g. creeks, wetlands) or floodways. If used asphalt will not be used as clean fill, it must be disposed of as residual waste.

It ultimately will be up to the Township staff that are collecting or handling recovered materials to determine the proper waste designation and disposal methods. Any questions can be directed to the local solid waste authority or the Department of Environmental Protection's Waste Management Program at (484) 250-5760.