



MUNICIPAL SEPARATE STORM SEWER SYSTEM

Stormwater Management Program Updates

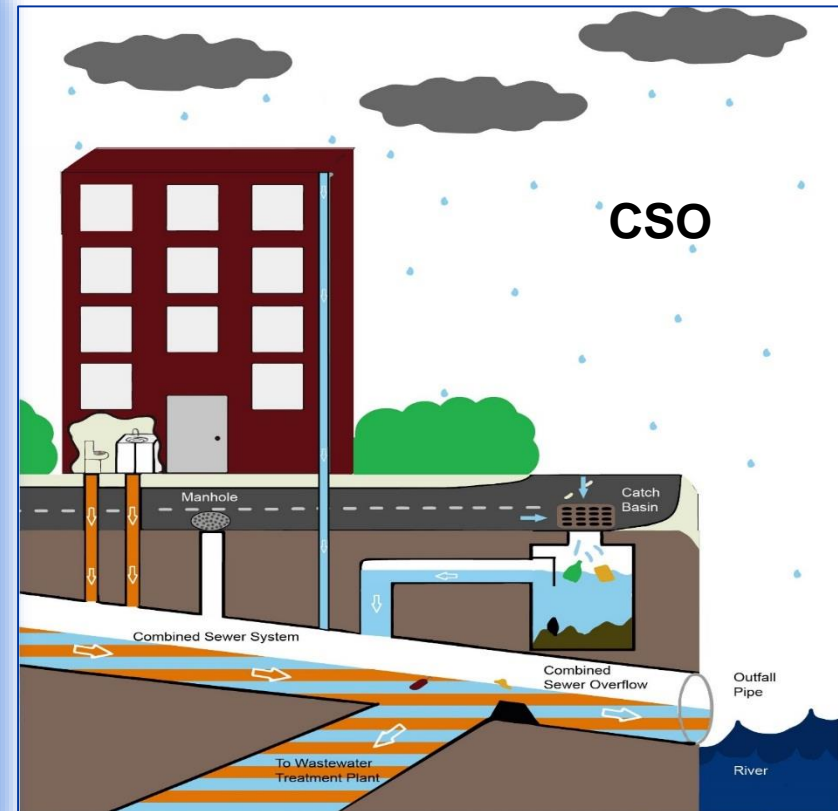
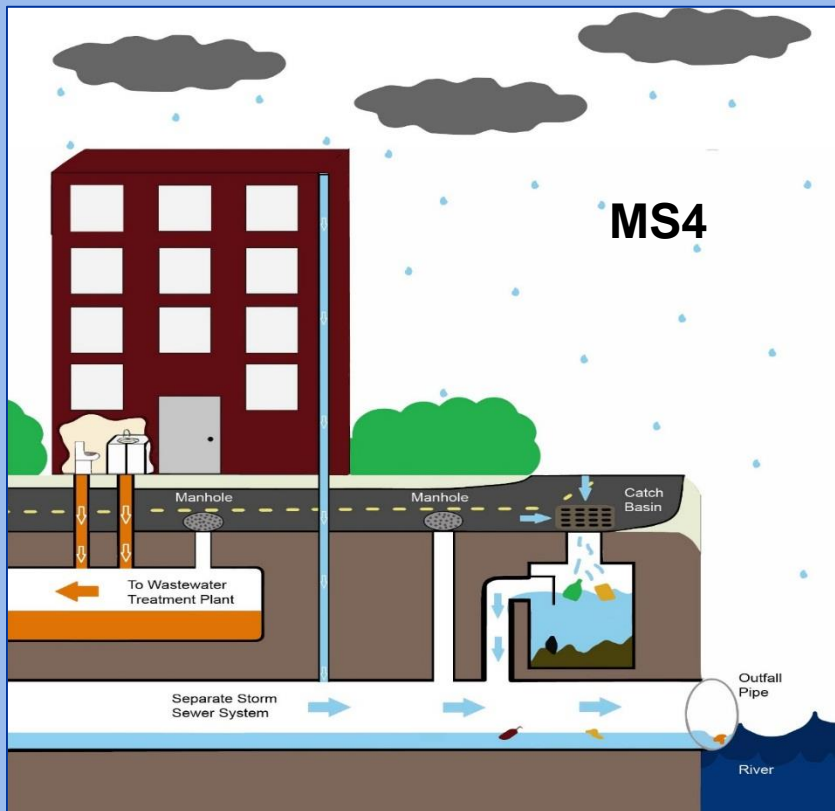
Stormwater Advisory Group Meeting

June 15, 2017

1. Introductions
2. Municipal Separate Storm Sewer System (MS4) Permit Overview
3. Legal Authority/Local Laws
4. Stormwater Management Plan (SWMP)
 - a) Industrial and Commercial Stormwater Sources**
 - i. Facility Inventory
 - ii. Legal Authority
 - iii. Unpermitted Facility Inspection
 - iv. MSGP Facility Inspection
 - v. MSGP Facility Prioritization
5. Next Steps to Plan Ahead
6. Questions

What is an MS4?

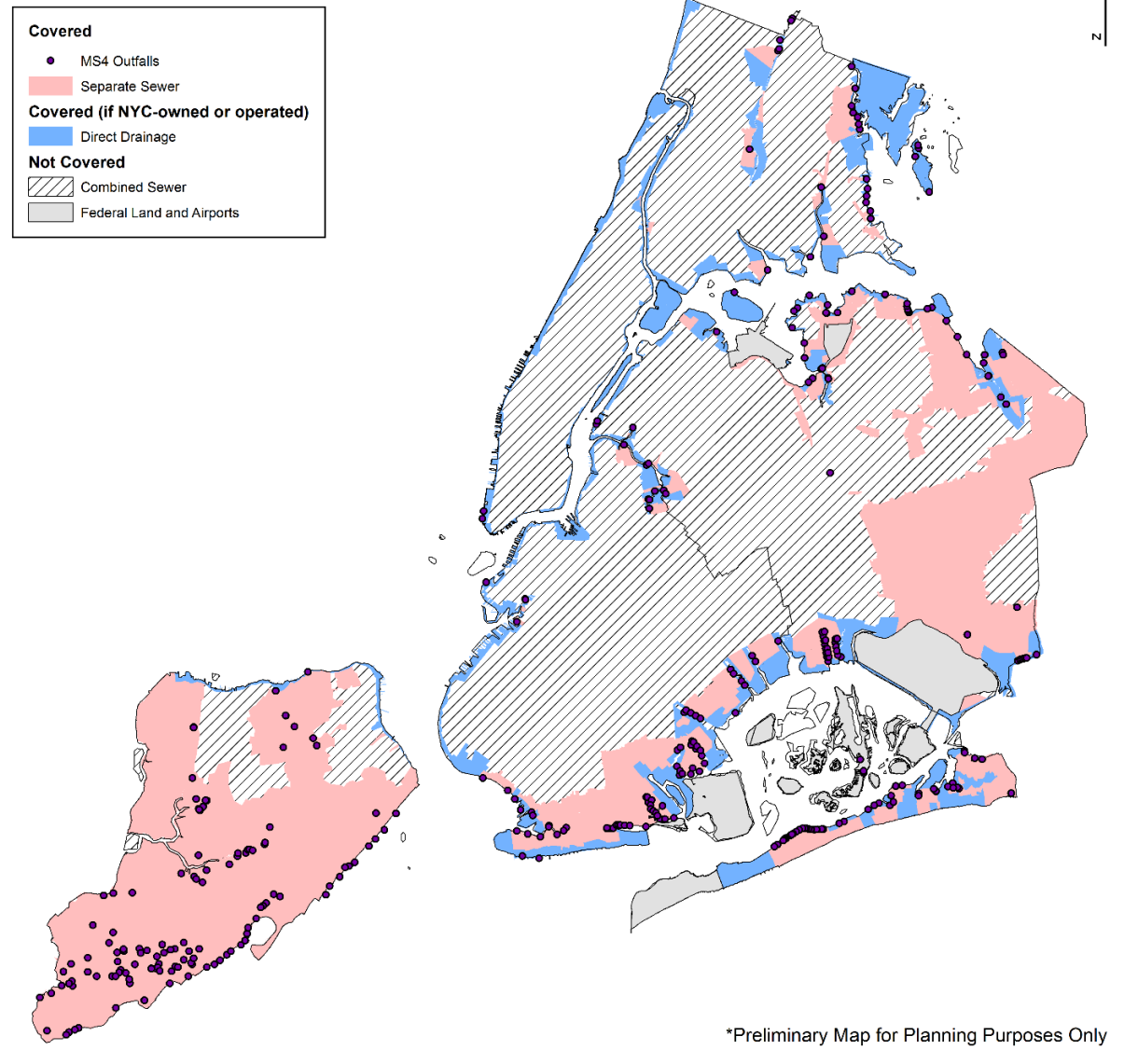
- a conveyance or system of conveyances
- system that is owned by a state, city, town, village, or other public entity that discharges to waters of the US
- designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.)
- not a combined sewer
- not part of a Publicly Owned Treatment Works (sewage treatment plant)



In August 2015 the State issued the City an MS4 Permit which seeks to manage urban sources of stormwater runoff to protect overall water quality and improve water quality in impaired waters.

In response, the City is developing a **Stormwater Management Plan (SWMP)**.

Draft NYC Municipal Separate Storm Sewer System (MS4) Map*



Permit intent: the management of urban sources of stormwater runoff to protect overall water quality and improve water quality in impaired waters.

Permit requirements: the implementation of controls for stormwater discharges of “pollutants of concern” and illicit discharges of other pollutants to the “maximum extent practicable.”

Pollutants of Concern: a pollutant that may be expected to be present in stormwater, in quantities that may then cause or contribute to a water quality violation in waters of the State.

These pollutants include but are not limited to the following:

- nitrogen, phosphorus, pathogens, floatables
- silt and sediment
- petroleum hydrocarbons
- heavy metals
- polycyclic aromatic hydrocarbons (PAHs)

Rulemaking: The local law authorizes agencies to make rules immediately

New York City MS4 Legislation

- Intro 1346-2016 introduced by City Council on November 16, 2016
- Public hearing held by Environmental Protection Committee on December 13, 2016
- Intro 1346-2016, Version A approved by Environmental Protection Committee on May 8, 2017
- Intro 1346-2016, Version A passed by City Council on May 10, 2017
- Local law was signed by Mayor on May 30, 2017

Construction/Post-Construction and Commercial/Industrial Programs

- Rules for these programs will reflect program elements currently being developed for the SWMP
- The City expects to propose draft rules in Spring 2018, when these programs will be more fully developed
- The rules will be finalized in order to allow implementation of these programs after the SWMP is approved

SWMP Chapters

1. Introduction
2. Program Overview
3. Public Education and Outreach
4. Public Involvement / Participation
5. Mapping
6. Illicit Discharge Detection and Elimination (IDDE)
7. Construction Site Stormwater Run-off Control
8. Post-Construction Stormwater Management
9. Pollution Prevention / Good Housekeeping for Municipal Operations and Facilities
- 10. Industrial and Commercial Stormwater Sources**
11. Control of Floatable and Settable Trash and Debris
12. Monitoring and Assessment of Controls
13. Reliance on Third Parties
14. Recordkeeping
15. Annual Reporting and Certification

Industrial/Commercial Timeline

**Aug 1, 2015
MS4 Permit
Effective Date**



**August 1, 2018
Submit SWMP plan to DEC**
Section IV.H requires City to
develop inspection programs for
unpermitted and MSGP sites



**Aug 1, 2020
MS4 Permit
Renewal**



*Legal Authority
Established*



2015*

2016

2017

2018

2019

2020

SWMP Plan Development

**DEC
APPROVAL**

SWMP Implementation

**Interim Reports Due
August 1, 2016 and 2017**

**MSGP inspection program plan
due August 1, 2018**

**Unpermitted industrial and commercial sites inspection program
plan due August 1, 2018**

Rulemaking

**Expected procurement for third-party contractor
to implement inspection program**

**Facility inspections expected to
begin 45 days after SWMP approval**

* - Calendar years

MS4 Permit – Part H.1.a.ii

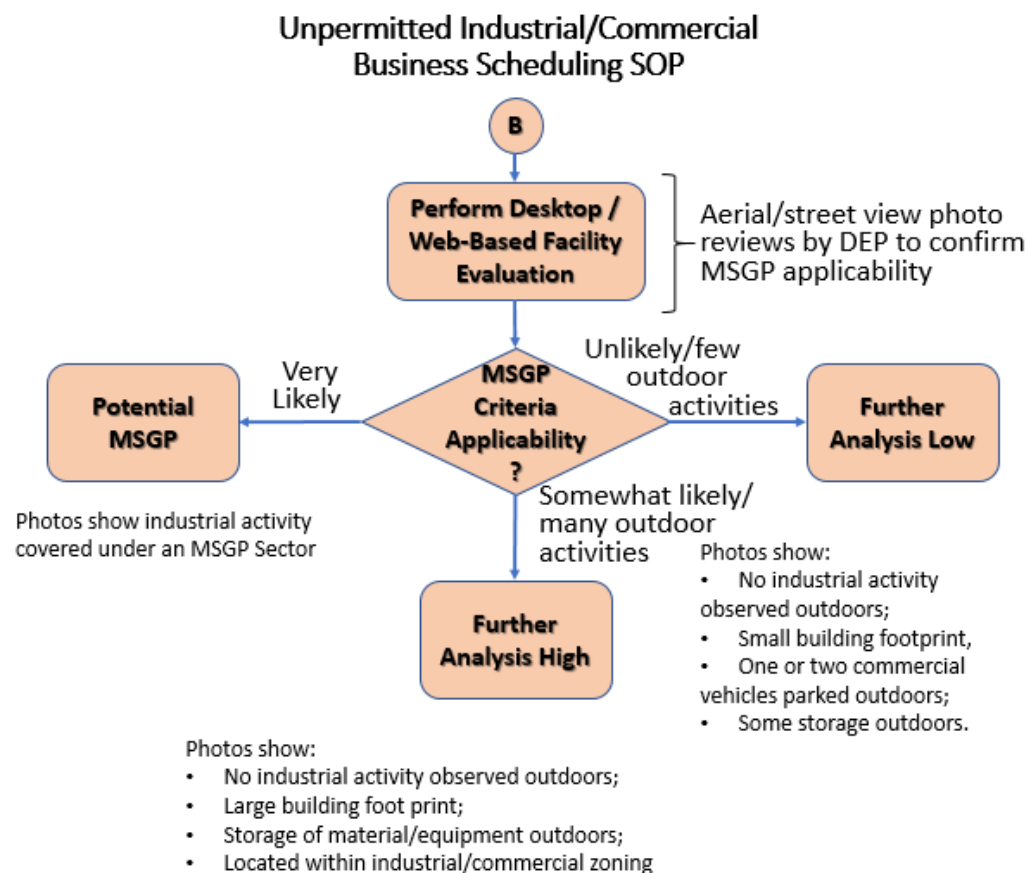
- DEP must prepare and maintain an inventory of all industrial and commercial sites/sources within its jurisdiction (regardless of ownership), within three years of 2015, that could discharge POCs in stormwater to the MS4

Industrial Commercial Inventory:

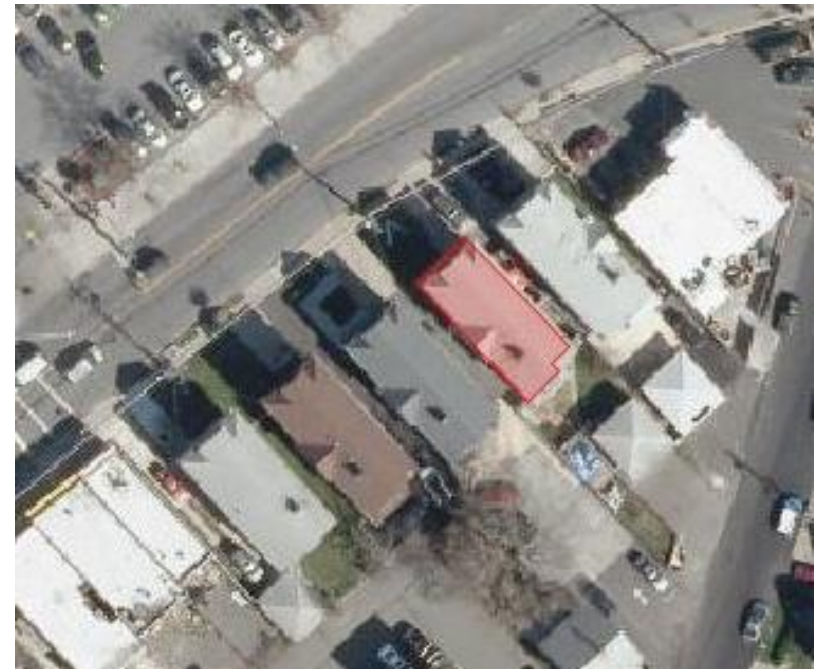
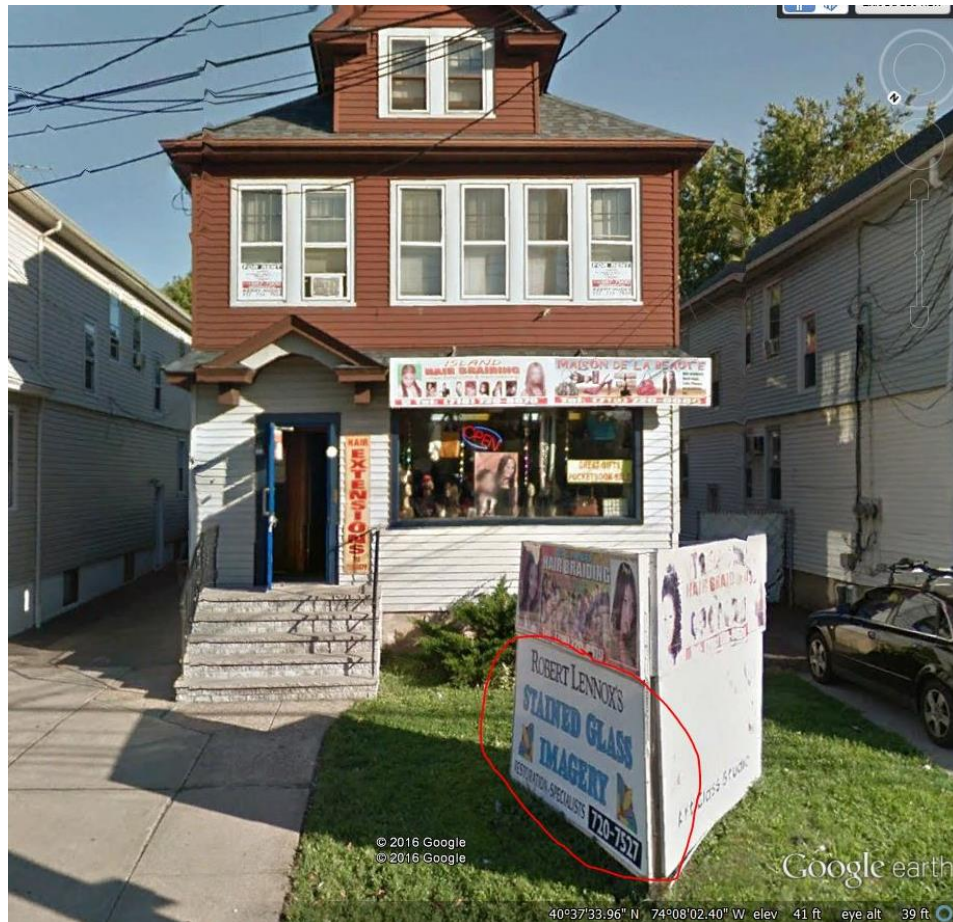
- Industrial Sites/Sources
 - 40 CFR § 122.26(b)(14)(i-ix and xi)
 - Facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA)
 - Hazardous waste treatment, disposal, storage and recovery facilities
 - NYCDEP Industrial Pretreatment Program (IPP)
- Other industrial or commercial sites/sources tributary to an impaired water that generates significant amount of POCs for which the water body is impaired
- Other industrial or commercial sites/sources that DEP determines may contribute a significant pollutant load to the MS4

Schedule inspections based on findings of desktop/web-based evaluations performed by DEP to prepare inventory:

- Locate site with DoITT Land Use database:
 - Drains to MS4
 - Land use category
- Review aerial/street view images of site:
 - Presence/significance of an “industrial activity”
 - Evidence of “stormwater exposure”
- ID businesses with incorrect SIC Codes/classifications
- Schedule per “likelihood” of MSGP applicability
- Incorporate work efficiency into schedule (proximity, travel time, seasonal, etc.)



Stained glass imaging company lists SIC code under Sector E (Glass, Clay, Cement, Concrete, and Gypsum Products), though there is no potential for business to impact stormwater.

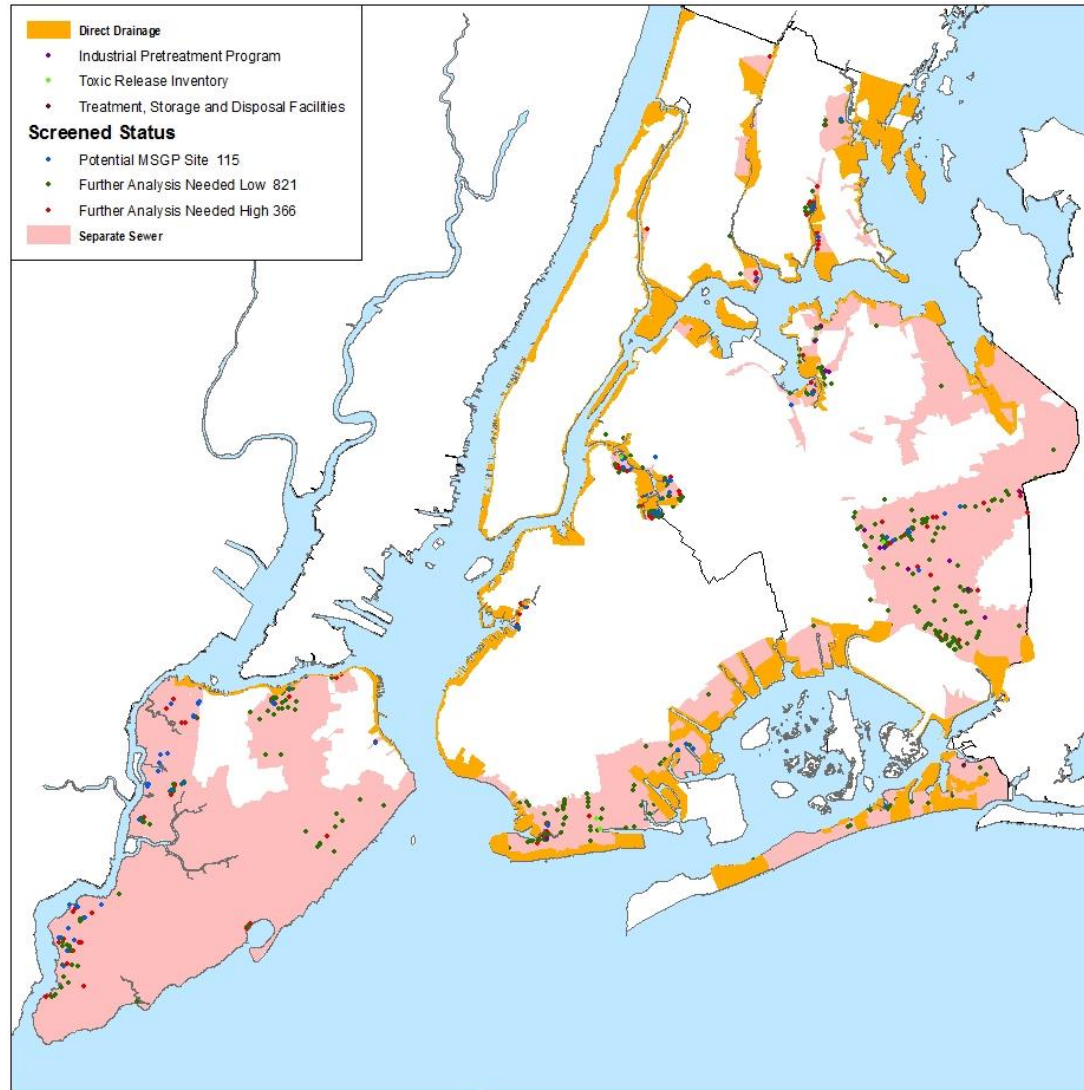


Example of Further Analysis

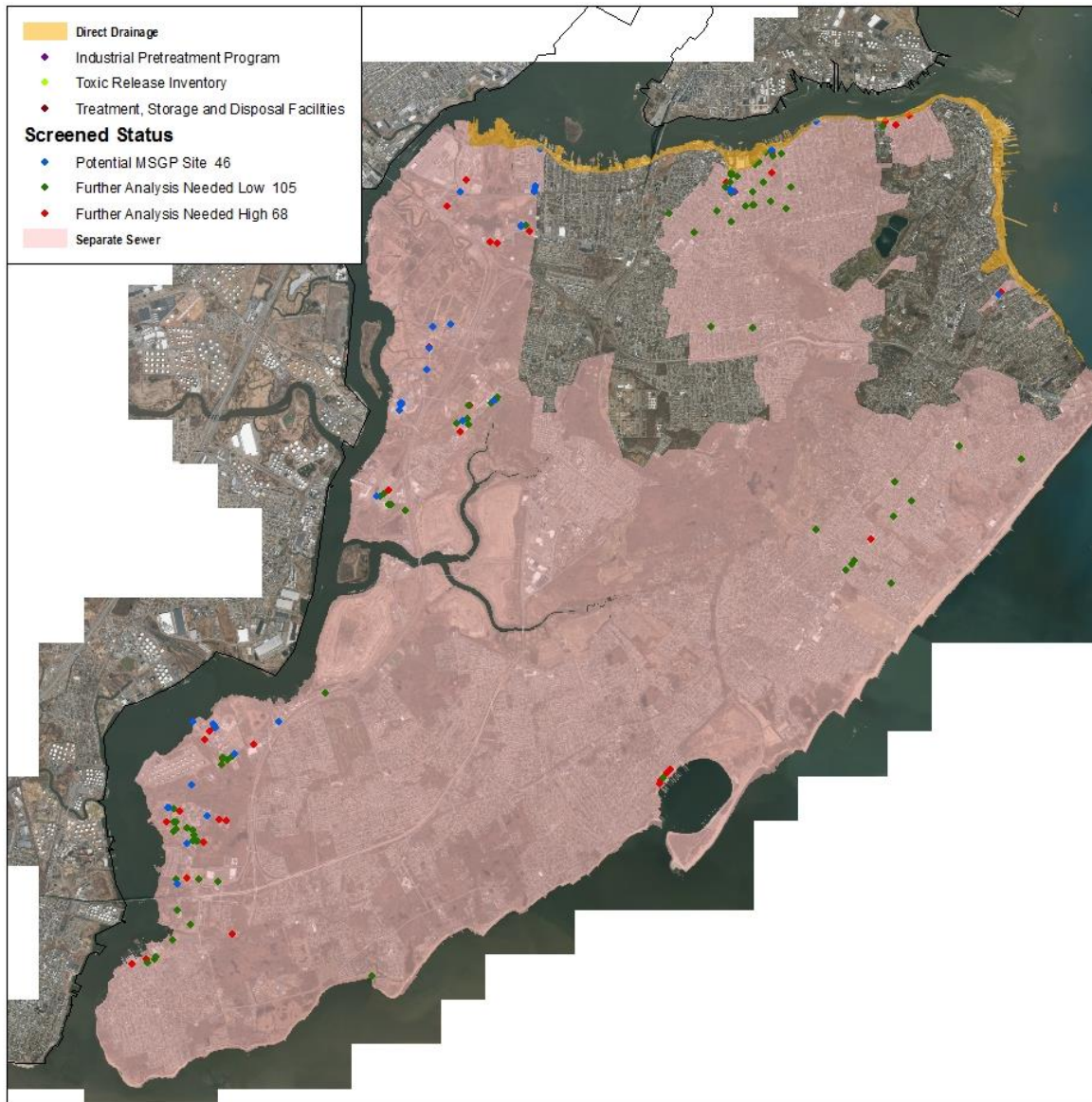
Facility which also has SIC code listed under Sector E with high potential to impact stormwater.



Facility Inventory



Staten Island Industrial Commercial Map

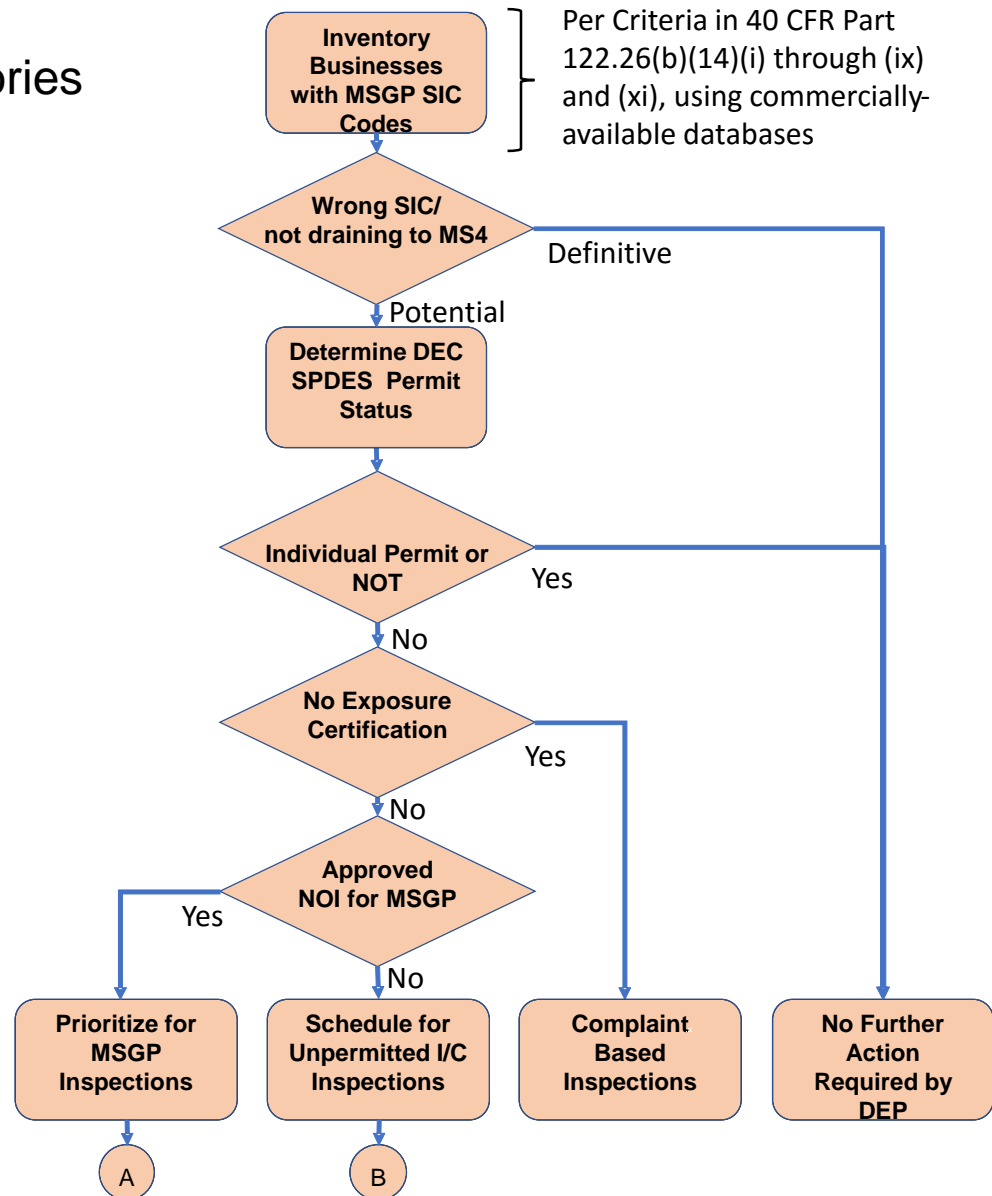


- Control stormwater pollution from industrial and commercial businesses potentially engaged in “industrial activities,” as defined under EPA and DEC regulations.
 - For each candidate business:
 - Identify and inventory
 - Inspect and assess
 - Refer findings to DEC
- } Educate and Train

BMP	BMP Description	Schedule (Yrs.)					Responsible Position
		1	2	3	4	5	
Provide an industrial and commercial pollution control program	Inventory and assess businesses conducting “industrial activities” and/or determined to be significant sources of stormwater pollution.	X	X	X	X	X	
Provide for staff training	Train staff/third-parties responsible for assessing inventoried businesses.	X					

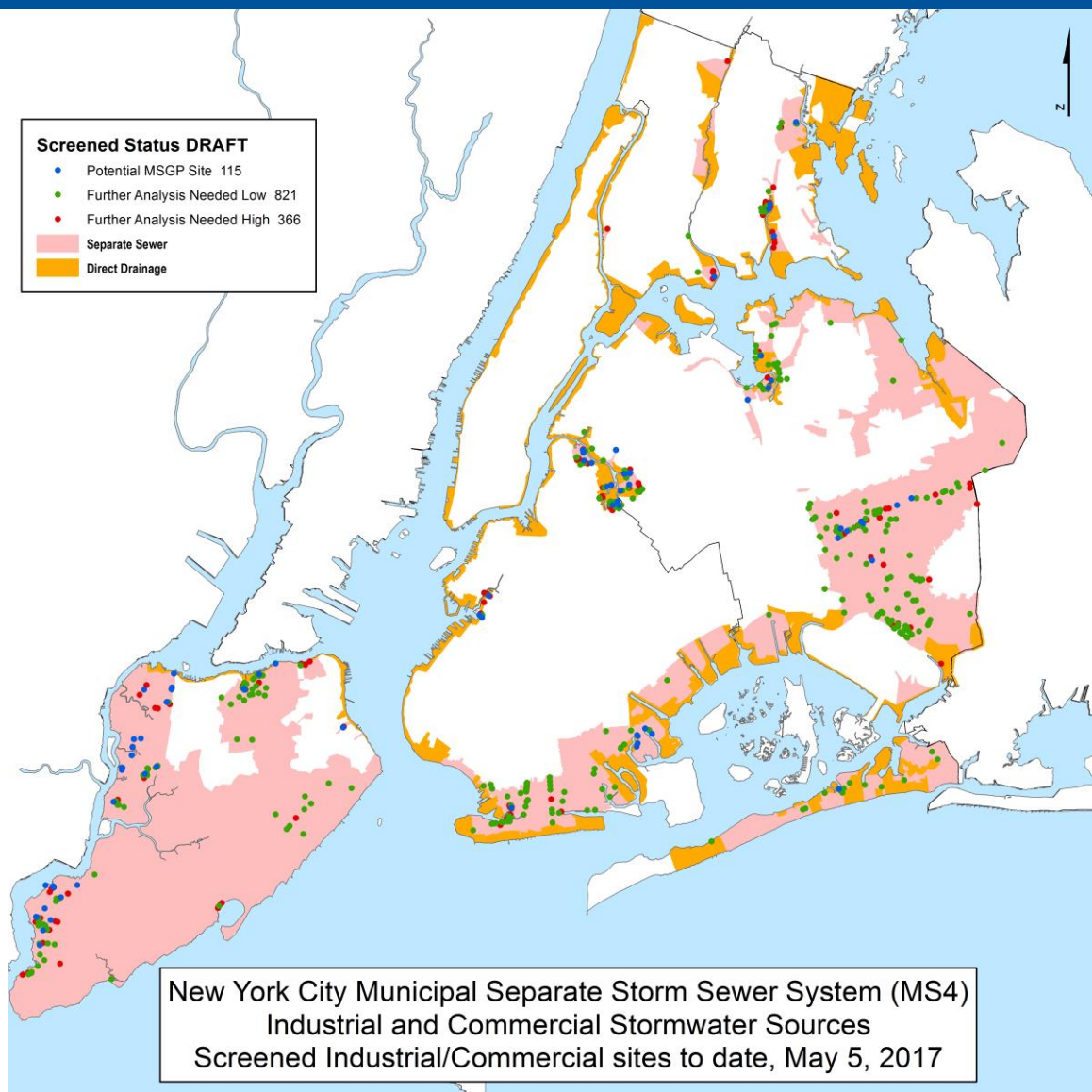
- The SWMP will be submitted on **August 1, 2018** to NYSDEC
- Once the SWMP is approved, inspections will begin immediately

- Initial inventory: Business categories subject to industrial stormwater permitting
- Web-based inventory screening
 - Potentially Drains to MS4
 - Current permitting status
- Type of inspection
 - None (Individual permit/NOT)
 - Complaint-based
 - Unpermitted facility
 - MSGP permit



Initial facility inspections by third-party contractor

- DEP anticipates a large number of facilities that will need to be assessed for SPDES
- DEP needs to determine how many facilities will be part of the regular inspection cycle, and commensurate staffing needs
- DEP has drafted an RFP to inspect permitted and unpermitted facilities (Anticipate advertisement June 2017)
- Contractor will conduct analysis for staffing needs once inspection program has been fully implemented
- Contractor will develop and implement training program for DEP staff
- Contractor will perform a study to determine if any other sectors not currently covered under MSGP need to be permitted for next permit cycle



PART VIII. SECTOR SPECIFIC PERMIT REQUIREMENTS	65
Sector A - Timber Products	66
Sector B – Paper and Allied Products Manufacturing	70
Sector C – Chemical and Allied Products Manufacturing	71
Sector D – Asphalt Paving & Roofing Materials & Lubricant Manufacturers	75
Sector E – Glass, Clay, Cement, Concrete and Gypsum Products	78
Sector G – Metal Mining (Ore Mining & Dressing)	85
Sector I – Oil and Gas Extraction and Refining	96
Sector J – Mineral Mining & Dressing	100
Sector K - Hazardous Waste Treatment, Storage, or Disposal Facilities	106
Sector L – Landfills, Land Application Sites and Non-Compliant Landfills	110
Sector M – Automobile Salvage Yards	120
Sector N – Scrap Recycling & Waste Recycling Facilities	126
Sector O – Steam Electric Generating Stations	136
Sector P – Land Transportation and/or Warehousing	140
Sector Q – Water Transportation	144
Sector R – Ship & Boat Building or Repair Yards	149
Sector S – Air Transportation	153
Sector T – Treatment Works	159
Sector U – Food & Kindred Products	161
Sector V – Textile Mills, Apparel & Other Fabric Products	163
Sector W – Furniture & Fixtures	166
Sector X – Printing & Publishing	167
Sector Y- Rubber, Plastics & Miscellaneous Manufacturing Industries	170
Sector Z – Leather Tanning and Finishing	173
Sector AA – Fabricated Metal Products	176
Sector AB – Transportation Equipment, Industrial & Commercial Machinery	183
Sector AC – Electronic, Electrical Equipment and Components, Photographic and Optical Goods	184
Sector AD – Non Classified Facilities/Stormwater Discharges Designated by Department as Requiring Permit Coverage	185
Sector AE – Department of Public Works and Highway Maintenance Facilities	186
(Non Classified Facilities/Stormwater Discharges Designated by Department as Requiring Permit Coverage)	186

SECTORS OF INDUSTRIAL ACTIVITY COVERED BY THIS PERMIT (Continued)

**Activities Consistent with
Descriptions and SIC Code or
Activity Code**

Activity Represented

Sector D: Asphalt Paving and Roofing Materials and Lubricants

2951, 2952

Asphalt Paving and Roofing Materials

2992, 2999

Miscellaneous Products of Petroleum and Coal

Sector E: Glass Clay, Cement, Concrete, and Gypsum Products

3211

Flat Glass

3221, 3229

Glass and Glassware, Pressed or Blown

3231

Glass Products Made of Purchased Glass

3241

Hydraulic Cement

3251-3259

Structural Clay Products

3261-3269

Pottery and Related Products

3271-3275

Concrete, Gypsum and Plaster Products

3281

Cut Stone and Stone Products

3291-3299

Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products

- Notify business – one time only
- Assemble background
- On-site inspections
 - Characterize SPDES applicability
 - Characterize exposure
- Post-inspection reporting
 - Notify business of findings
 - Notify DEC of findings
 - Revise inventory

Quarterly Pre-Planning

- Maintain I/C inventory and priorities
- Quarterly identification of businesses to inspect per priorities



Pre-Inspection Activities

- Notify business of inspection
- Review available data about business
- Assemble inspection equipment, information



On-Site Inspection Procedures

- Introductions
- Facility walkthrough
- Wrap-up Meeting to review findings



Post-Inspection Activities

- Complete inspection report
- Notify facility of findings
- Log findings in database
- Update inventory, prioritization
- Refer findings to DEC for SPDES coverage determination

Stormwater Pollution Prevention Plan (SWPPP)

A site specific document which identifies potential sources of stormwater pollution and control measures to eliminate impacts to stormwater runoff.

Elements of a SWPPP:

- General site description, facility information
- Site map, including outfalls, drainage areas, and direction of stormwater flow
- Potential sources of pollution
- History of spills and releases
- Best management practices to control impacts to runoff (structural & non-structural)
- Permit-Required Controls (inspection procedures, spill response plans, etc.)
- Monitoring and Sampling Data

1. ADMINISTRATIVE
 - 1.1. Facility Information and Location
 - 1.2. Contact Information and Responsible Parties
 - 1.3. Stormwater Pollution Prevention Team
 - 1.4. SWPPP Implementation and Revision
 - 1.5. Coverage Under SPDES General Permit
 - 1.6. Activities at the Facility
2. POTENTIAL POLLUTANT SOURCES
 - 2.1. Industrial Activity and Associated Pollutants
 - 2.2. Spills and Leaks
 - 2.3. Non-Storm Water Discharges
3. CONTROL MEASURES FOR STORM WATER RELATED DISCHARGES
 - 3.1. Minimize Exposure
 - 3.2. Good Housekeeping
 - 3.3. Maintenance
 - 3.4. Spill Prevention and Response
 - 3.5. Erosion and Sediment Controls
 - 3.6. Management of Runoff
 - 3.7. Multi-Sector General Permit Sector Specific Effluent Limits
 - 3.8. Employee Training
 - 3.9. Non-Storm Water Related Discharges
4. SCHEDULES AND PROCEDURES FOR MONITORING
 - 4.1. General
 - 4.2. Quarterly Visual Monitoring
 - 4.3. Annual Dry Weather Flow Monitoring
 - 4.4. Benchmark Monitoring
5. INSPECTION AND MAINTENANCE PROCEDURES
 - 5.1. Inspection and Maintenance Schedule
 - 5.2. Record Keeping Requirements

APPENDICES

- A. Notice of Intent
- B. SPDES General Permit
- C. Calculations

Primary Industrial Activity: Storage and Recycling



Potential sector this facility might be subject to: Sector N: Scrap Recycling

Typical parameters that require monitoring under this sector: TSS, COD, Oil & Grease, Aluminum, Cadmium, Copper, Chromium, Iron, Lead, Zinc

Site Specific SWPPP should identify locations where the following activities or sources may be exposed to precipitation/surface runoff:

- Locations of haul and access roads
- Scrap and waste material storage areas
- Outdoor scrap and waste processing equipment
- Areas where materials are sorted, transferred, stockpiled
- Containment areas

Primary Industrial Activity: Timber



Potential sector this facility might be subject to: Sector A: Timber Products

Typical parameters that require monitoring under this sector: TSS, COD, Zinc, TN, Phosphorous, Arsenic, Chromium, Copper

Site Specific SWPPP should identify locations where the following activities or sources may be exposed to precipitation/surface runoff:

- Processing areas
- Treatment chemical storage areas
- Treated wood and residue storage areas
- Wet decking areas
- Dry decking areas
- Untreated wood and residue storage areas
- Treatment equipment storage areas

Primary Industrial Activity: Land Transportation



Potential sector this facility might be subject to: Sector P: Land Transportation and/or Warehousing

Typical parameters that require monitoring under this sector: Oil and Grease, COD, BTEX

Site Specific SWPPP should identify locations where the following activities or sources may be exposed to precipitation/surface runoff:

- Fueling stations
- Vehicle/equipment maintenance or cleaning areas
- Storage areas for vehicle/equipment with actual or potential fluid leaks
- Loading/unloading areas
- Areas where treatment, storage or disposal of wastes occur; liquid storage tanks
- Processing areas, storage areas, and all monitoring areas

Primary Industrial Activity: Glass, Clay, Cement



Potential sector this facility might be subject to: Sector E: Glass, Clay, Cement, Concrete, and Gypsum Products

Typical parameters that require monitoring under this sector: Aluminum, TSS, pH, Iron

Site Specific SWPPP should identify locations where the following activities or sources may be exposed to precipitation/surface runoff:

- Bag house or other dust control device
- Recycle/sedimentation pond, clarifier or other device used for the treatment of process wastewater and the areas that drain to the treatment device

Primary Industrial Activity: Auto Salvage Yard



Potential sector this facility might be subject to: Sector M: Auto Salvage Yard

Typical parameters that require monitoring under this sector: TSS, Oil & Grease, Iron, Aluminum, Lead, BTEX

Site Specific SWPPP should identify locations where the following activities or sources may be exposed to precipitation/surface runoff:

- Vehicle storage areas
- Dismantling areas
- Parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers)
- Liquid storage lands and drums for fuel and other fluids
- Location of each discharge and monitoring point

Primary Industrial Activity: Scrap and Waste Materials



Potential sector this facility might be subject to: Sector N: Scrap Recycling

Typical parameters that require monitoring under this sector: TSS, COD, Oil & Grease, Aluminum, Cadmium, Copper, Chromium, Iron, Lead, Zinc

Site Specific SWPPP should identify locations where the following activities or sources may be exposed to precipitation/surface runoff:

- Locations of haul and access roads
- Scrap and waste material storage areas
- Outdoor scrap and waste processing equipment
- Areas where materials are sorted, transferred, stockpiled
- Containment areas

Vehicle/Equipment Storage



Higher Risk for Stormwater Impact: Open Vehicle Storage (Outside with Fluids Not Drained)



Lower Risk for Stormwater Impact: Covered Vehicle Storage

Drum Storage/Management



Higher Risk for Stormwater Impact: Drums stored without spill containment



Lower Risk for Stormwater Impact: Drums stored indoors on spill pallets

Material Stockpiles Example: Salt Pile



Hamilton County Public Health Department: Higher Risk for Stormwater Impact: Uncovered salt pile



Lower Risk for Stormwater Impact: Covered salt pile

Spill Response



Higher Risk for Stormwater Impact: Unattended spill



Lower Risk for Stormwater Impact: Quick spill response

Waste Management and Disposal



Higher Risk for Stormwater Impact: Leaking dumpster



Lower Risk for Stormwater Impact: Well-managed dumpster

- **Spring 2018** – City will propose draft rules to describe program specifics
- **August 1, 2018** – SWMP will be submitted to NYSDEC
- **November 2018** – all facilities that require SPDES MSGP inspections will be notified. Inspections will begin shortly after.



For more information, visit our website: nyc.gov/dep/ms4
If you have questions or feedback, please contact the MS4 Team at:
ms4@dep.nyc.gov