MS4 Stormwater Mapping

Requirements and Tools Overview

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SWMDR Training Day 2
October 31, 2019

MS4 Permit Required Mapping

Tier A Municipalities:

- Part IV.B.6.a of the Tier A MS4 permit requires municipalities to develop, update and maintain an outfall pipe map
  - Submitted to the Department by January 1, 2019
  - Submitted to the Department in an electronic format* by December 21, 2020

*This has not yet been defined by the Department
Part IV.C.1.a.ii of the Tier A MS4 permit requires municipalities maintain a log including the location information of the facility inspected (location information must be specific enough to locate and identify the stormwater facility in the field; e.g. geographic coordinates)

- Not submitted to the Department but will be subject to review during inspections and audits

Tier A Municipalities:

- Outfall Pipe Map Submissions
  - 61% Map Submitted
  - 39% No Map Submitted
MS4 Permit Required Mapping

Tier B Municipalities:

- No outfall pipe mapping is currently required, however, Tier B municipalities are encouraged to maintain an outfall pipe map.

Public Complexes:

- Part IV.B.6.a of the Public Complex permit requires public complexes to develop, update and maintain an outfall pipe map
  - Submitted to the Department by January 1, 2020
  - Submitted to the Department in an electronic format* by December 21, 2020

*This has not yet been defined by the Department
Public Complexes:

- Part IV.C.1.a of the Public Complex permit requires public complexes to develop, update and maintain an inventory and map of the following:
  - Storm drain inlets
  - Stormwater management basins
  - Subsurface infiltration/detention systems
  - Culverts
  - Manufactured treatment devices (MTDs)
  - Green Infrastructure

Public Complexes:

- Part IV.C.1.a of the Public Complex permit requires public complexes to develop, update and maintain an inventory of all stormwater facilities;
  - Submitted to the Department by January 1, 2020
  - Be populated and maintained in *electronic format provided by the Department
  *This has not yet been defined by the Department
MS4 Permit Required Mapping

Highway Agencies:

- Currently in pre-draft phase
- Proposed permit has same requirements as the public complex permit
- Dates for submittals are not yet finalized

Requirements Aided By Mapping

Stream Scouring:
Requirements Aided By Mapping

Stream Scouring:
- Tier A Municipalities are required to inspect outfall pipes *once every 5 years* for stream scouring
- Public Complexes are required to inspect outfall pipes *once annually* for stream scouring
- It is proposed (in pre-draft) that Highway Agencies inspect all outfalls *once every 5 years* for stream scouring

Requirements Aided By Mapping

Illicit Discharge Detection and Elimination:
Requirements Aided By Mapping

Illicit Discharge Detection and Elimination:

• Any physical or non-physical connection that discharges non-stormwater to a municipal separate storm sewer system
  o Sewage
  o Non-contact cooling water, process wastewater, or other industrial waste
  o Any discharge that the MS4 permittee identifies as a source or significant contributor of pollutants

Requirements Aided By Mapping

Illicit Discharge Detection and Elimination:

• Tier A Municipalities are required to inspect outfall pipes once every 5 years for illicit discharges
• Public Complexes are required to inspect outfall pipes once annually for illicit discharges
• It is proposed that Highway Agencies inspect all outfalls once every 5 years for illicit discharges
Requirements Aided By Mapping

Stormwater Facilities Maintenance:

![Image of stormwater facilities maintenance](image1)

Requirements Aided By Mapping

Stormwater Facilities Maintenance:

![Image of stormwater facilities maintenance](image2)
Requirements Aided By Mapping

Stormwater Facilities Maintenance:

- All MS4 permittees are required to develop, update, and implement a program to ensure the adequate long-term cleaning, operation, and maintenance of all permittee owned or operated stormwater facilities

- Municipalities are required to ensure the adequate long-term cleaning, operation, and maintenance of all stormwater facilities not owned or operated by the municipality but located within its borders

NJDEP Mapping & Inventory Assistance

- NJDEP created a database and data dictionary for the 7 stormwater infrastructure features required to be mapped/inventoried by MS4 permittees
### NJDEP Mapping & Inventory Assistance

- Outfall Pipes
- Stormwater Management Basins
- Subsurface Infiltration/ Detention
- Manufactured Treatment Devices
- Green Infrastructure
- Storm Drain Inlets

**NJDEP created a database and data dictionary for the 7 stormwater infrastructure features required to be mapped/inventoried by MS4 permittees**

**The data dictionary had to be made available over a number of different collection methodologies to suit the needs of all permittees**
NJDEP Mapping & Inventory Assistance: Dropdown Menus

NJDEP Mapping & Inventory Assistance: Handheld GPS Units
NJDEP Mapping & Inventory Assistance: ESRI Geodatabase

NJDEP Mapping & Inventory Assistance: Excel Spreadsheet
NJDEP Mapping & Inventory Assistance

- NJDEP created a database and data dictionary for the 7 stormwater infrastructure features required to be mapped/inventoried by MS4 permittees
- The data dictionary had to be made available over a number of different collection methodologies to suit the needs of all permittees
- Existing data can be made available upon request

NJDEP Mapping & Inventory Assistance: Existing Outfall Pipes
NJDEP Mapping & Inventory Assistance: H&H Database

NJDEP Mapping & Inventory Assistance

- NJDEP created a database and data dictionary for the 7 stormwater infrastructure features required to be mapped/inventoried by MS4 permittees
- The data dictionary had to be made available over a number of different collection methodologies to suit the needs of all permittees
- Existing data can be made available upon request
- Training and assistance is available

https://hydro.rutgers.edu/
More Information

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