



WOODBIDGE TOWNSHIP

TEN TOWNS, ONE COMMUNITY



TOWNSHIP OF WOODBRIDGE
MIDDLESEX COUNTY
NEW JERSEY

Stormwater Pollution Prevention Plan

Municipality: Woodbridge

County: Middlesex

Permit Number NJG 0148857

Annual Review Date: Stormwater: January 29, 2024

Program Coordinator: Michael Gelin

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Form 1 – Team Members

Stormwater Program Coordinator (SPC)			
Name and Title		Michael Gelin Municipal Engineer	
Phone	732-602-6047	Email	michael.gelin@twp.woodbridge.nj.us
Individual(s) Responsible for Major Development Project Stormwater Management Review			
Name and Title		Michael Gelin Municipal Engineer	
Phone	732-602-6047	Email	michael.gelin@twp.woodbridge.nj.us
Name and Title			
Phone		Email	
Other Municipal Stormwater Team Members			
Name and Title		Terence Vogt, Principal, Regional Manager Remington & Vernick Engineers, Inc	
Phone	732-955-8000 ext. 1709	Email	terry.vogt@rve.com
Name and Title		Jason Cline, Associate Remington & Vernick Engineers, Inc	
Phone	732-955-8000 ext. 2815	Email	jason.cline@rve.com
Name and Title			
Phone		Email	
Shared/Contracted Service Providers			
Provider Name	Service Provided	Term of Service	

Form 3 – Public Announcements
Part IV.B. and C.

1. Provide the link to the dedicated stormwater webpage for your municipality.
http://twp.woodbridge.nj.us/195/Stormwater-Management
2. List the name and title of person(s) responsible for stormwater webpage postings/updates.
Sean Burns, Geographic Information Systems Specialist Tel: 732-634-4500 Ext. 4710 Email: sean.burns@twp.woodbridge.nj.us
3. List the newspapers, social media outlets, websites, direct mailings (Email or postal), and other communication approaches typically used to inform/educate the public on stormwater program information and related events/activities.
<i>Public Meetings: Home News Tribune and Star Ledger and the Township's Main webpage.</i>
<i>Community Stormwater related Activities: Storm Township Facebook and stormwater webpage page, Township Public Meeting agenda postings.</i>
<i>Paper copy of newsletter mailed to residents and businesses and posted on webpage educating them of hazards associated with illicit connections and improper disposal of waste.</i>
<i>Annual Calendar for solid waste pick up and recycling includes stormwater management educating the public of hazards associated with illicit connections and improper disposal of waste.</i>

Form 4 – Post-Construction Stormwater Management in New Development and Redevelopment

Part IV.E.

1. How does the municipality define “major development”? If it is different from the definition in N.J.A.C. 7:8, explain the difference.

The Township defines “major development” as a disturbance of 1 acre of land.

“Major Development” means an individual development, as well as multiple developments that individually or collectively result in: The disturbance of 1 or more acres of land since February 2, 2004. The creation of 0.25 acre or more of “regulated impervious surface” since February 2, 2004.

The creation of 0.25 acre or more of “regulated motor vehicle surface” since March 2, 2021; or a combination of 2 and 3 above that totals an area of 0.25 acre or more, where the same surface cannot be counted twice in this determination. Includes all developments that are part of a common plan of development or sale. Also applies to government agency projects.

All other criteria match the updated definition from the Mar 2, 2021 Stormwater Management Rules at N.J.A.C. 7:8-1.2.

2. Is the municipality’s stormwater control ordinance (SCO) the same as or more stringent than NJDEP’s model SCO? If more stringent, explain the difference.

The municipality has adopted a Stormwater Control Ordinance (SCO) after NJDEP’s model SCO. The municipality’s minimum threshold for major development is 1 acre of disturbance instead of 1.0 acre of disturbance. We retained the ¼ acre threshold for regulated impervious surface and regulated motor vehicle surface (each or combined) as defined in N.J.A.C. 7:8-1.2.

The Township of Woodbridge ensures that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards (RSIS) comply with those standards. This includes compliance with the NJDP Stormwater Management rules N.J.A.C. 7:8, which are referenced in the RSIS. Our planning and Zoning Boards also ensure compliance before granting any approval under the jurisdiction of the Municipal Land Use Law.

Any Township of Woodbridge projects or any projects on Township of Woodbridge property will comply with a plan similar to the Stormwater Management Plan and will address and ensure long-term compliance and maintenance of the BMP’s for that project. All work undertaken will conform to the intent of the Municipal Stormwater Management Plan, including the design standards and the Township of Woodbridge stormwater requirements.

3. Describe the process for reviewing major development project applications for compliance with the SCO and Residential Site Improvement Standards (RSIS).

The Township of Woodbridge ensures that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards (RSIS) comply with those standards. This includes compliance with the NJDP Stormwater Management rules N.J.A.C. 7:8, which are referenced in the RSIS. Our planning and Zoning Boards also ensure compliance before granting any approval under the jurisdiction of the Municipal Land Use Law.

Any Township of Woodbridge projects or any projects on Township of Woodbridge property shall comply with a plan similar to the Stormwater Management Plan and will address and ensure long-term compliance and maintenance of the BMP's for that project. Any work undertaken shall conform to the intent of the Municipal Stormwater Management Plan, including the design standards and the Township of Woodbridge stormwater requirements.

For major development projects the town is undertaking, the Municipal Engineer is responsible for reviewing and approve the stormwater management plan. The Planning Board Engineer reviews the stormwater management design for compliance with the water quality, water quantity, groundwater recharge and green infrastructure design standards as per N.J.A.C. 7:8 and the more stringent criteria included in Storm Township's SCO. If the project is deemed compliant with the SWM rule and Township's SCO, it is presented to Planning Board for approval.

Throughout construction, the Township's Engineering inspectors inspect the construction sites at project milestones to ensure that the project is constructed in accordance with the approved development plans.

The Township ensures any new development or redevelopment projects have adequate long-term operation and maintenance of BMPs for that project by requiring a project maintenance plan similar to the maintenance plan outline provided by the New Jersey Department of environmental Protection (NJDEP).

4. Does your municipality have a mitigation plan included in your Municipal Stormwater Management Plan and Stormwater Control Ordinance? Indicate the location of records of all variances granted.

No. The municipality does not have a mitigation plan included in our Municipal Stormwater Management Plan and Stormwater Control Ordinance.

5. Indicate the dates of each iteration of the township’s Stormwater Control Ordinance, starting with the initial adoption and including revisions.
<i>The original SCO was adopted on February 2004. It was revised, February 18 2020 to comply with the New Jersey Department of Environment Protection Stormwater Amended Rule that effect March 2 2021.</i>
6. Indicate the dates of each iteration of the township’s Municipal Stormwater Management Plan, starting with the initial adoption and including revisions.
<i>The original Municipal Stormwater Management Plan was adopted on December 6, 2005. It revised with no change during the re-examination of Storm Township’s Master Plan on February 2006, and more recently on March 2020.</i>

Form 5 – Ordinances

Part IV.F.1.

Ordinance	Date Adopted	Was the DEP model adopted without change? If not, explain how the municipality's is more stringent.	Entity Responsible for Enforcement	Fees & Fines
1. Pet Waste	<i>02 Sep 1980</i>	<i>Yes</i>	<i>Health Department</i>	<i>Varies</i>
2. Wildlife Feeding	<i>03 Jan 2006</i>	<i>Yes</i>	<i>Health Department</i>	<i>Varies</i>
3. Litter Control	<i>06 Jun 1964</i>	<i>Yes</i>	<i>Code Enforcement</i>	<i>Varies</i>
4. Improper Disposal of Waste	<i>06 Dec 2005</i>	<i>Yes</i>	<i>Code Enforcement</i>	<i>Varies</i>
5. Yard Waste	<i>03 Jan 2006</i>	<i>Yes</i>	<i>Code Enforcement</i>	<i>Varies</i>
6. Private Storm Drain Inlet Retrofitting	<i>18 May 2010</i>	<i>Yes</i>	<i>Code Enforcement</i>	<i>Varies</i>
7. Illicit Connections	<i>16 Mar 1965</i>	<i>Yes</i>	<i>Code Enforcement</i>	<i>Varies</i>
8. Privately-Owned Salt Storage	<i>08 Aug 2023</i>	<i>Yes</i>	<i>Code Enforcement</i>	<i>Varies</i>
9. Tree Removal-Replacement	<i>22 Feb 2011</i>	<i>Yes</i> <i>General Ordinance Adopted 4/1/97</i> <i>Land Use Ordinance Adopted 2/22/11</i>	<i>Code Enforcement</i>	<i>Varies</i>
<p>List any additional stormwater-related ordinances the municipality has adopted that address issues beyond the scope of the MS4 permit. Include adoption date, entity responsible for enforcement, and related fees and fines.</p> <p><i>The Municipality distributes annually the NJDEP Pet Waste Handout with all new pet licenses issued Township Wide. Code enforcement officers and local police will enforce these ordinances. If someone is found to be in violation of an ordinance, they will be issued a written warning for first time offenses, and penalties will be issued for subsequent offenses.</i></p>				
<p>Indicate the location of records associated with ordinances and related violations and enforcement actions below.</p> <p><i>Municipal Clerk's office. Records are kept in the Clerk's office. If someone is found to be in violation of an ordinance, they will be issued a written warning for first time offenses, and penalties will be issued for subsequent offenses.</i></p>				

Form 6 – Street Sweeping

Part IV.F.2.a.i. and ii.

1. Provide a written description and/or attach a map outlining the sweeping schedule for the following:

- Segments of municipal roads with storm drain inlets that discharge to surface water (required at least 3 times each year)
- Segments of municipal roads that do not have storm drain inlets but do discharge to surface water (required at least 1 time each year)

Note: Only asphalt and concrete roads need to be swept. Roads that do not have storm drain inlets and do not discharge to surface water do not need to be swept.

Currently Woodbridge's street sweeper is in operation 5 days a week, weather permitting. Woodbridge currently has 9 street sweepers and typically operates 6 sweepers at any given time.

A daily log of all maintenance is kept at the Department of Public Works. The log will be used to record the date and area swept, as well as the amount of material collected.

A schedule is structured to ensure that all streets are swept on a monthly basis. The municipality uses the following criteria:

- *The street is owned or operated by the municipality;*
- *The street is curbed and has storm drains;*
- *The street has a posted speed limit of 25 mph or less;*
- *The street is not an entrance or exit ramp; and*
- *The street is in a predominantly commercial area*

The Township of Woodbridge completes a sweeping schedule of all township streets once per quarter. The Township has evaluated all of its streets to determine which areas will need to be swept monthly. There are no streets that meet the required threshold, however, Woodbridge Township intends on maintaining its existing street sweeping program for all streets (that are not required by the permit), which includes sweeping all streets once a year.

All sweepings are stored under cover on an impervious surface at the DPW garage prior to offsite disposal.

The following "predominantly commercial" roads fall subject to the street sweeping requirement:

Woodbridge: *Main Street, Green Street, Rahway Avenue, New Street; North James Street; Fulton Street; Pearl Street*

Fords: *Lafayette Road; Egan Avenue*

Menlo Park Terrace: *Kelly Street; Menlo Avenue*

Colonia: *Inman Avenue, Chain O' Hills Road, East Walnut*

Iselin: *Montague Ave.; Edward Street; Bradford Place; LaGuardia Ave.; Marconi Ave, Middlesex Ave.*

Avenel: *Lord Street; Crystal Street*

The Township regularly for the Middlesex County owned streets. These streets include:

Berry Street *(from Main St/Rahway Ave to Woodbridge Ave)*

Crows Mill Road *(from Route 440/Smith St to King Georges Post Rd)*

Florida Grove Road	<i>(from Convery Blvd./ Route 35 to Smith Street)</i>
Ford Avenue	<i>(from Route 1 to the Edison Township Line near N.B. Ave)</i>
Green Street	<i>(from Lincoln Highway to Rte. 9)</i>
Inman Avenue	<i>(from Edison Township Line to City of Rahway Line)</i>
King Georges Post Road	<i>(from Conrail Bridge to New Brunswick Avenue to Route)</i>
Middlesex-Essex Tpke	<i>(from Edison Township Line/Wood Ave to Green St)</i>
New Brunswick Avenue	<i>(from Edison Township Line to City of Perth Amboy Line)</i>
Oak Tree Road	<i>(from Edison Township Line/Wood Ave to Lincoln Hwy)</i>
Port Reading Avenue	<i>(from Rahway Ave to Borough of Carteret Line)</i>
Rahway Avenue	<i>(from City of Rahway Line to Main Street/Berry Street)</i>
Randolph Avenue	<i>(from Hart St/City of Rahway Line to Bo. of Carteret Line)</i>
Riverside Drive	<i>(from Edison Township Line to Smith Street)</i>
Smith Street	<i>(from Route 449/Crows Mill to City of Perth Amboy Line)</i>
State Street	<i>(from West Avenue to City of Perth Amboy Line)</i>
West Avenue	<i>(from State Street to Port Reading Avenue)</i>
Wood Avenue	<i>(from Inman Avenue to Middlesex-Essex Turnpike)</i>
Wood Avenue South	<i>(from Middlesex-Essex Tpke to Garden State Pkwy)</i>
Woodbridge Avenue	<i>(from Berry St to Conrail's Perth Amboy Branch R.O.W.)</i>
Woodbridge Center Drive	<i>(from Route 1 to Main Street)</i>

2. Indicate if sweeping work is outsourced and if so, describe the arrangement.

The Township Department of Public Works personnel do all street sweeping in compliance with the MS4 permit conditions, a list of street sweeping and solid waste collection removed in cubic yards is documented.

Form 7 – MS4 Infrastructure

Part IV.F.2-4. and Part IV.G.2-3.

1. Municipal Storm Drain Inlets

- a. Describe how you ensure that municipal inlets without permanent wording cast into the design have been properly labelled.
- b. Describe how you ensure that municipal and private storm drain inlets have been retrofitted.
- c. Describe how you ensure that newly installed storm drain inlets include corresponding catch basins or other BMPs to collect solids.
- d. Describe when and how you conduct inspections of storm drain inlets and the criteria used to determine when they need to be cleaned.

Woodbridge Township has implemented an annual catch basin cleaning program to maintain catch basin function and efficiency. All catch basins will be inspected once each year. If, at the time of inspection, no sediment, trash or debris is observed in the catch basin, then that catch basin will not be cleaned. All catch basins will be inspected yearly, even if they were found to be "clean" the previous year. At the time of cleaning, the catch basins will also be inspected for proper function. Maintenance will be scheduled for those catch basins that are in disrepair.

Catch basins and storm drain inlets are inspected once per week with a two-man crew. If necessary, clean up and repairs are made during the time of inspection. They are trained to check for debris collected in the catch basin. All catch basins that are 50% or more full are scheduled for clean out by a vacuum truck contractor within one month of inspection.

Department of Public Works personnel do all the labeling. The municipality will continue to maintain and upkeep the legibility of the labels throughout the entire municipality. The labels will read "No dumping - Drains to Stream" with a picture of a fish next to it. We will label all storm drain inlets that are along municipal streets with sidewalks, and all storm drain inlets within plazas, parking areas, or maintenance yards that are operated by Woodbridge Township. For the labeling we will use plastic or metal labels that will be applied using adhesive.

As part of the annual stormwater facility inspection and maintenance, we will be checking these labels to ensure that they are still visible and legible, and if they are not, we will ensure that the labels are replaced immediately. As part of the new permit, we will be enforcing the storm drain-labeling program for private sites, which repave parking facilities or roads in connection with storm drains.

2. Municipal Catch Basins

- a. Describe when and how you conduct inspections of catch basins.
- b. Describe the criteria used to determine when catch basins need to be cleaned.

The municipality has 10,762 catch basin. Each year, we inspect at least 2,690 (25% of the total) catch basins on rotation and ensure that all catch basins are inspected at least once within the 5-year permit cycle. Areas that clog and flood often during storms are inspected more regularly and prior to large, forecasted storms, and cleaned if necessary. DPW personnel conduct a visual inspection using a flashlight and measuring pole. All inlets are marked during inspection and are cleaned during the time of inspection, if necessary.

Extra diligence is used by the Public Works Dept. to keep the inlet cleaned out and in good working condition. Surface debris is removed on a regular basis and the County or State is contacted and notified of the issues for County Roads or State Highway.

All inlets are marked during inspection and are cleaned during the time of inspection, if necessary.

3. Municipal Conveyance System

Describe when and how inspections of MS4 conveyance systems are conducted, and the criteria used to determine when they need to be cleaned. Include a description of the equipment and techniques used.

The Division of Roads and Sewers within the Department of Public Works regularly inspects the streams, creeks, rivers, ditches and swales Township wide. They look for obstruction, trash or debris interfering with stormwater flow. Thereafter, a report is generated and work order issued to remove the obstructions and desnag under the General Permit activities allowed by the NJDEP.

DPW personnel also performed outfall inspections on a regular basis throughout the Township. We implement and enforce an illicit connection elimination program to detect and eliminate illicit connections into the municipality's small MS4. The inspections include the initial physical inspection of all municipally owned outfalls.

When we perform illicit connection part of this program, we check all of our outfall pipes for signs of scouring. All sites are placed on a prioritized list and repairs are made in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey. In addition, repairs that do not need NJDEP permits for those repairs may be done first.

We will follow each repair up with an annual inspection of the site to ensure that scouring has not resumed. Attached is a list of all sites with outfall pipe stream scouring, the date we plan on repairing the scouring, and the method of repair we will use. When repairs are completed we will note the date of that repair on this form.

We record outfall inspections for Stream Scouring and Illicit Discharges as on the NJDEP Illicit Connection Inspection Report Form. The Closeout Investigation Form is submitted to the NJDEP once the appropriate amount of investigation has been completed. A summary of these inspections/investigations are kept. All stormwater facility outfalls are identified, mapped, and issued an alphanumeric identifier throughout the Township.

4. Municipal Outfall Inspections – Stream Scouring

Describe the program in place to detect, investigate, and control localized stream scouring from stormwater outfalls. Include a description of the equipment and techniques used.

Woodbridge owns and operates 579 total outfalls. On average the Department of Public Works, Division of Streets and Sewers inspects 145 outfalls (25% of the total) and the surrounding areas for scouring.

If scouring illicit connection, stream scouring is detected, the inspectors record inspections on the NJDEP Illicit Connection Inspection Report Form. The Closeout Investigation Form is submitted to the NJDEP once the appropriate amount of investigation has been completed.

We conduct an initial physical inspection of all of our outfall pipes during the mapping process. We will use the DEP Illicit Connection Inspection Report Form to conduct these inspections, and each of these forms are kept with our SPPP records.

Outfall pipes that are found to have a dry weather flow or evidence of an intermittent non-stormwater flow will be rechecked again to locate the illicit connection. If we are able to locate the illicit connection (and the connection is within the Township) we will cite the responsible party for being in violation of our Illicit Connection Ordinance, and we will have the collection eliminated immediately. If, after the appropriate amount of investigation, we are unable to locate the source of the illicit connection, we will submit the Closeout Investigation Form with our Annual Inspection and Recertification.

If an illicit connection is found to originate from another public entity, the Township will report the illicit connection to the Department.

All pertinent repair records including the date, location, type of repair, and copies of all applicable NJDEP permits are retained in the Engineering Department. Past repairs will be inspected annually to ensure scouring has not resumed. Appropriate repairs will be made at those outfall locations where such resumption has occurred.

A summary of these inspections/investigations is kept on file. Inspectors trace any detected stream scouring back to the source within 30 days. If a source is identified, the Township takes immediate corrective action if is municipally owned property. In the case, it is privately-owned, we send a letter of Notice of Violation to the property Management or Owner with the specifics. If the Township is unable to identify the source, the enforcement inspector and MS4 case manager are notified before the end of the 30 days.

DPW personnel inspects illicit connection, scouring of outfalls within few days of any complaints. Corrective actions are taken immediately after the inspection report is released. If remediation cannot be completed within twelve months, a schedule will be submitted to the MS4 case manager prior to the twelve-month deadline.

5. Municipal Outfall Inspections – Illicit Discharge Detection and Elimination

Describe the program in place for conducting visual dry weather inspections of municipally owned or operated outfalls. Include a description of the equipment and techniques used. Record cases of illicit discharges using the DEP’s Illicit Connection Inspection Report Form from the Department’s main stormwater webpage.

Woodbridge owns and operates 579 total outfalls. On average the Department of Public Works, Division of Streets and Sewers inspects 145 outfalls (25% of the total). Inspectors checked for dry weather discharges (72 hours after a rain event), intermittent non-stormwater flow, and discoloration or inappropriate debris (such as toilet paper) in and immediately downstream of the outfall.

DPW personnel inspects illicit discharge of outfalls within hours of any complaints. If an illicit discharge is detected, the township will begin the work to identify the source within days. Inspectors complete and submit the NJDEP Illicit Connection Inspection Report Forms for each suspected illicit discharge to submit with our MS4 Annual Report. If the source is identified, the township notifies the property owner of the violation and immediate action is taken to have the illicit connection eliminated.

6. Other Municipal Infrastructure

List the types of MS4 infrastructure in your town that require inspection but are not noted above in items 1-5. Describe when and how you conduct inspections of this infrastructure and the criteria used to determine when they need to be maintained and/or cleaned.

Infiltration Basins – DPW staff performs annual inspections according to the approved stormwater maintenance and operations manual for the major development. Once inspection is completed, a letter is sent to the property owner or property manager on file for the maintenance. All corrective maintenance must be corrected within thirty days.

Manufactured Treatment Devices (MTDs) – DPW staff performs annual inspections according to the approved stormwater maintenance and operations manual for the major development. Once inspection is completed, a letter is sent to the property owner or property manager on file for the maintenance. All corrective maintenance must be corrected within thirty days.

7. Stormwater Facilities Not Owned or Operated by the Municipality

Describe your program for ensuring adequate long-term cleaning, operation, and maintenance of stormwater facilities not owned or operated by the municipality. This should include your plan for ensuring annual inspections are being done on these private properties and describe how you record the locations and logs associated with private infrastructure.

Long-term maintenance of BMP's and stormwater facilities that are not owned and/or operated by the Township are provided for under the stormwater control ordinances by requiring design engineers to prepare a specific maintenance plan that identifies the parties responsible for ensuring maintenance and compliance. In addition, facilities owners/operators are required to report to the Township annually, as described more fully under the Stormwater Facility Maintenance.

Department of Public Works inspectors performed annual inspections on all private stormwater facilities not owned and operated by the Municipality based on the findings corrective action report is issued to the property owner or property manager responsible for operation, and maintenance of stormwater facilities at the site. If the necessary maintenance is not completed by the due date, a notice of violation is issue and possible court order.

8. Infrastructure Records

Indicate the location of records related to stormwater infrastructure inspection, cleaning, maintenance, and repair activities.

Department of Public Works, Division of Engineering keeps an inventory list of all stormwater infrastructure (municipal and private) with records of inspections, cleanings, routine maintenance work, investigations of illicit connections and scouring near outfalls, and repairs that have been done as well as those projected for completion each year. These records are retained in the Division of Engineering office.

Form 8 – Community-wide Measures

Part IV.F.2.

<p>1. Herbicide Application Management Describe your program for preventing herbicides from being washed into the waters of the State and to prevent erosion caused by de-vegetation.</p>
<p><i>We do all de-vegetation by mowing or clipping and have not experienced erosion because of this practice.</i></p>
<p>2. Excess Deicing Material Management Describe your program for ensuring that excess salt piles are removed in a timely manner after storm events.</p>
<p><i>DPW staff are trained to shovel up excess salt piles that remains on roadways and parking areas within three days (72 hours) after the storm is over, conditions permitting. The salt is collected in a covered trash bin on the truck and the salt is reused during the next storm.</i></p>
<p>3. Roadside Vegetative Waste Describe your program for ensuring proper pickup, handling, storage, and disposal of wood waste and yard trimmings generated by the permittee along municipal roads or on municipal properties (trimming trees, mowing, etc.).</p>
<p><i>DPW staff use mower bags to collect grass clippings in most areas. The clippings are dumped on a paved surface temporarily at the maintenance yard and covered. Tree branches that result from trimming activities are also collected and brought back to the maintenance yard. These materials are moved off site to the county compost facility every month.</i></p>
<p>4. Roadside Erosion Control Describe your program to detect and repair erosion along municipal roadways.</p>
<p><i>As DPW staff perform annual storm drain inlet inspections as noted above, they also check for erosion of shoulders, embankments, ditches, and soils along roads. If they notice any such erosion or sedimentation collecting in areas, including in the waters near the road, they log it in the maintenance schedule and fix the issue within three months. We either plant vegetation or use other methods, such as riprap in areas prone to erosion along roads to promote soil stabilization as described in the Standards for Soil Erosion and Sediment Control. We will contact our MS4 Case Manager for guidance for cases where planting will not remedy this issue.</i></p>

Form 9 – Municipal Maintenance Yards & Other Ancillary Operations

Part IV.F.5.

Please complete a separate Form 9 for each yard or site. Indicate the number of yards/sites the municipality owns or operates: _____

1. Site Name and Address	
<i>Department of Public Works 225 Smith Street Keasbey, NJ 08832</i>	
2. Monthly Site Inspections	
Describe the nature of inspections conducted at this site and the location of inspection logs.	
<i>Department of Public Works has designated a trained full-time safety coordinator to inspect during daily operations. The coordinator inspects the site daily to ensure that all materials and machinery stored outside are stored in such a way that minimizes exposure to stormwater. He ensures the materials are on impervious surfaces as required, and completely covered. Remedial actions taken during inspection, as well as those that are still needed are reported in the inspection log.</i>	
<i>Follow-up actions are scheduled for completion within one week. Specifically, we check if outdoor containers are covered and placed on spill platforms or clean pallets and labels are in good condition. The coordinator ensures that spill kits are accessible near liquid transfer areas. He ensures that bulk liquids are protected with secondary containment and that all accessories (hoses, valves, etc.) are in good condition and within the containment area. He ensures that all outdoor refuse containers and dumpsters are always covered. All inspection records are retained at the DPW office.</i>	
3. Inventory List	
List all materials and machinery that are potentially exposed to stormwater.	
Materials	Machinery/Equipment
<i>Road salt</i>	<i>Loading vehicles Salt spreading vehicles</i>
<i>Transmission Fluid, Motor Oil, Grease</i>	
<i>Diesel & Gasoline USTs (Vehicle Fueling area at rear of DPW)</i>	<i>Above ground tank</i>
<i>One (1) open canopy</i>	<i>Recycled cardboard</i>
<i>One (1) open canopy</i>	<i>Recycled paint</i>
<i>Various recycled dumpsters and containers</i>	<i>Dumpsters and containers</i>
<i>Metal storage overhang storage (located adjacent to DPW building)</i>	<i>Miscellaneous machinery</i>
4. Discharge of Stormwater from Secondary Containment	
Describe the process in place for discharging stormwater from secondary containment areas where outdoor containers are stored.	

1,000 Gallon Waste Oil AST

This single wall steel tank is located under a semi-permanent structure, southeast of the main DPW building, adjacent to the Arthur Kill. This tank is equipped with an external steel secondary containment device. The tank is equipped with a spill bucket and a visual sight gauge. This tank is hand filled via individual transfers of less than 25 gallons of waste oil at a time. A spill originating from this tank would collect within the steel secondary containment device. The bulk oil transfer area is located on an impervious asphalt area adjacent to this AST. A likely release from this location would flow southward to a drainage ditch which drains into the Arthur Kill. The necessary improvements to the bulk oil transfer area are detailed in Section 4.0 of this document.

Secondary Containment Inspections

The bulk storage secondary containment areas shall be inspected monthly for the accumulation of oil and rainwater (if applicable). The inspection should include whether the containment is full of rainwater, oil, or an oil/water mixture (the latter is determined if there is a sheen floating on the water).

If the contained liquid is water with no visible sheen, it can be discharged into the storm water collection system. However, if there is oil, or an oil/water mixture (i.e. sheen or other indicator), the cause of the oil spill must be determined and the oil or mixture needs to be removed and disposed of as waste. The Woodbridge Tank Inspection Sheet provides a checklist for the inspection of the secondary containment structures.

5. Fueling Operations

Does fueling occur on site? If so, describe the BMPs in place to minimize contamination of stormwater from fueling activities. If not, explain where fueling takes place.

DPW Observation of Deliveries

The facility manager, or designee, will supervise deliveries from all oil suppliers and waste oil removal contractors. Delivery actions and observations must include the following:

- 1. Verify delivery truck contains type and quantity of oil ordered. For waste oil pickup truck, verify that the tank on the truck has room to contain the entire volume of the waste oil tank. Transfer of product should take place during daylight hours in non-rain events if practical.*
- 2. Determine level and volume of fuel in tank to ensure tank can accept volume ordered.*
- 3. Tank truck to be accompanied by trained operator and Woodbridge employee prior to unloading or loading. Personnel shall verify correct fill port on tank is accessed and verify that spill response materials are present.*
- 4. Fuel transfer containment device (where applicable) must be inspected to ensure it is closed prior to product transfer. Ensure all drainage valves are closed at containment area.*
- 5. Extinguish all nearby ignition sources within 50 feet of transfer area.*
- 6. Tank truck brakes shall be set and the driver shall remain with the vehicle during the entire unloading period.*

7. *Inspect hose connections for drips/spillage. Spill pads should be used to capture product.*
8. *Ensure that the tank vent line is open and unobstructed.*
9. *Prior to filling (and again prior to departure of tank truck), the lowermost drain and all outlets of the tank truck shall be examined for spillage.*
10. *Truck drive to place collection bucket below tank truck unloading valve for any drips.*
11. *DPW employee observing fuel transfer inspects the fuel transfer area for any releases. If any spill occurs during the fuel transfer process, the process shall immediately cease and the DPW spill reporting procedures shall be followed.*
12. *Gravity drains all hoses into the tank.*
13. *Inspect and clean (where applicable) fill port containment system.*
14. *Open gate valve and/or remove and store storm drain covers near fuel delivery area (and waste oil transfer area) if no spills or spills were observed.*

DPW Vehicle and Equipment Fueling Practices:

DPW personnel authorized to dispense fuel should comply with the following procedures to assist in the safe transfer of petroleum product into equipment or vehicles:

1. *Verify container or vehicle is compatible with the fuel to be dispensed.*
2. *Vehicle or container to be positioned as close as possible to fuel pump.*
3. *Remove all ignition sources.*
4. *Fuel dispenser nozzle is to be placed as far as possible inside the vehicle or container fill port.*
5. *Inspect all nozzles, connections, hoses for spillage or damage. Notify on site supervisor if damage or spills are observed.*
6. *Attend dispenser at all times during product transfer.*
7. *Remove nozzle, hold upright, inspect for spills, and return to dispenser.*
8. *In the event of an overflow, contain/remove spill immediately and notify the onsite supervisor.*

6. Vehicle/Equipment Maintenance and Repair

Do you perform maintenance and repair on site? Is this conducted indoors or outdoors? If outdoors, describe the BMPs in place to minimize contamination of stormwater from maintenance and repair activities.

DPW Building interior includes vehicle maintenance bays, office space, and material/vehicle and equipment storage. All our vehicle maintenance is performed at the DPW building. The Best Management Practices are in place to minimize contamination of stormwater from maintenance and repair activities.

Four (4) 275 Gallon and one (1) 300 Gallon Oil ASTs

These five (5) single wall steel tanks are located within vehicle maintenance bay #6, the bulk oil storage room at the DPW facility. These tanks store clean hydraulic and transmission oils, as well as waste oil, utilized for and generated from vehicle maintenance operations. The five tanks are staged on an impervious concrete surface and surrounded by a concrete containment wall. All five tanks are enclosed within the concrete containment area which has sufficient capacity for the single largest tank stored in this area. A release from any of these tanks would collect within the concrete containment area. A spill kit is located adjacent to the concrete containment area.

The bulk oil delivery area for these five ASTs is located outside of the building adjacent to the north wall of the structure approximately 20' from the oil storage area. A likely release from the bulk oil delivery area would flow north into a stormwater drain which is located in the north parking lot adjacent to the main DPW building. The necessary improvements to this bulk oil delivery area are detailed in Section 4.0 of this document.

Two (2) 270 Gallon Various Oil AST

These two 270 gallon single walled tanks are located inside the northwest part of the DPW facility in the Police bay. These tanks store clean motor and transmission oils, utilized for vehicle maintenance operations. These tanks are equipped with a visual sight gauge. A spill kit for these two tanks is located within the Police bay. The bulk oil transfer area for these two tanks is located outside the Police bay in the adjacent parking lot. A likely release from this bulk transfer area would flow down-gradient approximately 50' into a stormwater inlet.

7. Wash Wastewater Containment

Do you wash vehicles on site? If so, describe the BMPs in place to minimize contamination of stormwater from these activities. Note that on site containment structures require annual inspections by a NJ licensed professional engineer. If not, explain where vehicle washing takes place.

No. The municipality does not wash vehicles on site.

8. Salt and Other Granular De-icing Materials

Do you store salt and other granular deicing materials on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater from these materials. If not, explain where these materials are stored.

Salt Storage at Woodbridge

Woodbridge Township currently stores its de-icing material in a permanent structure located at its maintenance yard. At the completion of loading and unloading activities, we shall inspect for spilled salt. The DPW works to minimize tracking of material from loading and unloading operations performs regular inspections and maintenance of storage structure and surrounding areas. Salt and De-Icing materials are stored in a permanent structure. The storage area is also swept on a regular

basis.

Inspections of Woodbridge's Salt dome are recorded on the attached Log.

Satellite Salt Storage

We currently operate two temporary satellite salt storages are located in Iselin and Colonia. Materials in these satellite storages are tarped when not in use. These temporary outdoor storages shall not exceed 30 days unless otherwise approved in writing by the NJDEP.

Sand Storage at Woodbridge

Currently the Woodbridge Township Parks Department uses clean sand for various municipal applications. Woodbridge will ensure that all sand stored on municipal property is kept at least 50 feet from a storm drain inlet.

Storage Area Inspections

Following the delivery of any salt or sand, Woodbridge DPW employees inspect the delivery location to maintain the above mentioned 50' setback. In addition, following heavy rain events, DPW employees inspect both salt and sand storage areas to ensure compliance with the SBR.

The following Good House Keeping practices for De-icing material handling will be implemented by appropriate employees:

- 1. Prevent and/or minimize spillage of salt & de-icing materials during loading & unloading activities.*
- 2. Spilled salt & de-icing materials are removed using dry cleaning methods and either reused or properly discarded.*
- 3. If needed, sweeping will be complete immediately after loading/unloading activities.*
- 4. Storage and loading/unloading areas are swept as needed, in addition to after loading/unloading activities.*
- 5. Tracking of materials from storage & loading/unloading areas are minimized.*
- 6. Salt and de-icing material distance between storage and loading/unloading areas will be minimized.*

Uncovered Sand will be setback at least 50 feet from;

- 2. Storm sewer inlets,*
- 3. Ditches,*
- 4. Surface water bodies*
- 5. Other stormwater conveyance channels.*

Inspection:

Storage and Loading Areas are inspected on a regular basis and immediately during loading/unloading activities. Maintenance are performed as needed.

9. Aggregate Material, Wood Chips, and Finished Leaf Compost

Do you store these materials on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater from these materials. If not, explain where these materials are stored.

We store Aggregate Material, Wood Chips, and Finished Leaf Compost temporarily at our site. Aggregate Material, Wood Chips, and Finished Leaf Compost are stored in a dedicated dumpster, which is covered when not in use and hauled for proper disposal when the container is full or every quarter, whichever is sooner.

10. Cold Patch Asphalt

Do you store these materials on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater from these materials. If not, explain where these materials are stored.

DPW store cold patch asphalt indoors. Materials below are contained within a concrete “Jersey Barrier” wall system to prevent run-through of stormwater

Materials

*Rip-rap
Cold patch
¾ Clean stone
Dense Graded Aggregate
Sand*

11. Street Sweepings and Storm Sewer Cleanout Materials

Do you store these materials on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater from these materials. If not, explain where these materials are stored.

Road cleanup materials are placed into storage that are leak-proof and on an impervious surface and removed for disposal. Sweepings are stored in tarped, dumpsters, on pavement surrounded by a hay bale barrier, until removed. Dumpsters are regularly checked for damage or leaks. They are hauled off for proper disposal when it is full or every quarter, whichever is sooner.

12. Construction and Demolition Waste, Wood Waste, and Yard Trimmings

Do you store these materials on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater from these materials. If not, explain where these materials are stored.

The Township of Woodbridge Department of Public Works collects yard waste from all residents at least monthly starting October 1st and running through December 15th for each calendar year. Yard waste is also collected during the Spring. Woodbridge conducts approximately 100 special pickups during the winter months at residences. Woodbridge utilizes a street sweeper to conduct leaf pickups during the Spring.

For the remainder of the year, residents are encouraged, as needed, to drop off all yard wastes at the Township of Woodbridge's Public Works facility. Through an annual mailing, issued by the Township of Woodbridge, residents are notified of the yard waste collection schedule.

All residents of Woodbridge are required to use bio-degradable bags to contain their yard waste. Woodbridge does not collect non-containerized yard waste from its residents.

Grass and other yard waste are collected weekly year round. All grass and yard waste must be containerized. Brush of a 12” diameter and less than 3’ length must be placed at the curb for collection and must be non-containerized. Bundled brush is collected weekly. Non-bundle brush is collected once a month during the period of January through October.

We will be conducting monthly collection of leaves during the period of October – December. All collection dates and details will be made available to our residents through newspaper advertisements, individual mailings or, in some cases, personal delivery.

Woodbridge Township has adopted and is enforcing a yard waste ordinance that prohibits yard waste from being placed at the curb or along the street more than seven days prior to a collection, unless they are bagged or otherwise containerized. The ordinance also prohibits the placing of yard waste closer than 10 feet from any storm sewer inlet along the street, unless they are bagged or otherwise containerized.

We store construction and demolition waste, wood waste, and yard trimmings temporarily at our site. Construction and demolition wastes are stored in a dedicated dumpster, which is covered when not in use and hauled for proper disposal when the container is full or every 4 months, whichever is sooner. Wood waste and yard trimmings are stored in storage bays which are more than 50 feet from any stormwater inlets and surface water. Materials are hauled away when the bays get full or every quarter, whichever is sooner.

13. Scrap Tires

Do you store these materials on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater from these materials. If not, explain where these materials are stored.

We store scrap tires temporarily at our site. Tires are stored in a dedicated dumpster. Materials are hauled away when the bays get full or every quarter, whichever is sooner.

14. Inoperable Vehicles and Equipment

Do you store inoperable vehicles or equipment on site? If so, describe how they are stored and the BMPs in place to minimize contamination of stormwater. If not, explain where they are stored.

We do not store inoperable vehicles or equipment on site.

Form 10 – Training

Part IV.F.6-10.

Stormwater Program Coordinators
Describe the training provided for the municipal Stormwater Program Coordinator.
<i>The Stormwater Program Coordinator (SPC) for the municipality attends NJDEP training every permit cycle. Training covers the SPC responsibilities, permit conditions, annual reporting, and required submissions and documentation.</i>
<i>Engineers and others who review stormwater management design for development and redevelopment projects will complete the Department approved Stormwater Management Design Review Course once every 5 years. Township board members and governing body members who review applications complete the online training tool.</i>

Topic	Municipal Employees
	Examples: in-person or virtual group sessions, e-Learning, field trainings, and videos
	Describe the training provided for municipal staff.
SPPP	<i>The Township conducts an annual Local Education Program that focuses on providing the municipal employees whose work duties involve stormwater management with information on the impact of stormwater discharges to surface and ground waters of the State and steps that that the public can take to reduce pollutants in stormwater runoff. Appropriate Information covered under the program include, put not be limited to, local stormwater related municipal ordinances (Pet Waste Ordinance, Litter Ordinance, Improper Disposal of Waste Ordinance, Wildlife Feeding Ordinance, Illicit Connection Ordinance, refuse Container / Dumpster Ordinance, and Private Storm Drain net Retrofitting); proper application, storage and disposal of fertilizer and pesticides; home composting and yard waste recycling; use of native or well adapted vegetation; local stream and / or shoreline restoration activities; watershed education; and general nonpoint source education.</i>
Construction Site Stormwater Runoff	<p><i>The Township has adopted, implemented, and enforces a Municipal Stormwater Management Plan and stormwater control ordinances in accordance with the permit requirements. To control stormwater from new development and redevelopment projects throughout the Township of Woodbridge including projects which Woodbridge operates, the following action items will be implemented:</i></p> <p><i>Action Items to control stormwater from new development and redevelopment projects:</i></p> <p><i>The Township of Woodbridge has an adopted Stormwater Management Plan (SMWP).</i></p> <p><i>The Township of Woodbridge is already ensuring that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards for stormwater management (including the NJDEP Stormwater Management rules, N.J.A.C. 7:8, referenced in those</i></p>

	<p><i>standards) are in compliance with those standards.</i></p> <p><i>Staff responsible for inspections of construction projects that disturb one acre of soil or more, are trained annually on related MS4 permit conditions. Property owners must obtain a 5G3 permit from NJDEP prior to commencement of construction activities and must comply with their approved soil erosion and sediment control plan.</i></p>
<p>Post-Construction Stormwater Management in New and Redevelopment</p>	<p><i>The Township ensures that all new residential development and redevelopment projects that are subject to the Residential Site Improvement Standards (RSIS) comply with those standards. This includes compliance with the NJDP Stormwater Management rules N.J.A.C. 7:8, which are referenced in the RSIS. Our planning and Zoning Boards also ensure compliance before granting any approval under the jurisdiction of the Municipal Land Use Law.</i></p> <p><i>Any Woodbridge projects or any projects on Township property will comply with a plan similar to the Stormwater Management Plan and will address and ensure long-term compliance and maintenance of the BMP's for that project. All work undertaken will conform to the intent of the Municipal Stormwater Management Plan, including the design standards and the Township of Woodbridge stormwater requirements.</i></p> <p><i>Woodbridge Township ensures any new development or redevelopment projects have adequate long-term operation and maintenance of BMPs for that project by requiring a project maintenance plan similar to the maintenance plan described in our draft of that ordinance, and by requiring and funding the implementation of that plan. We will also require any storm drain inlets that we install to comply with the design standard in Attachment C of our permit. Once that ordinance takes effect, we will ensure such operation and maintenance for any new development or redevelopment projects on our property by complying with the maintenance requirements in that ordinance. In addition, any storm drain inlets we install for such projects will comply with that ordinance's standard for such inlets.</i></p> <p><i>Our planning board and municipal attorney have reviewed a draft municipal stormwater management plan and a draft municipal stormwater control ordinance for their adoption. We also plan to meet with the Middlesex County planning agency staff to discuss the plan and ordinance. The plan and ordinance will be adopted by our planning board and council, respectively, by the deadlines specified in the permit, and will be submitted to the county planning agency for approval.</i></p> <p><i>Once approved, the ordinance, which will be administered by our planning and zoning boards and code enforcement officer, will control stormwater from non-residential development and redevelopment projects. Where it is necessary to implement the municipal stormwater management plan, the approved ordinance will also control aspects of residential development and redevelopment projects that are not subject to the Residential Site Improvement Standards.</i></p>

Staff responsible for implementing stormwater permit requirements receive an annual review of the fundamentals of the municipality's post-construction stormwater management program to address stormwater runoff. Training explains the municipality's definition of major development and the interconnection among the Stormwater Management rules at N.J.A.C. 7:8, the Storm Township SCO, stormwater permit conditions, the Department's BMP Manual, and Guidance Documents. For example, we identify where the Department's maintenance guidance is available on the website for DPW staff reference when an approved maintenance plan does not exist.

For any BMP that is installed in order to comply with the requirements of our post-construction program, Woodbridge Township will ensure adequate long-term operation as well as preventative and corrective maintenance (including replacement) of BMPs. For BMPs on private property that we do not own or operate, Woodbridge Township intends to do this by adopting and enforcing a provision in the municipal stormwater control ordinance that requires the private entity to perform the operation and maintenance, with penalties if the private entity does not comply. If, for example, the private entity does not perform the required maintenance, the Township can perform the maintenance and charge the private entity.

Woodbridge Township will also enforce, through the municipal stormwater control ordinance, compliance with the design standard in Attachment C of our permit to control passage of solid and floatable materials through storm drain inlets. Woodbridge Township expects that for most projects, such compliance will be achieved either by conveying flows through a trash rack as described in the "Alternative Device Exemption," or (for flows not conveyed through such a trash rack), by installation of the NJDOT bicycle safe grate and (if needed) a curb opening with a clear space no bigger than two inches across the smallest dimension.

The Township of Woodbridge assures adequate long-term operation and maintenance of BMP's for any new development or redevelopment projects constructed on Municipal property by requiring a project maintenance plan similar to the maintenance plan described in our ordinance, and by requiring and funding the implementation of that plan. We require any storm drain inlets that we install to comply with the design and construction details.

Long-term maintenance of BMP's and stormwater facilities that are not owned and/or operated by the Township are provided for under the stormwater control ordinances by requiring design engineers to prepare a specific maintenance plan that identifies the parties responsible for ensuring maintenance and compliance. In addition, facilities owners/operators are required to report to the Township annually, as described more fully under Form 13 - Stormwater Facility Maintenance.

	<p><i>All improvements within the Township that trigger compliance with the Tier A MS4 NJPDES permit are required to provide storm drain inlets (new and/or retro-fits) that control the passage of solids and floatables.</i></p> <p><i>The Township has updated the Municipal Stormwater Management Plan and associated Stormwater Control Ordinance, which are consistent with the NJ Stormwater BMP Manual. We have also included county planning agency staff comments and recommendations on the Plan and ordinance.</i></p>
Community-wide Ordinances	<p><i>Staff responsible for approving and/or enforcing stormwater-related ordinances receive annual training on related MS4 permit conditions and to review the purpose of each ordinance and what steps to take if violations are reported.</i></p>
Community-wide Measures	<p><i>Staff responsible for conducting activities associated with community-wide stormwater management measures attend annual training to discuss the MS4 permit requirements and town specific measures employed to comply with the street sweeping, storm drain inlets (labeling, retrofitting, and installations), herbicide application, de-icing operations, roadside vegetative waste, and roadside erosion control requirements.</i></p> <p><i>Information is also presented regarding current best management practices, safety equipment and procedures, frequency of activities, and proper documentation of work.</i></p>
Stormwater Facilities Maintenance	<p><i>The Department of Public Works conducts informal yearly training for existing and new personnel by supervisors on procedures and a review of record keeping requirements. Each employee will be provided with a copy of Tier A Guidance Document chapters 8-10 for personal use.</i></p> <p><i>Staff responsible for conducting activities associated with inspections, maintenance and repair of stormwater infrastructure attend annual training on the MS4 related permit requirements. This training details what infrastructure is to be maintained according to approved manufacturers' maintenance plans, versus the remaining infrastructure that is to be maintained according to the NJDEP's BMP Manual.</i></p> <p><i>will implement a stormwater facility maintenance program to ensure that all stormwater facilities operated by the Township function properly. Woodbridge Township operates the following:</i></p> <ul style="list-style-type: none"> - <i>catch basins</i> - <i>storm drains</i> - <i>detention basins</i> <p><i>These stormwater facilities are inspected annually to insure that they are functioning properly. In high-risk areas, preventative maintenance is performed on all stormwater facilities to ensure that they do not begin to fail.</i></p>

	<p><i>Training also includes requirements for current BMPs, safety equipment and procedures, frequency of activities, and proper documentation of work. All types of stormwater infrastructure in the Township are addressed in the training, which includes but is not limited to storm drain inlets, catch basins, piped and open swale MS4 conveyances, stormwater infiltration basins, and manufactured treatment devices.</i></p> <p><i>Woodbridge Township Road Department manages the annual catch basin inspection & cleaning requirements of the Tier A Municipal Stormwater Permit. The Road Department works in coordination with the Woodbridge Sewer Department. Woodbridge Township utilizes jet vacs and vac trucks in order to properly maintain their stormwater inlets and catch basins.</i></p> <p><i>We have an annual catch basin cleaning program to maintain catch basin function and efficiency. All catch basins will be inspected annually and before major storm events. The catch basins will not be cleaned if there is no evidence of debris or trash in the basin. Basins deemed “clean”, but is checked the following year during the annual inspection. At the time of inspection, the catch basin will be inspected for proper function. Maintenance will be scheduled for those basins in need of repair. Additionally, the Township will respond to the complaints of catch basin “clogging” on a case-by-case basis and clean out debris where identified.</i></p>
Municipal Maintenance Yards and Other Ancillary Operations	<p><i>Staff responsible for conducting activities associated with our municipal maintenance yard and salt yard attend annual training to discuss related MS4 permit conditions, current best management practices, safety equipment and procedures, frequency of activities, and proper documentation of work.</i></p>
MS4 Mapping	<p><i>Staff responsible for conducting activities associated with electronic mapping of stormwater infrastructure attend annual training to review the MS4 permit requirements for electronic mapping.</i></p>
Outfall Stream Scouring	<p><i>Staff responsible for conducting inspections and repairs of stormwater outfalls attend annual training to discuss how to identify, remediate, and document cases of stream scouring as described in the MS4 permit. Training also includes current best management practices, safety equipment and procedures, frequency of activities, and proper documentation of work.</i></p>

<p>Illicit Discharge Detection and Elimination</p>	<p><i>Staff responsible for conducting inspections and repairs of stormwater outfalls attend annual training to discuss how to identify, remediate, and document cases of illicit discharge as described in the MS4 permit. Training also includes current best management practices, safety equipment and procedures, frequency of activities, and proper documentation of work.</i></p>
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<p align="center">Stormwater Management Design Reviewers</p>	
<p>Describe the training provided for individuals responsible for reviews and approvals of stormwater management designs.</p>	
<p><i>Individuals who review and approve stormwater management designs for major developments on behalf of the municipality are required under the MS4 permit to attend the mandatory NJDEP Stormwater Management Design Review course at least once every 5 years. They are required by the MS4 permit to also attend mandatory NJDEP training on amendments to the stormwater management rules at N.J.A.C. 7:8.</i></p>	
<p align="center">Municipal Board and Governing Body Members</p>	
<p>Describe the training provided for members of the planning/zoning board and municipal council.</p>	
<p><i>Within 6 months of joining town council or the planning or zoning board, each member is required under the MS4 permit to watch the NJDEP video titled, Asking the Right Questions in Stormwater Review https://nj.gov/dep/stormwater/asking_the_right_questions.html. Each term thereafter, members are required to watch another NJDEP video from the choices provided on the stormwater training webpage:</i></p> <p><i>Stormwater Management Rules Applicability https://nj.gov/dep/stormwater/training.htm</i></p> <p><i>Stormwater Management Rules Planning https://nj.gov/dep/stormwater/training.htm</i></p> <p><i>Stormwater Management Rules Design & Performance https://nj.gov/dep/stormwater/training.htm</i></p> <p><i>Stormwater Management Rules Safety https://nj.gov/dep/stormwater/training.htm</i></p> <p><i>Stormwater Management Through General Permit for MS4s https://nj.gov/dep/stormwater/training.htm</i></p>	

Training Records

Indicate the location of training records for the above required training.
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Logs of all training including the type of training, date conducted, attendees and trainers are kept at the Division of Engineering.

Form 11 – MS4 Mapping

Part IV.G.1.

1. Provide a link to the most current MS4 outfall/infrastructure map.	
https://gis.twp.woodbridge.nj.us/woodbridge/	
<p><i>The Township Woodbridge Division of Engineering maintains information on its stormwater collection system, including stormwater outfalls, as a part of the Townships on-going Geographic information System initiative. This information is displayed on a parcel map of the Township which is printed at a scale of 1" =1,000'. However, localized areas can be displayed and printed at much larger scales as needs dictate for investigative purposes. The data is updated on an as needed basis to reflect new construction. During the course of the current permit, the Township will also be gathering global positioning coordinate information for each of the stormwater outfalls as a part of the illicit connection investigation program.</i></p> <p><i>The Township of Woodbridge Environmental Advisory Committee used a GPS unit to map the location of the end of all outfall pipes operated by Woodbridge Township. They identified, GPS located and investigated each outfall pipe that was located.</i></p> <p><i>The outfall pipe locations have been included in a map prepared by the Municipal Engineer. The map scale is 1"=500' and shows major waterways and all other water bodies receiving outfall pipe discharges. Each outfall is identified on the map with an individual alphanumeric identifier.</i></p>	
2. Indicate the total of each type of MS4 infrastructure listed below (due 01 Jan 2026).	
a. MS4 outfalls	579
b. MS4 ground water discharge points (basins or overland flow infiltration areas)	N/A
c. MS4 interconnections	N/A
d. MS4 storm drain inlets	10,789
e. MS4 manholes	2,987
f. Length of conveyance (channels, pipes, ditches, etc.)	1,033,488.21 ft. (195.74 miles)
g. MS4 pump stations	N/A
h. MS4 stormwater facilities (any that are not listed above)	1
i. Maintenance yard(s) and other ancillary operations	2
3. Describe how the municipality's outfall/infrastructure map is reviewed and updated to reflect any new or newly identified MS4 infrastructure (e.g., an outfall is closed, a new basin is constructed, ownership of an outfall has changed, etc.).	
<p><i>We have a regular standing monthly meeting with the stormwater team made up DPW staff and engineers that discuss any new major development projects happening around town throughout the year.</i></p>	

4. Describe how the municipality will create and update its MS4 Infrastructure Map.

All MS4 Infrastructure Map in the municipality are completed. In addition, the public can view our MS4 Infrastructure Map by using Woodbridge Township Geographic Information System (GIS).

Here is the link: <http://gis.twp.woodbridge.nj.us/woodbridge/>

Form 12 – Watershed Improvement Plan

Part IV.H.

1. Describe how your municipality is developing its Watershed Improvement Plan.

Woodbridge Township is a fully developed community that is susceptible to both tidal and fluvial flooding. Approximately 19% of the Township lies within FEMA's Special Flood Hazard Areas (SFHAs). This Watershed Master Plan (WMP) addresses the Township's numerous and varied flood hazards.

Initially, this WMP reviews and analyses available information and studies regarding the Township's water resources, its contributing watershed areas, land uses, stormwater infrastructure, and known causes of flooding. This is followed by modeling and analysis of the Township waters under existing and future conditions, review of possible mitigation alternatives, analysis of implemented measures, and future recommendations.

Tidal flooding is caused by storm surge and wave setup associated with nor'easters and tropical storms that propagate along the east coast and enter the Township's tidal waters from the adjacent Arthur Kill. The most severe coastal storm, the 2012 Super Storm Sandy, reached adjacent properties standing 12 feet above mean sea level, approximately three feet higher than all previously observed coastal storms.

Fluvial flooding is caused by intense and/or prolonged rainfall events in Woodbridge's urbanized sub-watersheds. Nearly 80% of the Township's land cover has been classified as urban cover. Many of the Township's impervious surfaces were developed prior to the adoption of stormwater management regulations. As a result, many fluvial floodplain areas and wetlands were filled, reducing available flood storage, and stormwater was piped directly to streams. With limited natural detention and flood storage volume, the net result during intense rainfall events is higher flood flows, higher peak elevations and stream bank overtopping, and bank erosion.

In addition, the Township's numerous stream crossings and culverts may be undersized and also trap debris and sediment, cause backwater effects and, at times, flooding. Simultaneous tidal flooding may exacerbate fluvial flooding by raising downstream tide levels, which impedes upstream discharges and may cause or prolong upstream flood conditions. Simultaneous fluvial and tidal flooding caused severe flooding impacts in Woodbridge during the 2011 Tropical Storm Irene.

Following FEMA guidance, Hydrologic and Hydraulic (H&H) modeling was conducted to identify flood hazard areas under both present and future watershed conditions. For existing conditions, the modeling analysis revealed similar areas of inundation for both 25-year and 100-year fluvial flood events. The largest inundation areas for these storms occurred along the Township's South Branch Rahway River reach, especially near Merrill Park, Cooper Avenue playground, and commercial properties near Highway 35.

Because the Township already is approximately 97% developed, most future growth will consist of expansion of existing uses, or redevelopment of previously developed areas. H&H model simulations of such "build-out" conditions and zoning indicated that inundation areas for 100-year storm events will increase only by 2-3%. Thus, typical plans that focus primarily on managing stormwater runoff from future development will not significantly reduce flooding impacts in Woodbridge.

Modeling and GIS analyses also were conducted to assess impacts of future sea level rise (SLR) in the adjacent Arthur Kill. To this end, NOAA's local "intermediate-high" projection of 3.9 feet by year 2100 was utilized in the H&H model analysis. A 1-year tidal storm elevation was specified as a conservative downstream boundary condition. Results of the H&H modeling indicate that the impacts of the projected SLR in the fluvial flood areas was minimal, though peak flood levels and inundation areas expanded near the tidal boundary, mostly due to inundation from the specified higher tidal elevations.

Subsequently, NJDEP and NOAA updated this SLR projection to 5 feet (by year 2100), and the WMP used this value in a GIS mapping analysis of future inundation for both daily high water inundation and flooding. Results indicate that this projected level of SLR will inundate structures, roads and stormwater infrastructure located in low-lying areas adjacent to tidal waterways. A main area of potential impact is between Heards Brook and Wedgewood Brook east of the Railroad tracks associated with the Woodbridge River. In this area, approximately 300 additional buildings may be located in future project, SLR impacted 100-year SFHAs.

To address potential present and future flood hazards, the Township has evaluated a wide range of possible flood-reduction strategies. Preferred flood-mitigation measures include regulatory updates, property acquisition/demolition and various non-structural and structural mitigation projects.

NJDEP and Woodbridge already regulate flood zones that are more conservative than the FEMA 100-year zones. In addition, regulations require that stormwater from major development reduces peak flood flows from the 2-, 10- and 100-year rainfall events. To satisfy CRS WMP requirements not covered by New Jersey's stringent stormwater regulations, the local ordinance will be amended to manage stormwater runoff generated by major developments during 25-year rainfall events. Also, the Township will require review of stormwater runoff generated by "non-major" development (i.e., non-residential development disturbing more than 2,000 square feet) during both a 25-year and 100-year rainfall event.

The Township has already implemented some of the preferred flood-reduction alternatives. Implemented alternatives include a highly successful property acquisition and floodplain restoration project funded by the NJDEP Blue-Acres Program. This Program voluntarily removed 170 of the Township's most flood-vulnerable properties. These areas have been replanted for habitat restoration, flood attenuation, and passive recreation.

Another implemented alternative is the Township's adoption of an updated flood damage prevention ordinance that incorporates NJDEP's stringent environmental regulations and the UCC/ASCE-24 flood-resistant design requirements for new construction. In addition, the Township continues to conduct CRS Problem Site Maintenance (PSM) activities to remove debris and sediment. Also, the Township also conducts stream cleaning and streambank stabilization, has proposed project to alleviate flooding from stormwater piping and culverts, and has installed 8 rain gardens to capture and treat stormwater runoff.

The Township is developing plans to implement the following additional preferred alternatives in the coming years.

- a. The Township is actively pursuing funding from the USDA/Natural Resources Conservation Service and NJDEP for additional buyouts and floodplain restoration and habitat enhancement.*

- b. *The Township has investigated stormwater infrastructure problems in 9 different neighborhoods, and is developing initial drainage improvements for these areas. Capital improvement funds are dedicated to expand such programs in the coming years.*
- c. *The Township has conducted stream cleaning and high-priority stream bank restoration projects in the South Branch and Pumpkin Patch Brook.*
- d. *To address flow constrictions and backwater effects at stream road crossings, a high-priority improvement project for this year is the proposed reconstruction of the Route 35 culvert over Heards Brook. Likewise, the Township is conducting feasibility studies, engineering studies and applied for permits to reconstruct other stream culverts.*
- e. *The Township plans to continue installing rain gardens to capture stormwater runoff and enhance water quality.*

2. Describe any regional projects or collaboration efforts with other municipalities.

Rahway River:

The Rahway River Basin is 81.9 square miles and lies within the metropolitan area of Greater New York. Flooding within the Rahway River Basin is caused principally by the rapid development of the area, which has resulted in a large increase of storm water runoff. Floods have caused damage to houses, businesses, municipal facilities and public infrastructure in Linden, Carteret, Woodbridge and Rahway. Lower portions of the Rahway River Basin have experienced damages during Hurricane Sandy. The focus of this study is to address coastal flooding. The tidal influence on the Rahway River Basin extends roughly 5 miles from the Arthur Kill into the City of Rahway.

The Recommended Plan consists of structural and nonstructural components. The structural component consists of a levee segment in Joseph Medwick Park in Middlesex County. Nonstructural Plan includes elevation and flood proofing for properties in the City of Rahway, Borough of Carteret, Linden and Woodbridge Township. The Nonstructural Plan will consist of treatment designed to the future conditions 1% (100-yr) water surface elevation (WSE) plus one foot to account for water surface perturbations for approximately 136 structures (125 residential and 11 non-residential). The Levee is 3,360 ft. long with a 12 ft. top width and one vertical to three horizontal (1:3) side slope. The Levee is located next to the right bank of the Rahway River, approximately 1.2 miles downstream of the confluence with the South Branch. The upstream end is located by Ardmore Ave., continuing downstream to Dorothy St. The project provides coastal storm risk management to the Cities of Rahway and Linden, the Borough of Carteret, and the Township of Woodbridge.

3. Indicate the location of records related to all public information sessions and meetings for discussions of the Watershed Improvement Plan.

Logs of all public information sessions and meetings for discussions of the Watershed Improvement Plan are kept at the Division of Engineering.