Department of Public Works
MS4 Permit Training

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Rutgers Cooperative Extension helps the diverse population of New Jersey adapt to a rapidly changing society and improves their lives through an educational process that uses science-based knowledge.
Water Resources Program

Our mission is to identify and address community water resources issues using sustainable and practical science-based solutions.
MS4 Permit

- Municipal Separate Storm Sewer System (MS4)
- All NJ municipalities have MS4 permits
- General Permit for Tier A, Tier B, Public Complexes, and Highway Agencies
- EPA Requirement
MS4 Permit …
requires municipalities to develop and implement a program to reduce discharges of pollutants entering our waters from stormwater systems to the maximum extent practical.
Nonpoint Source Pollution

- Oil and grease from cars
- Fertilizers
- Animal waste
- Grass clippings
- Septic systems
- Sewage leaks
- Household cleaning products
- Litter
- Agriculture
- Sediment
Who is responsible?

SPPP FORM 1 - THE WOODBRIDGE STORMWATER POLLUTION PREVENTION TEAM

Completed by: PMK Group, Inc.
Title: Environmental Consultants
Date: June 1, 2018
Municipality: Township of Woodbridge
County: Middlesex
NJPDES #: NJG0148857
PI ID #: 168353

Stormwater Program Coordinator: Michael Gelin
Title: Woodbridge Municipal Engineer
Office Phone #: 732-602-6047
Emergency Phone #: 732-634-7700 (Woodbridge Twp. Police Dept.)
What goes into the SPPP?

1. Statewide Basic Requirements (SBRs)
2. Other Control Measures
3. Additional Measures
4. Optional Measures
Statewide Basic Requirements (SBRs)

1. Public Involvement and Participation
2. Local Public Education and Outreach
3. Construction Site Stormwater Runoff
4. Post Construction Stormwater Management
5. Pollution Prevention/Good Housekeeping for Municipal Operators
6. MS4 Outfall Pipe Mapping and Illicit Discharge and Scouring Detention and Control
Which SBRs might involve the DPW?

2. Local Public Education and Outreach

4. Post Construction Stormwater Management

5. Pollution Prevention/Good Housekeeping for Municipal Operators

6. MS4 Outfall Pipe Mapping and Illicit Discharge and Scouring Detention and Control
2. Local Public Education and Outreach

Labeling Storm Drain Inlets:

Annually during Woodbridge’s Catch Basin inspecting / cleaning operations, these labels will be inspected and replaced as needed.
2. Local Public Education and Outreach

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Points System for Public Education and Outreach (Need 12 points):

1. General Public Outreach
   - Website and Social Media (1 point)
   - Newspaper Ad (1 point)
   - Green Infrastructure Signage (5 points)

2. Targeted Audiences Outreach
   - Stormwater Display (1 point)
   - Ordinance Education (3 points)
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“NEW JERSEY’S LARGEST RAIN GARDEN”

KIWANIS PARK
RAHWAY, NEW JERSEY

Green Infrastructure Project

Example Rain Garden Plants

- Soft Rush (Juncus effusus)
- New England Aster (Symphyotrichum novae-angliae)
- Red-bud Dogwood (Cornus sericea)
- Black-eyed Susan (Rudbeckia hirta)
- Red Columbine (Achillea canadensis)
- Buttonbush (Cephalanthus occidentalis)

This garden is designed to capture stormwater and reduce flooding. Rain gardens keep rainwater from overflowing the sewers. Rain gardens are beautiful, low maintenance, and inexpensive gardens you can install at home.

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Learn more about the Rahway Rain Garden project at www.tinyurl.com/robinsneatrace.
Points System for Public Education and Outreach (cont’d):

3. School/Youth Education and Activities
   - School Presentations (5 points – 1 per presentation)
   - Storm Drain Labeling (3 points) (40 labels min)

4. Watershed/Regional Collaboration
   - Regional Stormwater Collaboration (3 point)
   - Green Infrastructure Workshop (3 points)

5. Community Involvement Activities
   - Rain Barrel Workshop (3 points)
   - Volunteer Stream Monitoring (3 points)
4. Post Construction
Stormwater Management:

Enforcement of the Municipal
Stormwater Control Ordinances:
• Operation and maintenance stage
  – Ensure stormwater practices are being inspected
  – Possibly conduct inspections
  – Carry out enforcement actions
  – Inspection and maintenance checklist
5. Pollution Prevention/Good Housekeeping for Municipal Operators:

Community Wide Ordinances:

1. Pet Waste Ordinance
2. Wildlife Feeding Ordinance
3. Litter Control Ordinance
4. Improper Disposal of Waste Ordinance
5. Yard Waste Collection Program Ordinance
6. Private Storm Drain Inlet Retrofitting Ordinance
Yard Waste Collection Program Ordinance

- Property owners cannot pile leaves at the curb for collection; instead leaves and grass clippings placed in the street must be in bags or other containers.
5. Pollution Prevention/Good Housekeeping for Municipal Operators (cont’d):

Community Wide Measures:

1. Street sweeping
2. Catch basin and storm drain inlet inspection and cleaning
3. Tier A Municipal Storm Drain Inlet Retrofit
Street Sweeping

Minimum Standards

Once per month all streets that:

• are owned or operated by the municipality
• are curbed and have storm drains
• have a posted speed limit of 35 mph or less
• are not an entrance or exit ramp
• are in a predominantly commercial area
Street Sweeping

Measurable Goal

Schedule is being maintained and records are being kept, including:

- Data and area swept
- Number of miles of streets swept
- Total amount of materials collected in tons
Street Sweeping

Recommendations

• Higher efficiency street sweepers should be considered when purchasing new equipment (e.g., regenerative air and vacuum filter street sweepers)

• Sharing staff and equipment with other municipalities or government agencies

• Parking should be regulated on predominately commercial streets to facilitate sweeper access
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.

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

<table>
<thead>
<tr>
<th>Section of Woodbridge Twp.</th>
<th>PREDOMINANTLY COMMERCIAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodbridge</td>
<td>New Street; North James Street; Fulton Street; Pearl Street; Poillon</td>
</tr>
<tr>
<td>Fords</td>
<td>Lafayette Road; Egan Avenue</td>
</tr>
<tr>
<td>Menlo Park Terrace</td>
<td>Kelly Street; Menlo Ave.</td>
</tr>
<tr>
<td>Colonia</td>
<td>Inman Avenue, East Walnut</td>
</tr>
<tr>
<td>Iselin</td>
<td>Montague Ave.; Edward Street; Bradford Place; LaGuardia Ave.; Marconi Ave, Middlesex Ave.</td>
</tr>
<tr>
<td>Avenel</td>
<td>Lord Street; Crystal Street</td>
</tr>
</tbody>
</table>
Catch basin and storm drain inlet inspection and cleaning

 Minimum Standards

• Inspect each catch basin and inlet at least once every five years

• Clean any municipally owned or operated catch basin or inlet as frequently as necessary to eliminate recurring problems and maintain proper function
Catch basin and storm drain inlet inspection and cleaning

*Measurable Goals (annual)*

Schedule is being maintained and records are being kept, including:

- Number of municipally owned and operated catch basin and inlets within the town
- Number of catch basins and inlets inspected
- Number of catch basins and inlets cleaned
- Amount of material removed in tons
Catch basin and storm drain inlet inspection and cleaning

Recommendations

• Increase frequency in problem areas
• Perform inspections after major storms
• Pass ordinance to require private entities to maintain stormwater facilities or take over private facilities
• Increase street sweeping
• Coordinate cleaning with mosquito control agency
Municipal Storm Drain Inlet Retrofit

Minimum Standards

Municipality shall retrofit existing inlets that are:

• In direct contact with repaving, repairing (excluding pothole repair), or resurfacing
• In direct contact with any reconstruction or alterations of facilities
5. Pollution Prevention/Good Housekeeping for Municipal Operators (cont’d):

Municipal Maintenance Yards and Other Ancillary Operations:

1. Fueling operations
2. Discharge of stormwater from secondary containment
3. Vehicle maintenance
4. On-site equipment and vehicle washing and wash wastewater containment
Municipal Maintenance Yards and Other Ancillary Operations (cont’d):

5. Salt and de-icing materials storage & handling

6. Aggregate material & construction debris storage

7. Street sweeping, catch basin clean out, and other material storage

8. Yard trimmings and wood waste management sites

9. Roadside vegetation management
Fueling operations

Minimum Standards

Establish, maintain, and implement standard operating procedures to address:

- vehicle fueling
- receipt of bulk fuel deliveries
- inspection and maintenance of storage tanks, including the associated piping and fuel pumps

Woodbridge inspects all fueling areas on a monthly basis.
Discharge of stormwater from secondary containment

Minimum Standards

- The discharge pipe or outfall must be equipped with a valve to control the discharge from all containment areas.
- Ensure that the valve remains closed at all times, except when discharging.
- Perform routine inspections of the tanks, drum, vats, other containers, valves, hoses, and pipes.
- Perform regular maintenance of tanks, drums and components.
Vehicle Maintenance

Minimum Standards

• Maintain inventory of materials & machinery
• Perform maintenance activities indoors
• If maintenance is performed outdoors:
  – Away from catch basins and block drains with booms
  – Drip pans must be used at all times
  – Portable tents or covers if maintenance activity last more than one day
On-site Equipment & Vehicle Washing

Minimum Standards

- No unpermitted discharge of wash wastewater to storm sewer inlets or local waterways
- If you cannot discharge wash wastewater to sanitary sewer, can temporarily contain wastewater but must ensure containment does not leak
On-site Equipment & Vehicle Washing

Minimum Standards

• No unpermitted discharge of wash wastewater to storm sewer inlets or local waterways

• If you cannot discharge wash wastewater to sanitary sewer, can temporarily contain wastewater but must ensure containment does not leak
Salt and de-icing materials storage & handling (Minimum Standards)

• Store salt and de-icing materials in a permanent structure
• Perform regular inspections and maintenance of storage structure and surrounding area
• Minimize tracking of material from loading and unloading operations
More on Salt and de-icing materials storage & handling (Minimum Standards)

- During loading and unloading:
  - Conduct during dry weather
  - Prevent and/or minimize spillage
  - Minimize loader travel distance between storage area and spreading vehicle

- Sweep (or clean using other dry cleaning methods)
  - Storage areas on a regular basis
  - Materials tracked away from storage areas
  - Immediately after loading and unloading is complete
Even More on salt & de-icing materials storage & handling (Minimum Standards)

• Reuse or properly discard materials collected during cleanup

• Temporary outdoor storage is permitted only under the following conditions:
  – A permanent structure is under construction or repair
  – Stormwater runoff and de-icing materials runoff is minimized
  – Materials in temporary storage are tarped
  – All of the above requirements are met
  – Temporary storage up to 30-days
Salt and de-icing materials storage & handling (Recommendations)

• Locate site at least 200 ft from streams, wells, reservoirs, and drinking water sources
• Do not build storage structure in designated well head protection area
• Ensure top elevation of storage pad is higher than 100-year flood elevation
• Control site drainage by diverting stormwater away from storage areas (curbing, berms, etc.)
Salt and de-icing materials storage & handling (Recommendations)

• Install wind barriers at strategic locations where shipments of salt are being loaded
• Include paved, impermeable surface as access to storage facility
• Work with neighboring municipalities to construct joint storage facilities
Aggregate material & construction debris storage *(Minimum Standards)*

Store materials such as sand, gravel, stone, top soil, road millings, waste concrete, asphalt, brick, block, and asphalt-based roofing scrap and processed aggregate in such a manner as to minimize stormwater run-on and aggregate run-off via surface grading, dikes and/or berms (which may include sand bags, hay bales, and curbing, among others) or three-sided storage bays.
Aggregate material & construction debris storage (Minimum Standards)

• Sand, top soil, road millings, and processed aggregate may only be stored outside and uncovered if in compliance with the bullet above and if a 50-foot setback is maintained from surface water bodies, storm sewer inlets and/or ditches or other stormwater conveyance channels.
Aggregate material & construction debris storage (Minimum Standards)

- Road millings must be managed in conformance with the “Recycled Asphalt Pavement and Asphalt Millings (RAP) Reuse Guidance” (see www.nj.gov/dep/dshw/rrtp/asphaltguidance.pdf) or properly disposed of as solid waste pursuant to N.J.A.C. 7:26-1 et seq.
Aggregate material & construction debris storage *(Minimum Standards)*

- The stockpiling of materials and construction of storage bays on certain land (including but not limited to coastal areas, wetlands, and floodplains) may be subject to regulation by the Division of Land Use Regulation (see [www.nj.gov/dep/landuse/](http://www.nj.gov/dep/landuse/) for more information).
Street sweeping & catch basin cleanout material storage (*Minimum Standards*)

Road cleanup materials must be ultimately disposed of in accordance with N.J.A.C. 7:26-1.1 et seq. See the “Guidance Document for the Management of Street Sweepings and Other Road Cleanup Materials” which may be found online at [www.nj.gov/dep/dshw/rrtp/sweeping.htm](http://www.nj.gov/dep/dshw/rrtp/sweeping.htm).
Street sweeping & catch basin cleanout
material storage *(Minimum Standards)*

- Road cleanup materials placed into storage must be, at a minimum:
  - Stored in leak-proof containers or on an impervious surface that is contained (e.g., bermed) to control leachate and litter
  - Removed for disposal (as above) within six (6) months of placement into storage
Yard trimmings and wood waste management sites (Minimum Standards)

- Yard trimmings or wood waste management sites must be operated in a manner that:
  - Diverts stormwater away from yard trimmings and wood waste management operations and
  - Minimizes or eliminates the exposure of yard trimmings, wood waste, and related materials to stormwater
More on Yard trimmings and wood waste management sites

Yard trimmings and wood waste management site specific practices include:

– Constructing windrows, staging, and storage piles:
  • In such a manner that materials contained in the windrows, staging, and storage do not enter waterways of the state
  • On ground which is not susceptible to seasonal flooding
  • In such a manner that prevents stormwater run-on and leachate run-off
More on Yard trimmings and wood waste management sites

Yard trimmings and wood waste management site specific practices include:

- Maintaining perimeter controls such as curbs, berms, hay bales, silt fences, jersey barriers, or setbacks, to eliminate the discharge of stormwater runoff carrying leachate or litter from the site to storm sewer inlets or to surface waters of the state

- Preventing on-site storm drain inlets from siltation using controls such as hay bales, silt fences, or filter fabric inlet protection
More on Yard trimmings and wood waste management sites

Yard trimmings and wood waste management site specific practices include:

– Preventing dry weather run-off from reaching a municipal stormwater sewer system, which is an illicit discharge; possible sources of dry weather run-off include wetting of piles by the site operator and uncontrolled pile leachate or uncontrolled leachate from other materials stored at the site

– Removing trash from yard trimmings and wood waste upon receipt
More on Yard trimmings and wood waste management sites

Yard trimmings and wood waste management site specific practices include:

– Monitoring the site for trash on a routine basis
– Storing trash in leak-proof containers or on an impervious surface that is contained (e.g., bermed) to control leachate and litter
– Disposing of collected trash at a permitted solid waste facility
– Employing preventative tracking measures, such as gravel, quarry blend, or rumble strips at exits
Roadside Vegetation Management

*(Minimum Standards)*

- The municipality shall not apply herbicides on or adjacent to storm drain inlets, on steeply sloping ground, along curb lines, or along unobstructed shoulders.

- The municipality may only apply herbicides within a 2-foot radius around structures where overgrowth presents a safety hazard and where it is unsafe to mow.
Stormwater Facilities

Maintenance (Minimum Standards)

- Must ensure long-term cleaning, operation, and maintenance of all municipally owned or operated stormwater facilities
- Keep a maintenance log
- Must certify annual that they are function properly
- Schedule and prioritize repairs
Woodbridge’s Stormwater Management Facility

Name: Green Street Detention Basin
Location: Green Street, Woodbridge
Size: 13.60 acres
Stormwater Facilities

Maintenance (Minimum Standards)

• The municipality must develop, update, implement, and enforce a program to ensure adequate long-term cleaning, operation, and maintenance of the following stormwater facilities:
  – not owned or operated by the municipality,
  – not subject to the conditions of another NJPDES stormwater permit, and
  – constructed after February 7, 1984

• Ensure they are maintained
Additional Measures: Road Erosion Control

- The Township of Woodbridge will utilize the Public Works Department to monitor all their roads and streets for erosion problems during typical day to day operations. All identified road erosion problems will be reported to the Road Department & Road Supervisor.
- Identified areas of erosion will be discussed and repairs prioritized.
Questions?

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