TOWN OF AMHERST
STORMWATER MANAGEMENT PLAN

Town of Amherst

Engineering Department

March 2018

TOWN OF AMHERST

MS4 STORMWATER MANAGEMENT PLAN

PURSUANT TO:

NEW YORK STATE SPDES GENERAL PERMIT

FOR STORMWATER DISCHARGES

FROM

MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

PERMIT NO. GP-0-15-003

Prepared by

TOWN OF AMHERST, NY

ENGINEERING DEPARTMENT

TOWN OF AMHERST STORMWATER MANGEMENT PLAN

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INTRODUCTION

The Town of Amherst (TOA) has developed a Stormwater Management Plan (TOA SWMP) to comply with the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (GP-0-15-003), Town of Amherst: NYR-20A122.

The aim of this program is to control stormwater runoff and prevent the discharge of the pollutants from the Town's storm sewer system to the waters of the United States in accordance with the requirements of federal Phase II stormwater regulations under the Clean Water Act. The aim of the Clean Water Act, the federal Phase II stormwater regulations and the program proposed in this document is to reduce to the "maximum extent practicable" pollutants in the stormwater discharges. There are six program elements designed to reduce the discharge of pollutants to the maximum extent practicable. The program elements, titled Minimum Control Measures, include:

1. Public Education and Outreach
2. Public Involvement / Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention / Good Housekeeping for Municipal Operations.

Each Minimum Control Measure and the Best Management Practices that have been implemented to maintain compliance with the NYSDEC GP-0-15-003 General Permit are described in the plan. For each Best Management Practice, responsibilities to achieve and sustain compliance are clearly defined. Portions of the work necessary are provided through the collective efforts of the Western New York Stormwater Coalition of which the Town of Amherst is a member. The remaining work is the responsibility of Town of Amherst's designated Stormwater Management Officer.

Certain components of this program have been codified into local law. Refer to the Local Law for Stormwater Management and Erosion and Sediment Control and the Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems. These laws were adopted by the Town of Amherst on August 20, 2007 and as amended.

This Stormwater Management Plan will be updated on an annual basis in order to take into consideration the latest technologies and information to maintain compliance with the NYSDEC GP-0-15-003 General Permit.

GENERAL DEFINITIONS AND REQUIREMENTS

Best Management Practices (BMPs) - Activities or structural improvements that help reduce the quantity and improve the quality of stormwater runoff. BMPs include public education and outreach, treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Clean Water Act - Amendments made to the Federal Water Pollution Control Act in 1972 to establish water quality standards and to create the National Pollutant Discharge Elimination System to protect the waters of the U. S. by regulating the discharge of pollutants from point source discharges and municipal separate storm sewer systems.

Combined Sewer System – A sewer system designed to convey both sanitary wastewater and stormwater.

Detention Pond – Pond that stores a volume of water for a given period of time and then discharges the water downstream.

Discharge – An outflow of water from a stream, pipe, ground water system or watershed.

Ecosystem – all of the plants and animals in an area that interact to make up the local environment.

Erosion – the overall process of the transport of material on the earth's surface including the movement of soil and rock by agents such as water, wind, or gravity.

Groundwater – all of the water contained in void space beneath the earth's surface.

Heavy Metals - Metals such as zinc, copper, lead, mercury, chromium, cadmium, iron, manganese, nickel, molybdenum and silver that, even in low concentrations can be toxic or lethal to humans, animals and aquatic life.

Illicit Discharge - The term refers to any discharge to an MS4 that is not composed entirely of stormwater unless authorized via an NPDES permit or otherwise excluded from regulation. Thus, not all illicit discharges are illegal or prohibited.

Industrial Waste - Unwanted materials from an industrial operation. It may be liquid, sludge, solid, or hazardous waste.

Large Municipal Separate Storm Sewer System (Large MS4) – all municipal separate storm sewers that are located in an incorporated place with a population of 250,000 or more according to the latest Census.

Maximum Extent Practicable (MEP) – a water quality standard that applies to all MS4 operators under NPDES permits. The standard has no exact definition, as it was intended to be flexible to allow operators to tailor their stormwater programs to their particular site.

Medium Municipal Separate Storm Sewer System (Medium MS4) – all municipal separate storm sewers that are located in an incorporated place with a population of more than 100,000 but less than 250,000.

Municipal Separate Storm Sewer Systems (MS4) - Areas with a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains) that are not a combined sewer or part of a publicly owned treatment system and are owned or operated and regulated by a municipality or authorized agency. MS4s may be small, medium or large with the medium or large MS4s being principally determined by population size.

Non-Point Source Pollutants (NPS) – pollution coming from many diffuse sources whose origin is often difficult to identify. This pollution occurs as rain or snowmelt travels over the land surface and picks up pollutants such as fertilizer, pesticides, and chemicals from cars. This pollution is difficult to regulate due to its origin from many different sources. These pollutants enter waterways untreated and are a major threat to aquatic organisms and people who fish or use waterways for recreational purposes.

National Pollutant Discharge Elimination System (NPDES) – the EPA's regulatory program to control the discharge of pollutants to waters of the United States.

Notice of Intent (NOI) - An application to notify the permitting authority of a facility's intention to be covered by a general permit. This exempts a facility from having to submit an individual or group application.

Nutrients - The term typically refers to nitrogen and phosphorus or compounds containing free amounts of the two elements. These elements are essential for the growth of plant life, but can create problems in the form of algal blooms, depletion of dissolved oxygen and pH changes in streams and other water bodies when higher concentrations are allowed to enter drainage systems and lakes.

Ordinance - A law based on state statutory authority developed and approved by a governmental agency to allow them to regulate the enforcement of criteria contained within the specific law and to invoke sanctions and other enforcement measures to ensure facilities comply with the criteria.

Outfall – the point where a sewer or drainage discharges into a receiving waterway.

Point Source Pollution – pollution coming from a single, definable source, such as a factory.

Retention Pond – Pond that stores a volume of water without allowing it to discharge downstream.

Runoff – any drainage that leaves an area as surface flow.

Sanitary Sewer – an underground pipe system that carries sanitary waste and other wastewater to a treatment plant.

Sediment – material derived from the weathering of rock such as sand and soil. This material can be detrimental to aquatic life and habitats if too much is allowed to wash into rivers and ponds.

Site Plan – a geographic representation of the layout of buildings and other important features on a tract of land.

Municipal Separate Storm Sewer Systems (MS4s) - These are MS4s that are not merely determined by population, but are much broader in scope. MS4s are land areas with conveyances that are designated because of one or more of the following criteria: 1) they discharge to sensitive waters; 2) they are experiencing high growth or have a high growth potential; 3) they are contiguous to urbanized areas and other MS4s; 4) they are a significant contributor of pollutants to the waters of the U. S.; or 5) they have ineffective protection of water quality through other programs.

State Pollutant Discharge Elimination System (SPDES) – the state's regulatory program to control the discharge of pollutants to waters of the Unites States.

Storm Drain – any drain which drains directly into the storm sewer system, usually found along roadways or in parking lots.

Storm Sewer – an underground pipe system that carries runoff from streets and other surfaces.

Stormwater – stormwater or snow melt runoff, and surface runoff and drainage.

Stormwater Management – any measure associated with the planning, maintenance, and regulation of facilities which collect, store, or convey stormwater.

Stormwater Pollution Prevention Plan (SWPPP) - A plan developed by a facility or entity that thoroughly evaluates potential pollutant sources at a site and selects and implements appropriate best management practice measures designed to prevent or control the discharge of pollutants in stormwater runoff.

Surface Runoff – the flow of water across the land surface that occurs when the rainfall rate exceeds the ability of the soil to absorb the water. Also occurs on impervious surfaces, such as parking lots, where water cannot infiltrate at all.

Surface Water – any water that remains on the earth's surface, such as ponds, rivers, streams, impoundments, wetlands, oceans, etc.

Total Maximum Daily Load (TMDL) – a regulatory limit of the maximum amount of a pollutant type that can be released into a body of water in a twenty-four hour period without adversely affecting water quality.

Tributary – a stream which drains into another larger stream or body of water.

Urbanized Area (UA) - Is a land area consisting of one or more central places and the adjacent densely settled surrounding area (urban fringe) that together have a residential population of at least 50,000 and a minimum average population density of at least 1,000 people per square mile.

Watershed – a geographic area in which water flowing across the surface will drain into a certain stream or river and flow out of the area via that stream or river. All of the land that drains to a particular body of water. Also known as a catchment or drainage basin.

Waters of the US - These are surface waters defined as wetlands, lakes (including dry lakes), rivers, streams (including intermittent streams, ephemeral washes and arroyos), mudflats, sandflats, sloughs, wet meadows, playa lakes, natural ponds, and man-made impoundments.

Wetlands – an area of land where part of the surface is covered with water or the soil is completely saturated with water for a large majority of the year. Wetlands provide an important habitat for many different types of plant and animal species. Wetlands are also natural stormwater control areas, since they filter out pollutants and are able to retain large amounts of water during storm events.

LIST OF COMMONLY USED ABBREVIATIONS

BMPs – Best Management Practices

CWA – Clean Water Act

ECDEP – Erie County Department of Environment and Planning

MEP – Maximum Extent Practicable

MS4 - Municipal Separate Storm Sewer System

MCM – Minimum Control Measures

NOI – Notice of Intent

NPS – Non-Point Source Pollutants

NPDES – National Pollution Discharge Elimination System

NYSDEC – New York State Department of Environmental Conservation

SMO – Stormwater Management Officer

SPDES – State Pollution Discharge Elimination System

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

USEPA – United States Environmental Protection Agency

WNYSC – Western New York Stormwater WNYSC

1. PROGRAM DEVELOPMENT

The Town of Amherst has developed a Stormwater Management Plan (TOA SWMP) in accordance with the New York State Pollutant Discharge Elimination System (SPDES) requirements for obtaining authorization for stormwater discharges and certain non-stormwater discharges. This TOA SWMP has been developed in accordance with guidelines published by the New York State Department of Environmental Conservation (NYSDEC) for coverage under SPDES General Permit No. GP-0-15-003. The TOA SWMP has been developed to facilitate the Town's efforts in reducing stormwater pollutants from the Town's municipal separate storm sewer system (MS4) to the maximum extent possible as required by the SPDES General Permit.

The TOA SWMP describes specific actions that will be taken over time to reduce pollutants and protect the Town's surface waters. The specific activities to be implemented are referred to as "Best Management Practices" (BMPs). Various BMPs have been developed for each of the six MCM's required by the General Permit. The TOA SWMP also sets measurable goals for the implementation of the BMPs. Implementation of the selected BMPs is expected to result in reductions of the pollutants discharged into the Town's streams, ponds, and creeks.

1.1 TOWN OF AMHERST MUNICIPALITY BACKGROUND

The Town of Amherst is located in northern Erie County, encompasses an area 6.9 miles wide at the widest and extends approximately 9.5 miles north to south, and covers approximately 53.6 square miles (34,304 acres), see Figure 1-1

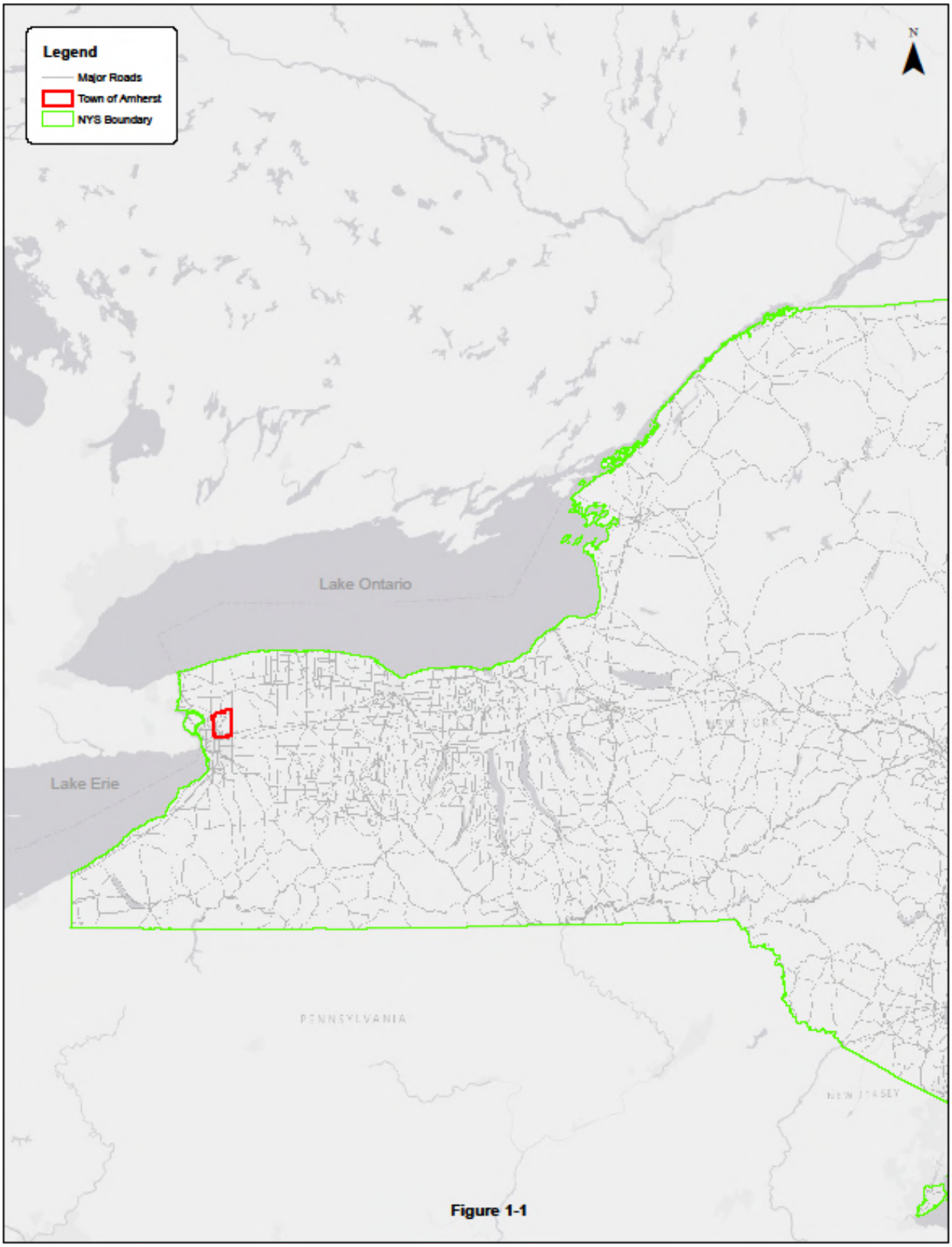

Legend
Major Roads
Town of Amherst
NYS Boundary
N
Lake Ontario
Lake Erie
PENNSYLVANIA

Figure 1-1

The Village of Williamsville is an incorporated village within TOA but is not part of this TOA SWMP.

The Town of Amherst is governed by the Town Supervisor and four Town Council Members. There are several departments tasked with running the public service offices of the Town including but not limited to:

Assessor's Office

Town Attorney

Comptroller's Office

Highway Department

Engineering Department

Recreation and Youth Department

Town Clerk

Building Department

Planning Department

Building Maintenance

Information Technology

Police Department

Town Court

The Town has established a structure of task oriented responsibilities of those responsible for SWMP management and implementation. Facilities like parks, open space parcels, schools and libraries are important elements in the public education, outreach and participation aspects of the stormwater management plan.

1.2 COMMUNITY RESOURCES

For purpose of stormwater management and planning, key community resources within the planning area consists of parks, schools and libraries. These facilities are important elements in the public education, outreach and participation aspects of the stormwater management plan.

1.3 TOPOGRAPHY AND SOILS

Erie County is located in the western portion of the Erie-Ontario physiographic province of New York, which is in the northeastern portion of the Central Lowlands physiographic province of the Interior Plains physiographic division (USACE, 1979). The region is bordered on the north by Lake Ontario, on the west by Lake Erie and the Niagara River, and on the south by the Allegheny Plateau. Within the region are three plains, Ontario, Huron, and Erie, separated by the east-west striking Niagara, Onondaga, and Portage escarpments. Town of Amherst is located within the Salina Lowland of the east-west trending Huron plain. This lowland area is bounded by the

Onondaga and Niagara Escarpments, which are composed of more resistant rock. Topographic relief in Town of Amherst is due to pre-glacial erosion of the bedrock and subsequent topographic modification by glaciation (La Sala, 1968). The Town generally slopes north-northwest, which promotes surface and subsurface drainage toward Tonawanda Creek and the Niagara River. Between the major drainages of Ellicott and Ransom Creeks, the topography is nearly flat, with Tonawanda Creek dropping only three feet per mile across northern Amherst.

The Onondaga Escarpment, which parallels Route 5 through the Town, marks the approximate boundary between surface soils which are predominantly lacustrine in origin (to the north) and predominantly glacial till soils (south). Soils are more typically shallow to bedrock along and just south of the escarpment. North of the escarpment, soils are generally deeper, with depth to bedrock greater than 10 to 20 feet in most areas. There are approximately 55 mapped soil units within the town of Amherst (ECSWCD, 1972). Five soil units are described as fine-grained lacustrine soils and include Cheektowaga, Cosad, Lakemont, Niagara, and Odessa. These soils cover about 42 percent of Amherst. These cohesive soils generally show high porosities, low permeability, and natural moisture content associated with low strength, low bearing capacity, and high settlement characteristics.

1.4 WATER BODIES

Key surface water resources in the Town include Tonawanda Creek, Ellicott Creek and Ransom Creek. Other important water bodies include named and unnamed streams, creeks and ditches. Surface water bodies in the Town are shown in Figure 1-2

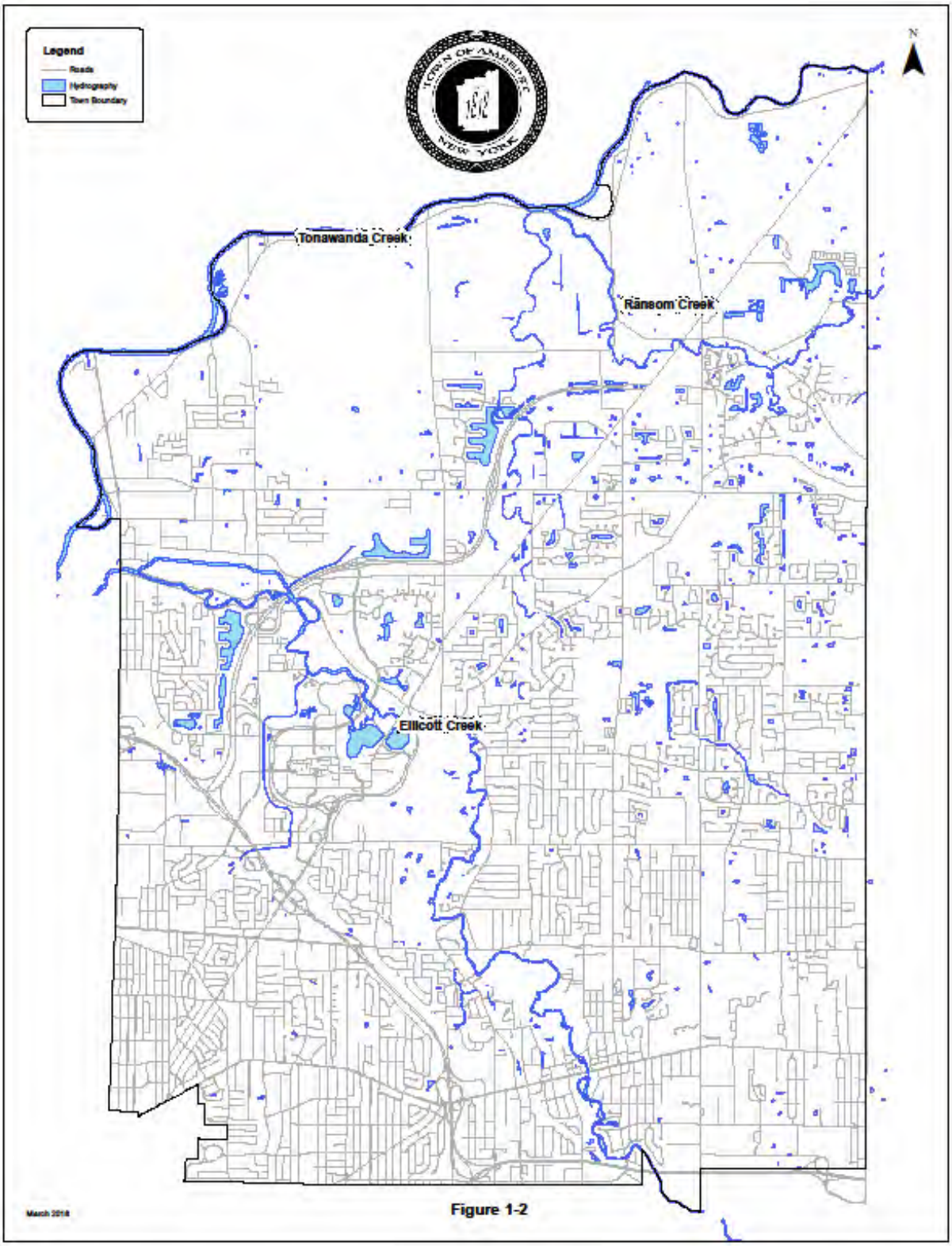

Legend
Roads
Hydrography
Town Boundary
N
Tonawanda Creek
Ransom Creek
Ellicott Creek
March 2018

Figure 1-2

1.5 LAND USE

Amherst has a mix pattern of land uses reflecting the varied influences that have shaped the Town's growth. On a percentage basis, residential development (predominantly single-family) remains the Town's most widespread land use, at about 36.4% of the total. The next largest category, vacant land, represents about 18.4% of the Town's land area. Commercial, office and industrial development together comprise about 9.3%. See Figure 1-3 for land use within the Town.

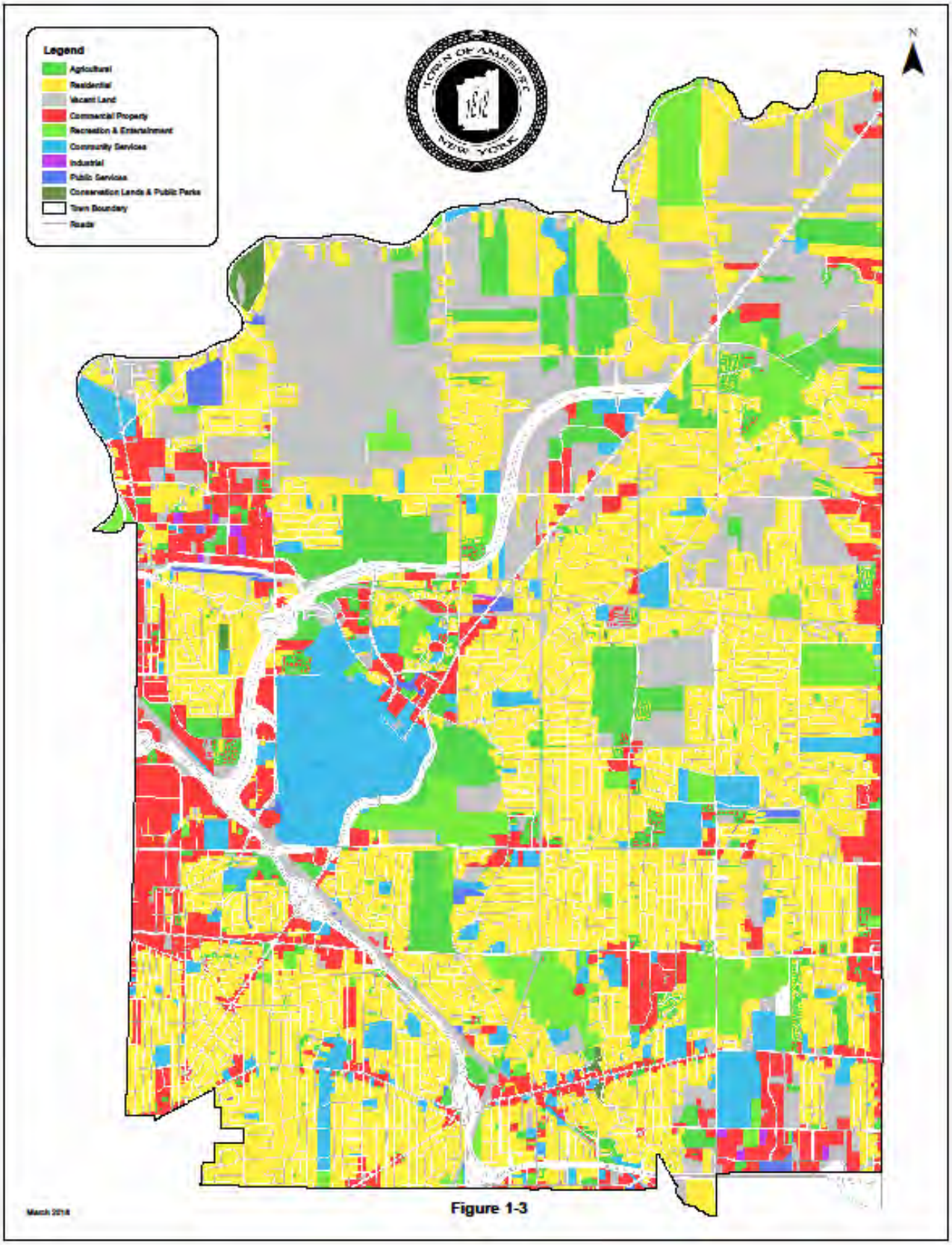

Legend
Agricultural
Residential
Vacant Land
Commercial Property
Recreation & Entertainment
Community Services
Industrial
Public Services
Conservation Lands & Public Parks
Town Boundary
Roads
TOWN OF AMHERST
NEW YORK
1812
N
March 2018

Figure 1-3

2. EXISTING MUNICIPAL STORM SEWER

The Town's stormwater infrastructure includes drainage systems with onsite storage and/ or direct discharges to surface water bodies. The onsite storage of stormwater is typically achieved by the installation of drywells, stormwater retention ponds, and bio-retention areas. In most cases these facilities also include overflow structures that direct stormwater runoff resulting from extreme rainfall events to drainage facilities that ultimately discharge to the surface waters of the United States. The current inventory of stormwater facilities within the Town is maintained on the Town's GIS system.

2.1 HIGHWAY DEPARTMENT: STORM SEWER SYSTEM MAINTENANCE

The TOA Highway Department is charged with maintaining municipal roads, and the Town's MS4 stormwater system which includes swales, catch basins, ditches, creeks and all interconnecting pipes within public roadway systems.

2.2 BEST MANGEMENT PLAN

The Town of Amherst recognizes that the Stormwater Management within the Town conveyance system and within Town owned and operated facilities as an important task. To that end, the success of the program will be contingent on cooperation of many of the Town Departments as stakeholders. The stormwater management officer is the main point of contact and co-ordinates with all other departments when necessary in implementing the six minimum control measures. See attached Organizational Chart.

TOWN OF AMHERST
Departments at the Town Responsible for Implementation of the Six Minimum Control Measures (MCM)
MS4 Coordinator - Stormwater Management Officer - V. Reberholt

MCM 1	MCM 2	MCM 3	MCM 4	MCM 5	MCM 6
PUBLIC EDUCATION	**PUBLIC INVOLVEMENT**	**ILLICIT DISCHARGE DETECTION AND ELIMINATION**	**CONSTRUCTION SITES**	**POST CONSTRUCTION MANAGEMENT**	**GOOD HOUSEKEEPING**
WNYSC - The Coalition creates graphics and designs presentations. Prepares postcards and mailers. Creates K-12 Education	WNYSC WNYSC schedules 2 public meetings a year to educate key individuals and groups	GIS (B. Barnes) - Performs mapping functions. Assists and trains individuals using GPS.	Engineering Department Once the SWPPP is approved, Developer is required to apply for a Stormwater Inspection Permit (SWIP) through V. Reberholt No building permits are issued untill the SWIP has been issued. has been secured.	Engineering Department All long term post construction measures are inspected by the Engineering Consultant before construction is completed and NOT signed by V. Reberholt	Management, Highway Dept, Building Maintenance Dept, Recreation Dept - Implements best management practices for operational and capital
Organizes a stormwater conference once in 2 years, Invites Guest speakers, Engineering Consultants, Landscape Architects and MS4 communities.	TOA along with WNYSC organises a household hazardous waste collection day. This event is published in the newspaper and residents from all communities are encouraged to attend	Engineering Department (V. Reberholt) - Inspects outfalls, and field reconnaissance associated with regular inspections and potential illicit discharge voilations. Works on staff training, performs inspections and issues notice of voilations	Before any clearing activities can take place a kick-off meeting is held on site to be attended by the Project Manager, Site Superintendent and Owner's SWPPP Inspector. Construction sites are monitored by Engineering Consultants hired by the Town.	The owner signs a maintenance agreement and files it at County Clerk's office to ensure that the post-construction measures will not be altered without notification and will be maintained in the future.	Highway Dept maintains Highway Maintenance facilities including buildings, salt storage, fueling station, Town roadways, drainage infrastructures.
Makes presentations to educate MS4 Communities and Town Boards when needed. Maintains a website related to stormwater management	TOA participates in different Environmental groups that have interest in the stormwater management program. These local groups assist with public education and involvement.	(V.Reberholt) recieves calls from Residents, Code Enforcement Officers, Pre-treatment Co-ordinator, Highway employees, Emergency Services & Safety Co-ordinator regarding illicit discharges into storm sewers. The complaints are investigated and necessary voilations issued.	V. Reberholt closely monitors the construction sites by reviewing the weekly inspection reports and issuing notice of voilations (NOV) if necessary. Fourth NOV maybe accompained with an admintrative fine. A stop work order may also be issued with the help of the Code Enforcement Officer. After the NOV is issued the site is inspected again in 14 days as a follow up on the voilations	Highway Dept. - Maintains Highway maintenance facilities including buildings, salt storage, fueling station, Town roadways, drainage infrastructures.	Recreation Dept maintains all recreation infrastructure and community centers. Parks Dept maintains all public Town Parks.

The Engineering Department works directly with: The Highway Department, Building Department, Planning Department, Police Department, Code Enforcement, GIS and Town Attorney's Office.

The Engineering Department oversees the implementation of the SWMP and has responsibility for reviewing SWPPPs for new developments, developing programs and policies regarding IDDE, Good Housekeeping and Capital Improvement Projects to improve stormwater quality discharging to impaired water bodies, and all other surface water bodies. Public Education and Participation is a joint effort between the Town and the WNYSC.

Engineering Department – Receives and reviews new SWPPP applications. Works with Capital Improvement Projects, assists all other concerned Departments. Works to implement Town's Good Housekeeping Training.

Highway Department – Cleans and rehabilitates Town's MS4 system. One of the first lines of detection of Illicit Discharges.

Building Department – Receives applications for building permits, demolition and excavation permits – land disturbing activities.

Town Attorney's Office – Drafts code amendments to enhance the Town's enforcement of the Federal Clean Water Act and SPDES General Permit for Stormwater Discharges. Interprets legal issues with Engineering Department.

Parks Department – Maintains all Town Parks

Recreation Department – Maintains Town's recreational facilities and infrastructure.

Building Maintenance – Maintains interior and exterior Town buildings and facilities.

Public Safety – Consisting of Police, Fire, Code and Building Inspectors, one of the first lines of detection for Illicit Discharges.

2.3 IMPAIRED WATERBODIES AND POLLUTANTS OF CONCERN

In stormwater management, it is important to identify any waters in the planning area that are on the New York State Section 303(d) list of impaired waters, or for which Total Maximum Daily Loads (TMDLs) have been adopted. The Federal Clean Water Act requires states to periodically assess and report on the quality of waters in their state. Section 303(d) of the Act also requires states to identify Impaired Waters, where specific designated uses are not fully supported. For these Impaired Waters, states must consider the development of a Total Maximum Daily Load (TMDL) or other strategies to reduce the input of the specific pollutant(s) that impair the water body, in order restore and protect such uses. Additionally, states are required to provide an assessment and listing methodology that explains their approach to water quality monitoring, data evaluation and listing.

The SPDES General Permit for Stormwater Discharges from MS4, GP-0-15-003 (Appendix 2) identifies the 303(d) listed waterbodies that are impaired by stormwater runoff within the Town. Those include:

- Ellicott Creek, Lower, and tribs — phosphorus
- Ellicott Creek, Lower, and tribs — silt/ sediment
- Ransom Creek, Lower, and tribs — pathogens
- Ransom Creek, Upper, and tribs — pathogens

The SPDES General Permit for Stormwater Discharges from MS4, GP-0-15-003 (Part IX) does not identify any TMDL waterbodies within the Town.

The Town of Amherst's stormwater program prioritizes attention to the pollutants causing impairment of the Town's waterbodies. In addition to phosphorus and pathogens, the stormwater program also addresses a host of other runoff pollutants including toxic chemicals, sediment, and debris.

2.3.1 BACTERIA IN STORMWATER

Pathogens – Pathogens are viruses, bacteria, algae and protozoans that cause diseases in humans, animals and/or plants. Pathogenic or disease-causing bacteria are ubiquitous in nature and are normally associated with human and animal wastes. In many cases where human pollution is suspected on the basis of coliform test results, the actual pollution source may, in fact, be caused by animal wastes generated in the watershed's ponds, streams, streets, and yards. Stormwater discharges throughout the watershed typically contain these bacteria. Based on numerous studies throughout the country over the last 15 to 20 years, it is not uncommon to find total coliform, fecal coliform and fecal streptococci in stormwater runoff at very high concentrations, from hundreds of thousands to over a 100 million colonies per 100 ml (USEPA, 1992).

Bacteria levels in stormwater runoff (urban areas) routinely exceed public health standards for

recreational water contact. Bacteria are a leading contaminant in many of New York's waters.

Pathogens may cause gastroenteritis, salmonellosis, and hepatitis A. Pathogens can enter the waterways through untreated or partially treated human sewage and wild/domestic animal waste. Two protozoa of major concern as waterborne pathogens are Giardia lamblia and Cryptosporidium parvum. Sources of pathogens in surface waters can be attributed to failing Sanitary Septic Systems and animal waste that is conveyed through the stormwater sewer systems. Untreated sewage like livestock wastes are also likely contributors of pathogens to Town of Amherst's waterbodies.

2.3.2 NUTRIENTS (PHOSPHORUS)

Phosphorus (Nutrients) – While essential for a healthy aquatic ecosystem, too much nitrogen and/or phosphorus in a waterbody will result in eutrophication; and can have detrimental impacts to aquatic life, human health and recreation. Too much nitrogen or phosphorus in a waterbody results in: overgrowth of aquatic plants, increased harmful algal blooms and decay, decreased light penetration and decreased levels of dissolved oxygen. Each of these conditions make it difficult for fish to live and people to swim. Nitrogen and/or Phosphorus, is considered a nutrient, and when the balance concentration is exceeded, it stimulates aquatic plant growth including algae. Under certain conditions, these algal blooms are damaging to fish and other aquatic animals by consuming the dissolved oxygen (DO) in the water that they need to breathe. This condition, referred to as hypoxia can cause fish death.

Nitrogen and/ or Phosphorus sources include agricultural and residential fertilizers, on-site disposal systems (sanitary systems). The Town of Amherst has golf courses and residential land. Runoff from developed land has elevated concentrations of phosphorus, which can enrich streams, lakes, and rivers.
Sources of these pollutants include fertilizer, atmospheric deposition, animal waste, organic matter, and stream bank erosion.

2.3.3 SEDIMENTS AND OTHER DEBRIS

Sediments and other debris such as litter and floatables carried by stormwater typically originate from construction sites, eroding road banks where there are no curbs, farm fields, lawns and yards that are sloped, eroded stream banks, damaged or eroded driveways, parking lots, walks and sidewalks, and roadway sanding for ice and snow.

Because urban/rural runoff is really rainfall washing an urban/rural area, whatever materials or substances are on the impervious and pervious land, roof or parking surfaces, or which have been deposited into a street gutter or directly into a catch basin or drop inlet, will be carried to the storm sewer discharge. Examples of these items could include organic materials such as discarded food; crop cuttings, animal droppings; garbage from overfilled or toppled trash cans; the contents from discarded containers, bottles and cans; flyers and garage sale posters placed on utility poles; and eroded soils, leaves, branches and twigs.

Organic materials are trapped or retained in the catch basin sump, frequently causing standing water to develop in the bottom of the catch basin. These materials tend to discolor the standing water and decompose and, at times, produce odors. This is particularly noticeable when catch basin contents are disturbed or washed out during a storm, by dry-weather flows, or when the system is being cleaned. In some cases, the odors could be similar to sanitary waste odors, since the nature of the materials is similar.

Both suspended and deposited sediments can have adverse effects on aquatic life in streams, lakes and rivers. Turbidity resulting from sediment can reduce light penetration for submerged aquatic vegetation. Reflected energy from light reflecting off the suspended sediment can increase water temperatures (Kundell and Rasmussen, 1995). Sediment transports many other pollutants to the water resources be it surface waters and /or groundwater.

2.3.4 TYPICAL FLOWS TO STORM SEWERS

The majority of flow to storm sewers is stormwater runoff. Stormwater runoff is surface flow water from precipitation that accumulates in and flows through natural and/or manmade storage and conveyance systems during and immediately following a storm event. As stormwater travels through a conveyance system, it carries pollutants to rivers, wetlands, lakes and groundwater, thereby impairing water quality. The quality of runoff is affected by a variety of factors and depends on the season, local meteorology, geography and upon activities which lie in the path of runoff.

As development occurs, impervious surfaces, such as streets, parking lots and buildings, replace natural ground cover, preventing infiltration of rainfall. This results in an increase in surface runoff. The runoff carries whatever pollutants are in its path to our water bodies. The quality of stormwater is important because stormwater conveys to rivers, creeks, streams, and lakes. These resources are inherently valuable, but they also provide many communities with sources of economic viability.

2.3.5 WET WEATHER SOURCES

The most common, and often the largest source of wet-weather flow is runoff generated by rainfall and snowfall. The majority of this runoff is from impervious surfaces and is directed to catch basins by drains or laterals that receive runoff from roofs, parking lots, basements, exterior stairways, roadside channels and ditches, retaining walls, park lawns, patios, shopping and pedestrian plazas and sidewalks. The catch basins are connected to the storm sewer system for subsequent discharge to leaching structures, retention or detention structure, or directly to a receiving water body, such as a river, creek, stream, a pond or large receiving waters.

2.3.6 DRY WEATHER SOURCES

Dry-weather flow occurs during dry weather in the form of delayed drainage that was started by the storm event. One common example of a dry-weather flow is basement drainage. This drainage occurs when sump pumps remove groundwater around building foundations. Frequently, the pumping of drainage of groundwater around a building or other structure may need to continue for a number of days or weeks after a rain event has stopped. Sometimes it is seasonal or continuous.

In the Town of Amherst, there are many small communities that are at a low elevation, and are built on clay soils that require the use of sump pumps to avoid basement flooding. A second example of dry weather flow is groundwater seepage into structures below the groundwater level which are not perfectly tight. This could include storm sewers and manholes that are below the level of groundwater in the surrounding area. Besides dry weather flow induced by previous precipitation, storm sewers receive a third type of dry weather flow. This includes non-stormwater discharges that are permitted as part of the MS4 General Permit and include:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising groundwaters
- Uncontaminated groundwater infiltration
- Uncontaminated groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Water from crawl space and basement sump- pumps
- Springs
- Footing drains
- Lawn and landscape watering runoff provided that all pesticides and fertilizers have been applied in accordance with the manufacturer's product label
- Flows from individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool water discharges
- Discharges or flows from fire-fighting activities
- Street wash waters related to cleaning and maintenance
- Any SPDES permitted discharge.

Storm sewers could also receive dry-weather flow and other materials from illicit discharges. Some examples of illicit discharges to storm sewers are: radiator flushing on sidewalks, driveways or streets; improper motor oil disposal in street gutters or directly into catch basins; throwing litter and garbage in the gutter or a catch basin; roadway accidents that result in fuel spills or spills of truck contents; washing of ready-mix concrete trucks; overturned trash cans that spill their contents, including various household liquids, into the street; and disposal of

household hazardous substances such as solvents, cleaning fluids, paints, empty or partially empty containers that still contain dangerous chemicals or liquids; and illicit connections to storm sewers from sanitary or industrial discharges.

2.3.7 CHARACTERISTICS OF STORM SEWER DISCHARGES

Storm sewer discharges in most urban areas have been found to contain a host of pollutants that are part of the precipitation itself (acid rain or snow), atmospheric deposition, or result from the rain or snow coming into contact with roofs, sidewalks, streets, parking lots and other areas. These pollutants and parameters can be part of runoff during wet-weather periods or dry –weather discharges after the precipitation event. In addition, some pollutants and parameters can also be found in the other dry-weather discharges described earlier and which are not related to precipitation. Typical pollutants found in runoff in rural and urban areas originate on lawns, farm lands, golf courses, sidewalks, streets, parking lots, and park spaces and can include suspended solids, bacteria, nitrogen, pathogens, phosphorus, heavy metals, and a variety of organic compounds such as polychlorinated biphenyls, petroleum hydrocarbons and polyaromatic hydrocarbons. Based on historical and recent water quality assessment reports, NYSDEC has concluded that storm sewers cause impairments to many of the State's rivers, lakes, bays, and estuaries. Table 2.1 presents a list of pollutants of concern from various sources in urban areas. Table 2.2 presents a summary of possible sources and potential effects of runoff.

TABLE 2.1
SOURCES OF RURAL /URBAN RUNOFF POLLUTANTS

Source	Pollutant of Concern
Erosion	Sediment and attached soil nutrients, organic matter and other absorbed pollutants
Atmospheric Deposition	Hydrocarbons emitted from automobiles, dust, aromatic hydrocarbons, metals and other chemicals released from industrial and commercial
Construction Materials	Sediment, metals from flashing and shingles, gutters and downspouts galvanized pipes and metal plating, paint and wood preservatives, concrete, asphalt
Manufactured Products	Heavy metals, halogenated aliphatics, phthalate esters, PAHs, other volatiles, phenols and oil from automobile use, zinc and cadmium from tire wear, and pesticides and phenols from other uses including industrial.
Landscape Maintenance	Fertilizer and pesticides. Generally as impervious area increases, nutrients build up on surfaces and runoff transport capacities also rise resulting in high loads. Exceptions include intensively landscaped areas (e.g., golf
Plants and Animals	Plant debris, animal excrement
Farmland	Fertilizer and pesticides
Septic Tanks	Coliform bacteria, nitrogen/NO3
Non-Stormwater Connections	Inadvertent or deliberate discharges of sanitary sewage and industrial wastewater to storm drainage systems including illicit connections, leaking sanitary collection systems, spills, industrial and commercial activities, construction activities, infiltration or contaminated groundwater and
Accidental Spills	Pollutants of concern depend on the nature of the spill.

TABLE 2.2
SUMMARY OF POSSIBLE SOURCES AND POTENTIAL EFFECTS OF RUNOFF POLLUTANTS

Category	Parameters	Possible Sources	Effects
Sediments	Organic and Inorganic Total Suspended Solids (TSS) Turbidity Dissolved Solids	Construction sites Urban/agricultural runoff Bank erosion Landfills, septic fields SSO's	Turbidity Habitat alteration Recreational and aesthetic loss Contaminant transport Hydraulic capacity is compromised
Nutrients	Nitrate Nitrite Ammonia Organic Nitrogen Phosphate Total Phosphorus	Urban/agricultural runoff Landfill, septic fields Atmospheric deposition Erosion	Algal blooms Ammonia toxicity Groundwater contamination Nitrate toxicity
Pathogens	Total Coliforms Fecal Coliforms Fecal Streptococci Viruses E. Coli Enterococcus	Urban/agricultural runoff Septic systems Illicit sanitary connections Domestic/wild animals CSOs (NA)	Ear/intestinal infections Recreational / aesthetic loss

2.3.8 ELLICOTT CREEK

Per SPDES General Permit for Stormwater Discharges from MS4, GP-0-15-003 (Appendix 2), Ellicott creek is impaired for sediment and phosphorus. Ellicott Creek watershed includes 3 golf courses, the Town Highway yard, residential, institutional, commercial, industrial and vacant properties. Possible sources of sediment and phosphorus impairment as listed above include construction sites, stream bank erosion, highway yard, on site wastewater treatment systems and run-off collecting sediment and nutrients on its way to storm sewer systems. The Town of Amherst takes and will continue to take all possible measures to control sediment from construction sites through construction monitoring and erosion control plan approval process. We ask the design engineers to provide 2 rows of silt fence if the construction site is in the Ellicott Creek watershed and the construction sites are monitored through the construction inspection program where the Town hires an engineering firm to complete construction inspection 9 times through the construction process and also closely monitor the owner's construction inspection reports. The highway yard is regularly maintained and best management practices (BMPs) are employed to keep the run-off free of sediment and nutrients. Highway vehicles and street sweepers are washed without soap at designated areas only. Town owned stream/ river banks are stabilized as necessary, stream/ river banks owned

by third parties or other MS4's are informed as necessary if stabilization or maintenance is needed. All Town streets and Town owned parking lots are swept a minimum of twice a year to reduce the amount of sediment and debris on roads and pavement.

For phosphorus impairment the property owners and/or residents will be educated through our public outreach program regarding the effects of phosphorus impairment in surface waters and its possible sources. All new construction in the watershed is required to have a stormwater quality measure to reduce phosphorus in stormwater. There are no onsite wastewater treatment systems or agricultural use in the Ellicott creek watershed however, individual property owners caring for their lawns is a potential source. Educational material through public outreach program will be distributed to the public to educate them regarding the harmful effects of excessive phosphorus in surface waters.

All educational flyers are attached in Appendix B.

2.3.9 RANSOM CREEK

Per SPDES General Permit for Stormwater Discharges from MS4, GP-0-15-003 (Appendix 2), Ransom Creek is impaired for pathogens. Ransom Creek watershed consists of golf courses, residential, agricultural and some commercial properties. Possible sources of pathogen impairment as listed above include agricultural run-off, septic tanks/ on site wastewater treatment systems, illicit sanitary connections and domestic/ wild animal waste; however, the main source of pathogen impairment in Ransom creek per the NYSDEC released 303d list are on-site wastewater treatment systems. The Town of Amherst will distribute educational material on pathogen impairment and its sources in this targeted area through public outreach and education program. All outfalls will the inspected during dry weather once every 5 year to detect any illicit sanitary connections through its illicit discharge detection and elimination program.

All educational flyers are attached in Appendix B.

3.0 MINIMUM CONTROL MEASURE 1 – PUBLIC EDUCATION AND OUTREACH

3.1 INTRODUCTION

The Public Education and Outreach minimum control measure consists of Best Management Practices (BMPs) that focus on the development of educational materials designed to inform the public about the impacts that stormwater discharges have on local water bodies. The educational materials contain specific actions as to how the public, as individuals or collectively as a group, can participate in reducing pollutants and their impact on the environment. The Public Education and Outreach program and BMPs, in combination, are expected to reach all of the constituents within the MS4s permitted boundary. The target pollutant sources are construction site runoff, impacts from new and re-development projects, illicit discharges and local/regional Pollutants of Concern (POCs).

3.2 PROGRAM

The WNYSC has developed many of the BMPs necessary for this MCM. These have included brochures, posters, webpage, education packages, and a display for community events. These BMPs will be updated by the WNYSC on an annual basis and made available to each MS4 that is a member of the WNYSC. MS4's will display these brochures at the libraries and municipal buildings. WNYSC will distribute relevant brochures to targeted businesses and general public. Display them at community events when possible.

3.3 BEST MANAGEMENT PRACTICES

WNYSC has developed public education brochures addressing stormwater pollution prevention for the general public, target businesses/ activities and schools. Ten brochures have been developed and are titled as follows:

- Automotive & Related Industries
- Construction Site Stormwater Runoff Control
- Concrete & Mortar Operations
- Roadwork & Paving
- Food & Restaurant Industries
- Pools, Fountains & Spas
- Mobile Cleaners: Carpet, Upholstery Cleaners, Janitorial Service Providers
- Hospitals, Medical Treatment Centers & Healthcare Facilities
- Pesticide Application, Lawn Care and Landscaping
- Household Guide to Preventing Stormwater Pollution

Brochures are typically distributed through trade associations, public outreach events, seminars and other educational programming.

The brochures are available on the WNYSC webpage along with information for businesses, municipalities, schools, and the general public to request additional brochures or download the brochures directly.

3.4 WEBPAGE

The WNYSC has developed a webpage designed to educate the public on the impacts of stormwater runoff on local waterbodies. The website also lists steps the public can take to reduce stormwater pollution and public involvement programs. WNYSC updates and maintains the webpage as necessary. (http://www2.erie.gov/environment/index.php?q=how-can-you-prevent-stormwater-pollution)

3.5 K-12 EDUCATION PACKAGES

The WNYSC has developed age appropriate materials for distribution to local educators in order to foster an early age respect for the environment. Distribution includes information describing environmental education services available to local educators regarding stormwater quality issues. Education materials will be updated as necessary to maintain consistency with current standards and to reflect any input received from school administrators and teachers. The WNYSC distributes education materials to all schools and maintain records of the distribution.

3.6 PUBLIC EDUCATION DISPLAY FOR COMMUNITY EVENTS

Public education displays, addressing general stormwater pollution prevention and rain gardens, have been developed for use by MS4s at their community events. The displays are prepared and maintained by the WNYSC. A number of displays addressing the two topics are available. A reservation system mitigates potential conflicts between municipalities requesting the display for the same time period.

The displays consist of a poster board, public education materials, the Enviroscape watershed model, stormwater quiz cards, a prize wheel and promotional items (answering a quiz card successfully allows a spin on the wheel). Use of the items listed will depend on the audience and venue.

The Town of Amherst along with the Erie County organizes household hazardous waste drop-off day at the ECC North Campus in the Town.

3.7 PUBLIC INFORMATION PRESS PACKAGE

A public information press package was prepared and distributed to local news agencies. Each MS4 received the package as well. The press package includes the following:

- Information targeting stormwater pollution prevention for households. This includes U.S. EPA's *After the Storm* video.
- Printed public service announcements.
- Invitation for public participation at open WNYSC meetings.
- Invitation for public to review draft Annual Report (sample press release).
- Invitation for Community Cleanup Events (sample press release).

Information in the press package is generic relative to dates and times. Specific dates and times will be developed by the WNYSC and each municipality. Not all components developed for the press package should be released with each announcement. For example, the invitation for public participation at the WNYSC meetings would not require any video or audio material. Printed notices in the local newspaper would be sufficient. WNYSC documents the distribution and content of press materials utilized.

3.8 ANNUAL REPORTING

The annual reporting period begins on March 10 and ends on March 9 of the following year. The annual report must be sent to the DEC by June 1 of each reporting year. For MCM 1, the Town will supply the DEC with the following information:

a. List education / outreach activities performed for the general public and target audiences and provide any results (for example, number of people attended, amount of materials distributed, etc.);

b. Permittees performing the education and outreach activities required by other MCMs (listed below), may report on those activities in MCM 1 and provide the following information applicable to their program:

- IDDE education activities planned or completed for public employees, businesses, and the general public, as required by Part VII.A.3 of GP-0-08-002;
- construction site stormwater control training planned or completed, as required by Part VII.A.4 of GP-0-08-002; and
- employee pollution prevention / good housekeeping training planned or completed, as required by Part VII.A.6 of GP-0-08-002 ; and

To facilitate shared annual reporting, if the education and outreach activities above are implemented by a third party, and the third party is completing the associated portions of the annual report, that third party may report on the education and outreach activities within MCM 1 of the annual report and not within the MCMs that the education and outreach activities are required by; and

c. Report on effectiveness of program, BMP and measurable goal assessment

4.0 MINIMUM CONTROL MEASURE 2 – PUBLIC INVOLVEMENT/ PARTICIPATION

4.1 INTRODUCTION

The Public Involvement/Participation minimum control measure consists of Best Management Practices (BMPs) that focus on involving the local public in development and implementation of the SWMP. Compliance with State and local public notice requirements will facilitate public participation. The BMPs include a number of practices designed to seek public input on the SWMP and Annual Report accomplishments. They also describe specific activities that encourage public participation. The target audiences for the public involvement program are key individuals and groups that may have an interest in the particular BMPs and the general public located within the permitted boundary.

4.2 PROGRAM

In order to comply with this MCM, TOA must involve the local public in their SWMP. By participating in the WNYSC, the Town complies with certain aspects of the SWMP such as public participation at the WNYSC meetings, incorporating a feedback mechanism into the webpage, community cleanup events, and public meetings in targeted Erie and Niagara County Watersheds. The Town allows for public review of their individual SWMPs and Annual Reports by posting it on the Town website. The Town plans to develop programs such as volunteer monitoring of outfalls, adopt-a-stream program, and storm sewer stenciling by the end of 2019. These BMPs are not General Permit requirements but do foster public involvement and may be of interest to the local communities. The Town has appointed Vaishali Reberholt, PE, CPESC as the Stormwater Management Officer (SMO) who is responsible for the management of the MS4s stormwater management program. A consultant cannot be appointed as Stormwater Management Officer.
The Municipal Board will update the designated SMO as necessary.

4.3 PUBLIC MEETINGS AND PROMOTE PUBLIC INVOLVEMENT

Twice per year, the WNYSC will schedule a public meeting to educate key individuals and groups who are interested in or affected by the SWMP on the status of implementation in the MS4s of Erie and Niagara County. Public employees, businesses and the general public will also be targeted for attendance. In addition, the meetings will be used to solicit input from those key individuals and groups on the SWMP and to publicize opportunities for public participation and involvement. The meetings will be hosted by one or more MS4s and will take place in locations that will draw individuals and groups that are based in the northern and southern portions of the Urbanized Area.

The WNYSC publishes a notice in the local paper for each public meeting held by the WNYSC, notifying the public of their invitation to participate.

4.4 PUBLIC REVIEW OF STORMWATER MANAGEMENT PLAN

Town's SWMP is published on the Town's website with all contact details to provide the public with an ongoing opportunity to inspect the SWMP. The SMO maintains a record all all public input and comments.

4.5 PUBLIC REVIEW OF ANNUAL REPORT

The Town submits an annual report by June 1 of each year that updates the NYSDEC on the status of their stormwater management program. Before submittal of the annual report to the NYSDEC, a draft report is prepared and presented to the public for their review and comment at a Town Board meeting. The report is also posted on the Town website for public review and comments. The WNYSC shares the draft Annual Report at a WNYSC meeting that is open to the public.

4.6 COMMUNITY CLEANUP EVENT

Inform and encourage residents about the many opportunities that exist to participate in area community cleanup events: Household Hazardous Waste Collections held several times per year by Erie and Niagara Counties; nationally sponsored "Great American Cleanup" events that can be organized locally; and locally sponsored, volunteer cleanup activities such as Buffalo Niagara Riverkeepers spring shoreline cleanup and Fall Beach Sweep; and State sponsored Adopt A Highway Programs.

The Household Hazardous Waste Collection events are published in the newspaper and Town website. Any additional community cleanup events will also be published on the Town website as needed.

4.7 KEY INDIVIDUALS AND GROUPS

Environmental groups identified as having an interest in the WNYSC's Stormwater Management Program include: Erie County Environmental Management Council (EMC), Niagara County EMC, municipal Conservation Advisory Committees (CAC's), the Buffalo Niagara Riverkeepers, Citizens Coalition for the Environment (CCE), the Erie County Water Quality Committee (ECWQC), Lake Erie Watershed Protection Alliance (LEWPA), and Tonawanda Creek Watershed Committee. These local groups assist with the implementation through participation in public education and public involvement. Publicize and staff community clean up events and attend monthly WNYSC monthly meetings.

The Town of Amherst is a member of the listed groups and attends the meetings that assist with Stormwater management.

4.8 ANNUAL REPORTING

The annual reporting period begins on March 10 and ends on March 9 of the following year. The annual report must be sent to the DEC by June 1 of each reporting year. For MCM 2, the Town will supply the DEC with the following information:

- Annual report presentation information (date, time, attendees) or information about how the annual report was made available for comment;
- Comments received and intended responses (as an attachment);
- Public involvement / participation activities (for example stream cleanups including the number of people participating, the number of calls to a water quality hotline, the number and extent of storm drain stenciling); and
- Report on effectiveness of program, BMP and measurable goal assessment.

5.0 MINIMUM CONTROL MEASURE 3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

5.1 INTRODUCTION

Illicit discharges are defined as discharges not entirely composed of stormwater into the MS4, except those identified in Part I.A.2 of the SPDES General Permit. Examples of Illicit discharges are non-permitted sanitary sewage, illegal connections to the storm sewer, garage drain effluent, and waste motor oil. However, an illicit discharge could be any other non-permitted discharge which the Town has determined to be a substantial contributor of the pollutants to the MS4. The majority of the Town of Amherst sanitary waste water is currently treated at the TOA wastewater treatment plant. Some areas outside the boundary of the MS4 have privately owned septic tanks which fall under the jurisdiction of Erie County Health Department.

5.2 IDDE PROGRAM

Outfall inspections require at least a two-person crew, for safety and logistics. All crew members should be trained on how to complete the ORI (Outfall Reconnaissance Inventory) and should have a basic understanding of illicit discharges and their water quality impact. All inspections are done with on a GIS system using tablets on the field.

I. Plan dry weather inspections
   a. No precipitation/snow melt for preceding 72 hours
   b. If an outfall is not assessable due to over-grown vegetation make a note to inspect it in the spring or fall.

II. Choose Outfalls
   a. Review outfalls inspected from previous year to identify any that may require re-inspection.
   b. Identify at least 20% for dry weather inspection
   c. Record outfalls inspected on the outfall spreadsheet
   d. Schedule sampling for outfalls discharging dry weather flow
   e. Outfalls to skip : Drop inlets from roads in culvert (unless evidence of illegal dumping, dumpster, leaks, etc), cross-drainage culverts in transportation right-of-way, weep holes, flexible HDPE pipes that are known to serve as slope drains and pipes that are clearly connected to roof downspouts via above-ground connections.

III. Prepare for IDDE Testing
   a. Prepare sampling equipment, field meters and E. coli growth media
   b. Take maps of outfalls and field report sheets to record data
   c. Collect sample/field data according to outfall sampling and lab analysis procedure.

d. Obvious Discharges: Field crews may occasionally encounter an obvious illicit discharge of sewage or other pollutants, typified by high turbidity, odors, floatables and unusual colors. When obvious discharges are encountered, field crews should STOP the ORI survey and trackdown the source of the discharge and immediately contact the appropriate the SMO for enforcement. Crews should photo document the discharge, estimate its flow volume and collect a sample for water quality analysis (if this can be done safely)

IV. Lab Anaylsis

a. Conduct lab analysis on sample(s) according to outfall sampling and lab analysis procedure
b. Record results lab analysis report form
c. Interpret results to characterize flow
d. If pollutants are detected, initiate trackdown investigation to identify the source of contamination
e. Eliminate source of contamination or if nature of the source prohibits elimination, utilize targeted education to inform/minimize the source (e.g. pet waste disposed in storm sewers: distribute information on proper disposal throughout neighborhood)
f. Document efforts taken to identify and eliminate the source of contamination.

V. Basic Data Management and Quality Control

The ORI produces an enormous amount of raw data to characterize outfall conditions. Once data entry is complete, be sure to check the quality of the data. This can be done quickly by randomly spot-checking 10% of the entered data. Survey crew is responsible for reviewing the accuracy of the ORI maps. The following five pages, show some of the conditions that will be noted during the ORI.

 Ductile iron round pipe	 4-6" HDPE; Check if roof leader connection (legal)	 Field connection to inside of culvert; Always mark and record.
 Small diameter (<2") HDPE; Often a sump pump (legal), or may be used to discharge laundry water (illicit).	 Elliptical RCP; Measure both horizontal and vertical diameters.	 Double RCP round pipes; Mark as separate outfalls unless known to connect immediately up-pipe
 Culvert (can see to other side); Don't mark as an outfall	 Open channel "chute" from commercial parking lot; Very unlikely illicit discharge. Mark, but do not return to sample (unless there is an obvious problem).	 Small diameter PVC pipe; Mark, and look up-pipe to find the origin.
 CMP outfall; Crews should also note upstream sewer crossing.	 Box shaped outfall	 CMP round pipe with two weep holes at bridge crossing. (Don't mark weep holes)

Typical Outfall Types Found in the Field

Color: Brown; Severity: 2
Turbidity Severity: 2

Color: Blue-green; Severity: 3
Turbidity Severity: 2

Highly Turbid Discharge
Color: Brown; Severity: 3
Turbidity Severity: 3

Sewage Discharge
Color: 3
Turbidity: 3

Paint
Color: White; Severity: 3
Turbidity: 3

Industrial Discharge
Color: Green; Severity: 3
Turbidity Severity: 3

Blood
Color: Red; Severity: 3
Turbidity Severity: None

Failing Septic System:
Turbidity Severity: 3

Turbidity in Downstream Plume
Turbidity Severity: 2
(also confirm with sample bottle)

High Turbidity in Pool
Turbidity Severity: 2
(Confirm with sample bottle)

Iron Floc
Color: Reddish Orange; Severity: 3
(Often associated with a natural source)

Slight Turbidity
Turbidity: 1
(Difficult to interpret this observation; May be natural or an illicit discharge)

Construction Site
Discharge
Turbidity Severity: 3

Discharge of Rinse from Floor Sanding
(Found during wet weather)
Turbidity Severity: 3

Interpreting Color and Turbidity

SUDS		
		
Natural Foam Note: Suds only associated with high flows at the "drop off" Do not record.	Low Severity Suds Rating: 1 Note: Suds do not appear to travel; very thin foam layer	High severity suds Rating: 3 Sewage
OIL SHEENS		
		
Low Severity Oil Sheen Rating: 1	Moderate Severity Oil Sheen Rating: 2	High Severity Oil Film Rating: 3

Determining the Severity of Floatables

Bacterial growth at this outfall indicates nutrient enrichment and a likely sewage source.

This bright red bacterial growth often indicates high manganese and iron concentrations. Surprisingly, it is not typically associated with illicit discharges.

Sporalitis filamentous bacteria, also known as "sewage fungus" can be used to track down sanitary sewer leaks.

Algal mats on lakes indicate eutrophication. Several sources can cause this problem. Investigate potential illicit sources.

Illicit discharges or excessive nutrient application can lead to extreme algal growth on stream beds.

The drainage to this outfall most likely has a high nutrient concentration. The cause may be an illicit discharge, but may be excessive use of lawn chemicals.

This brownish algae indicates an elevated nutrient level.

Interpreting Benthic and Other Biotic Indicators

Typical Findings at Both Flowing and Non- Flowing Outfalls

GEOGRAPHIC AREAS OF CONCERN

Illicit discharge priority areas of concern will differ from one neighborhood to another within the Town depending on land use, drainage areas, water quality conditions, age of infrastructure, etc. The Town SMO can direct the gathering and evaluation of available information related to where in the Town illicit discharges might be occurring. This information can be used to identify geographic areas of concern, which should be targeted for further field screenings and investigations.

In order to identify priority areas of concern, a straightforward desktop assessment of available community information can be used. This desktop assessment is meant to provide insight on how to narrow the illicit discharge search, and is helpful when conducting the required Outfall Reconnaissance Inventory (ORI). The desktop assessment can identify subwatersheds, generating sites, and neighborhoods where the Town will focus illicit discharge efforts. The following resources should be collected, reviewed and ranked during the prioritization process:

- Zoning maps – A high priority designation will correlate to industrial/commercial areas with high density development.
- Locations of previous illicit discharges – A high priority designation will correlate to areas with historical illicit discharge reports or complaints.
- Locations with storm water hotspots – A high priority designation will correlate to areas with land use/activities with the potential to generate highly contaminated runoff such as auto repair shops.
- Density of outfalls – A high priority designation will correlate to areas with a high density of outfalls.
- Age of infrastructure/development – A high priority designation will correlate to older areas of the community.
- Location of areas with septic systems – Older areas with septic systems will be considered high priority.
- Water quality information –Water quality classification and 303(d) listed waterbodies will be considered when identifying geographic areas of concern.
- Areas that drain to important surface waters - A high priority designation will correlate to important drainage areas such as shellfish growing waters or public beaches. These areas will be designated as high priority for public health and economic reasons.

The above information will be used to qualitatively and/or quantitatively assess where illicit discharges may be found and what waterbodies are particularly sensitive. The Town will conduct this process as necessary or as illicit discharges are removed. It should be noted that the above list is adaptive and not exhaustive. Additional Town-specific data pertinent to locating high priority areas in the community can also be used. Similarly, some of this information can be excluded if it is not relevant to identifying priority areas in the community.

Once the available information has been acquired and reviewed, it will be compiled and evaluated to define which portions of the Town should be designated as High, Medium, or Low priority for illicit discharges. Table 5-1 provides a sample prioritization table using a

method where criteria are assigned a relative illicit discharge potential value. The scores for each area are then averaged to produce an overall relative score for the area. Further guidance on conducting the desktop assessment can be found in the IDDE Guidance Manual.

Once the IDDE prioritization process is complete and priority areas of concern are identified, the subsequent list can be used to determine the Town IDDE program focus such as which areas should be mapped next; which techniques will be used to develop community- specific detection techniques; and how to prioritize storm drain system maintenance work. The Town plans to complete this desktop assessment by the end of 2018.

Table 5-1

EXAMPLE
PRIORITIZATION TABLE
ILLICIT DISCHARGE POTENTIAL BENCHMARKS

Priority Designations	Assigned Value	Land Use	Receiving Waters Designation	Outfall Density	Average Age of Development
Low	1	Residential	Not Listed	<10 per mile	<25 years
Medium	2	Commercial	303(d) Impaired: Other Source	10-20 per mile	25-50 years
High	3	Industrial	303(d) Impaired: Illicit Discharge or Storm Water	>20 per mile	>50 years

5.3 INFORMAL INSPECTIONS

Town crews conduct regular duties in and around the storm drain system. In addition to the required ORI, crews will informally "keep a look out" for illicit discharges throughout the Town. If evidence of an illicit discharge is detected, the crew will collect as much information about the potential illicit discharge as possible then contact the SMO so that appropriate action can be taken. The Illicit Discharge Field Sheet provided in Appendix D is the suggested format in which to record observed conditions in the field during the investigation of possible illicit discharges. While it is not reasonable to expect all Town employees have copies of all forms at all times, the following are acceptable ways to collect necessary information:

- The person observing the discharge can provide the information verbally to dispatch or the supervisor, who can then complete the form.

- The person can log as much information as they can recall onto the form upon returning to the office.
- A crew can be sent to the location as soon as possible where the potential illicit discharge was observed to collect the necessary information directly on the form.
- Almost everybody carries a smart phone which can be used to take photographs of the situation.

It is important to collect as much information as safely possible at the time of initial observation because of the likelihood that a discharge may be transitory or intermittent and may not be present at a later time. Initial identification of the likely or potential sources of the discharge is also very important.

5.4 RESIDENT CALL-IN

The resident call-in is an effective way to identify illicit discharge. Residents can report evidence of an illicit discharge to the Town of Amherst Engineering Dept, Town Hall, Highway Department or Emergency Services. Upon receipt of a report of a potential illicit discharge, the SMO will perform a desktop review of the area. The Town's GIS system will be used to locate the area, with all topography, drainage structures and other conveyance systems visible. The SMO with the help of the pre-treatment co-ordinator investigate the complaint.

Residents provide free surveillance around the clock, and their reports should prompt rapid investigations and enforcement by trained inspectors, usually within 24 hrs. The Illicit Discharge Incident Log provided in Appendix D is a suggested format to record the information related to the notification. This Incident Log can be used to follow up with the completion of the Illicit Discharge Field Sheet to record observed conditions in the field.

5.5 ISOLATING ILLICIT DISCHARGE SOURCES

Once an illicit discharge has been detected or reported, the next step is to locate the source. The Town will choose among the following four types of illicit discharge investigations:

- Storm drain network investigations
- Drainage area investigations
- Onsite investigations

Each type of investigation handles a different type of discharge problem and has its advantages and disadvantages. The Town will select the type of investigation based upon the type of illicit discharge, the information collected during initial observation, and available resources and technology.

These investigations rely on a number of different types of tracing techniques. Depending on the illicit discharge, the Town may use single tracing technique or combine several techniques to identify the source of the discharge. Tracing techniques include, but are not limited to:

- Visual inspection at manholes/ catch basins
- Sampling flowing discharges and conducting lab analysis
- Sandbagging or damming
- Dye testing
- Televising
- Smoke testing

Storm Drain Network Investigations

Storm drain network investigations can be used by the Town to narrow the source of a discharge problem to a single segment of a storm sewer. These investigations start at the outfall and explore the upstream pipe network. Once crews choose a method of exploration, they select the most appropriate investigative methods to track down the source. The manhole inspections and catch basin inspection form provided in Appendix D can be used during the investigation of the storm drain network.

Drainage Area Investigations

Drainage area investigations are most appropriate in large or complex drainage areas with flow types specific to a certain type of land use or generating site. These investigations are initially conducted in the office, but quickly move into the field. They involve a parcel by parcel analysis of potential generating sites within the drainage area of a problem outfall.

Onsite Investigations

Onsite investigations are conducted after an illicit discharge is isolated to a specific section of storm drain to find the specific source of the discharge. Onsite investigations are typically performed by dye testing plumbing systems. The results of dye testing can be recorded on the Tracer Testing Sheet provided in Appendix D.

5.6 ELIMINATING ILLICIT DISCHARGES

Finding and fixing illicit discharges is the major goal of IDDE program. The process of finding and fixing discharges has several desirable outcomes, such as improved water quality, increased pollution prevention awareness, and maintenance of a recordkeeping system to track repairs and identify repeat offenders.

If the Town uncovers a violation, the Town will attempt to resolve problems with the least intrusive method and at the lowest public expense possible. Quick and efficient correction of illicit discharges begins with having well defined legal authority and responsibilities coupled with strong enforcement and follow-up measures. The Town has adopted a Local Law to Prohibit Illicit Discharge, Activities and Connections to the Storm Water Sewer System. The

Town will employ a combination of structural, educational and enforcement methods for removing illicit discharges as necessary.

The Town will follow the sequential process for addressing illicit discharges presented in the IDDE Guidance Manual, which focuses on identifying responsible parties and enforcement procedures. The Town SMO will direct crews to take steps to fix or eliminate the discharge after the source of has been identified. The ultimate responsibility for removing the source of a discharge will be generally that of the property owner or violator.

Illicit discharge corrective actions can involve some form of infrastructure modification or repair. Structural repairs are used to eliminate direct and indirect discharges. Fixes can range from simple plumbing projects to excavation and replacement of sewer lines. Most transitory discharges can be corrected simply with spill containment and clean-up procedures. The Town may eliminate the illicit discharge and then seek payment for repairs or back charge the responsible party. In addition, the Town can require implementation of non-structural best management practices (BMPs) to control illicit discharges and activities.

The Town will confirm the removal and correction of a discharge or connection both at the source to ensure that the correction has been made and downstream to ensure that it is the only local discharge present.

5.7 ENFORCEMENT AND PENALIZATION OF VIOLATORS

Enforcement will be consistent with all existing Town laws, codes and/or policies as well as with new laws, codes and/or policies that are developed. Any violation will be mitigated according to Prohibit Illicit Discharge, Activities and Connections to the Storm Water Sewer System Local Law, or cases may be referred to the County, NYSDEC or the United States Environmental Protection Agency (USEPA) as deemed appropriate by the Town. Town local law prohibits polluted storm water discharges from entering the Town's storm drain system, watercourses, outlets or channels. This law provides the Town with the authority to make inspections to enforce the provisions of the law.

The Town will attempt to negotiate a reasonable amount of time for the responsible party to correct the violation. However, any person who violates the provisions of Town local law will be guilty of a violation punishable according to the local law. Enforcement mechanisms may include non-monetary penalties (e.g., Notice of Violation), fines, imprisonment, and/or permit denials for non-compliance.

The Town will administer, implement and enforce all Town local storm water laws. The escalating enforcement approach, as defined by Town local law, will be followed. Voluntary compliance will be considered for first-time, minor offenders. More serious violations or continued non-compliance may warrant a more aggressive, enforcement-oriented approach.
If necessary, a Notice of Violation will be issued, which will include:

- The elimination of illicit connections or discharges;
- That violating discharges, practices or operations shall cease and desist;
- The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
- The performance of monitoring, analysis and reporting;
- Payment of the applicable fine; and/or
- The implementation and deadline of source control or treatment BMPs.

An example Notice of Violation letter form is provided in Appendix D. The Town can edit the form on a case by case basis.

For serious violations, the Town can suspend access to the MS4 without prior notice. Suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, to the health or welfare of persons, or to the MS4. The Town will notify the responsible party of the suspension in writing. If the violator fails to comply with a suspension order, the Town will take steps as necessary to prevent or minimize damage to the MS4 or to minimize danger to persons. Suspension may include blocking pipes, constructing dams, or taking other measures on public ways or public property to physically block the discharge.

For further violations, the Town can terminate access to the MS4 if the termination would abate or reduce an illicit discharge. The Town will notify a violator in writing of the proposed termination of its MS4 access. If the Town determines that the illicit discharge has ceased and the discharger has taken steps to prevent it recurrence, access may be granted. Access will be denied if the Town determines in writing that the illicit discharge has not ceased or is likely to recur.

If the Town is refused access to any part of the premises from which storm water is discharged, and is able to demonstrate probable cause to believe that there may be a violation of Town local law, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with Town local law or any order issued, then the Town may seek issuance of a search warrant from any court of competent jurisdiction.

5.8 IDDE: Available Equipment

The Town of Amherst Highway Department currently has three vacuum trucks that it utilizes in the cleaning of the drainage structures including but not limited to catch basins and storm drain pipes. The Town's GIS Division maintains a handheld GPS system that is utilized when mapping structural elements of the drainage system. The Highway Department is in the process of buying a CCTV system for use in conveyance line maintenance and illicit discharge detection

activities by the end of 2019. The Town has mapped its storm sewer system and storm sewersheds as required by Part IX Watershed Improvement Strategy requirements. In additions, the TOA Engineering Department has a CCTV system which can be utilized to investigate illicit discharges.

5.9 STAFF

Town Engineer – Oversees the Engineering and Wastewater Department. This individual reports directly to the TOA Town Board, who ultimately makes decisions concerning the operations of the Town.

Stormwater Management Officer - This individual is responsible to implement the MS4 stormwater requirements. Compile annual information from all departments pertaining to the MS4 Annual Reporting. Works with the Town Attorney's Office and Code enforcement officer to enforce MS4 requirements when necessary. This position works closely with GIS, highway and engineering in developing sub-watershed mapping and ORI.

GIS Supervisor – Develops and maintains the Town's GIS Mapping system. All employees with desktop access can access the Town's GIS system. GIS department staff is available for training opportunities to other town departments. GIS has been working on a naming convention so that all MS4 structures may be identified in the field by Hwy staff during cleaning operations so they may be better tracked. The Town has recently begun tracking the IDDE program on the GIS system.

Town Attorney – is the legal counsel for the Town's MS4 Program. This staff member works closely with the Engineering Division and Town Board on Town Code adoptions for Construction Site Stormwater controls, Illicit Discharge Detection and Elimination and other MS4 local law requirements. The Town Attorney's office receives stormwater questions from the Engineering Division and provides legal opinions as warranted.

Highway Department Superintendent –the Superintendent is an elected Superintendent of the Town of Amherst Highway Department. The Superintendent has diligently dedicated staff to the maintenance of MS4 structures and all other MS4 program duties and responsibilities as noted elsewhere in this Plan.

5.10 FUNDING

Operational Costs – The Town currently funds personnel from the Engineering Department, Highway Department, Code Enforcement Officers and the Town Attorney's Office that work on MS4 Permit requirements through its operating budget.

Capital Improvement Costs – Large scale projects such as infrastructure replacement/retrofits are generally paid out of a Capital Improvement Project (CIPs) budget. Generally CIPs are funded through either bonding or town budgets coupled with grant monies (shared).

Grant Opportunities – The WNYSC has had great success in securing grant funds for the implementation of MS4 mapping project. The Town was able to map the entire storm sewer system through grant monies.

5.11 WATERSHED MAPPING

The size of a watershed is closely related to the network of streams contained within its borders. Streams with no upstream tributaries are designated as first-order streams down to their first confluence. A second-order stream is formed when two first-order streams meet.

Watershed – Generally, this is the largest management unit that falls within the local land use planning authority. A community might have one or more watersheds within its borders, depending on its size.

Sub-watershed – The scale encompassed by the watershed. Its boundaries include all land area draining to the point where two second-order streams come together to form a third order stream. In most regions, sub watersheds are a few square miles in area and are drained by a stream several feet in width.

The Town has mapped all known storm sewersheds that discharge to the surface waterbodies including impaired waterbodies. Known outfalls have been completely mapped. This aids in determining where illicit discharges originate in the watershed. The Town is divided into 4 quadrants with storm sewershed boundaries, structures, outfalls and the majority of piping has been incorporated into the Town's GIS system.

5.12 HIGHWAY DEPARTMENT IDDE RESPONSIBILITIES

The Town Highway Department maintains the Town's MS4 system. Typical maintenance operations performed by the Hwy Dept include, but are not limited to:

STREET SWEEPING

During street sweeping operations, the operator is traveling at a slow rate of speed. The operator actively looks for non-MS4 pipes draining to the MS4, overland discharges draining to the MS4, etc. There is a running list maintained at the Hwy Dept. that describes any activities or events that are potential illicit discharges. If there are discharges of strong odor or color, the Hwy Dept. will inform the SMO who with the help of the Highway Dept investigate. If it has potential to be an immediate hazard, the Fire Dept is contacted.

DRAINAGE STRUCTURE CLEANING

Highway Dept. actively cleans out drainage infrastructure. The Highway Dept. currently maintains three vacuum trucks that are utilized for removing debris that has accumulated in drainage catch basins, leaching pools, and manholes. During cleaning operations, if they observe dry weather flow, additional pipes in the structures, or foul odors, they maintain a list of the structure number, and location and follow-up with further investigation and corrective measures with the help of the SMO.

EMERGENCY SERVICES

The Town Emergency Services include the Police Department, Emergency Department, Fire Departments and Ambulance Departments. During motor vehicle accidents, they are the first responders, and are able to assess the immediate effects of an accident. If there are any penetrations to vehicle fuel tanks they alert appropriate departments including the NYSDEC and the Highway Department, to protect the Town's MS4 system and the environment.

5.13 RECORDKEEPING

Recordkeeping and documentation are essential to each of the Minimum Control Measures of the Town Storm Water Management Program. Keeping Records of inspections, spills, leaks and other discharges can help the Town run more efficiently and cleanly. Records of past spills and illicit discharge identification, track down, elimination and enforcement activities contain useful information for improving operations to prevent future illicit discharges.

Ongoing illicit discharge field investigation, monitoring, track down, elimination and enforcement documents and activities within the Town's jurisdiction should be stored according to a standardized recordkeeping system. The Town will utilize the existing framework for "chain-of-command" reporting of storm water management issues.
Records are to be maintained at the Engineering Dept by the SMO. The Town will emphasize communication and coordination across key Town departments and operations and county and state agencies, organizations and institutions. Town facilities will document their progress in the IDDE program. Sample recordkeeping logs and forms for typical IDDE activities are provided in Appendix D. For all illicit discharges detected, record the following minimum information on the reporting form:

Date/time of the incident
Location
Type of material
Source, if determined
Action taken
Date incident was closed

This information should also be included on the Illicit Discharge Summary Sheet provided in Appendix D

5.14 EVALUATING AND MEASURING PROGRESS

The Town will keep a record of all illicit discharges detected and eliminated. They will be broken down into the quantity of illicit discharges identified and the number eliminated. The quantity of inspections will be utilized as a measuring progress tool.

5.15 ANNUAL REPORTING

The annual reporting period begins on March 10 and ends on March 9 of the following year. The annual report must be sent to the DEC by June 1 of each reporting year. For MCM 3, the Town will supply the DEC with the following information:

- Approximate percentage and numbers of outfalls mapped.
- Number of outfalls screened for dry weather discharges during reporting period.
- Types of generating sites/sewersheds targeted for inspection during this reporting period;
- Types of illicit discharges found during the reporting period.
- Quantity of illicit discharges/potential illegal connections that have been detected during this reporting period.
- Quantity of illicit discharges/illegal connections have been eliminated during this reporting period.
- If the storm sewershed mapping has been completed.
- If the information is available on GIS.
- What percent of staff in relevant positions and departments have received IDDE training?

6. MINIMUM CONTROL MEASURE 4 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

6.1 INTRODUCTION

This minimum control measure is intended to reduce the amount of sediment generated from construction sites (erosion control) and reduce the off-site transport of sediment and construction – related chemicals (sediment and chemical control). This measure ensures that water quality protections are implemented during construction. Several pollutants of concern are associated with construction activities, including the following: sediment; pesticides; fertilizers used for vegetative stabilization; petrochemicals (oils, gasoline, and asphalt degreasers); construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste. “Erosion rates from natural areas such as undisturbed forested lands are typically less than 1 ton/acre/year, whereas erosion from construction sites ranges from 7.2 to 500 tons/acre/year” (USEPA, 2005).

6.2 TOWN CODE AMENDMENT

The Town of Amherst adopted "Chapter 172 – Stormwater Management and Erosion and Sediment Control Regulations" of the Amherst Town Code. Chapter 172 was modeled after the local law provided by the NYS DEC. The law provides for Town enforcement of NYS erosion and sediment control standards and the requirements of the NYS SPDES General Permit for Stormwater Discharges from Construction Activity.

6.3 EDUCATION AND PROGRAM

Construction site operators, design engineers, municipal staff and other individuals will be trained in sediment and erosion control practices either through the Soil and Water Conservation District, NYSDEC, USEPA, or Geological Group. The Town Engineering Department utilizes a few tools to educate land developers and contractors that operate within the Town. When a land development project is presented to the Town, one of the requirements is that the applicant must complete a site plan review checklist which requires them to submit a SWPPP for land disturbances 1 acre and more as the site requires a SPDES Construction Coverage. The site plan along with the SWPPP is submitted to the Planning Dept and is then forwarded to the Engineering Department for review. The SWPPP document is accepted by the Engineering Department, reviewed by Stormwater Management Officer and revised as per review if necessary with a signed maintenance agreement prior to the Town issuing an MS4 Acceptance Letter. As this process generally occurs prior to the developer deciding on his construction contractors, not all certifications may be in place prior to the Town's issuance of the MS4 Acceptance Letter. When the Town provides the MS4 Acceptance letter, it is accompanied by a SWPPP Applicants Instructions letter which advises applicants to apply for a Stormwater Inspection permit through the SMO. Building Dept does not issue any permit unless the stormwater inspection permit has been issued. To receive the stormwater inspection permit the developer must submit the Notice of Acknowledgement letter from the NYSDEC, proof of NYSDEC Approved 4-hour erosion and sediment control training and the required contractor's certifications. Once the permit has been issued the information is relayed to the Building Dept who then issues necessary building permit needed to start clearing activities. A mandatory pre construction meeting is scheduled before site clearing to be attended by the Owner, contractor, owner's stormwater inspector, Town's stormwater inspector and the SMO to go over the MS4 requirements and the Town's stormwater monitoring procedures. The Town uses third party consultants to monitor the construction sites. All the owner's SWPPP construction inspection reports are emailed to the Town's inspector and SMO on a weekly basis so they can closely monitor the construction sites. If there is an issue with SWPPP compliance, the Town follows a progressive path of compliance, including verbal communication to the site operator that is documented in the inspection sheet. Following a followup inspection, the Engineering Office may issue a Notice of Violation. Stop Work Order may be issued through the Building Department and/or Code Enforcement Officer. Once a project that is subject to SWPPP that has post construction practices and covenants and restrictions recorded, then the site information is entered into the post construction tracking excel sheet. Information included on this spreadsheet includes, owner, location, practice type and quantity. The Town's SWPPP

inspector inspects the construction site at nine critical stages of the project: start of construction, Installation of sediment control measures, Completion of site clearing, Completion of rough grading, Completion of final grading, Close of construction season (if applicable), Completion of final landscaping, Establishment of landscaping in public areas (if applicable), and Project Completion as stated in the Local law chapter 172. Once the project has achieved 85% ground coverage and the owner has filed the maintenance agreement with the County Clerk as a deed restriction the SMO signs off on the Notice of Termination which is submitted to the DEC by the owner.

When the SMO receives complaints regarding run-off from a construction site by a member of the public, it is investigated no matter the size of land disturbance. The contractor is asked to utilize erosion control measures to stop such run-off in the future and asked to the clean the storm sewers of any sediment that might have entered. If the violation occurs again then a stop work order is issued with the help of a code enforcement officer until the contractor takes appropriate action to stop future un-controlled run-off from the construction site.

6.4 EVALUATING AND MEASURING GOALS

The Town will keep a record of all reviewed SWPPPs, how many revisions each one needed and when it was approved. The Town maintains these documents in each individual site folder, not a rolling database as it decentralizes site specific data. The Town will also keep a record of enforcement activity and compliance by construction site operators and developers. Current list of active construction sites will be maintained.

6.5 ANNUAL REPORTING

The annual reporting period begins on March 10 and ends on March 9 of the following year. The annual report must be sent to the DEC by June 1 of each reporting year.
For MCM 4, the Town will supply the DEC with the following information:

- If the Town has adopted a law that provides equal protection to the NYS SPDES General Permit.
- Does the Town have a SWPPP review procedure in place?
- How many SWPPPS have been reviewed in the reporting period?
- Does the Town have a mechanism for receipt and consideration of public comments related to construction SWPPPs?
- Does the Town provide education and training for contractors about the local SWPPP process?
- Identify the types of enforcement actions used during the reporting period for construction activities.
- How many projects have been authorized for disturbances of one acre or more?
- How many construction projects disturbing at least one acre were active in your jurisdiction during this reporting period.

- What percent of active construction sites were inspected during this reporting period?
- What percent of active construction sites were inspected more than once?
- Do all inspectors working for the Town use the NYS Construction Stormwater Inspection Manual?

7. MINIMUM CONTROL MEASURE 5 – POST - CONSTRUCTION STORMWATER MANAGEMENT

7.1 INTRODUCTION

Post-construction best management practices (BMPs) provide long-term water quality and water quantity control for stormwater discharges from development and redevelopment projects. To insure efficient and effective operation, these BMPs must be correctly installed and maintained. The Post-construction stormwater management program, as set forth by the New York State MS4 permit Part VII.A.5.a.vii, requires adequate long-term operation and maintenance of management practices identified by trained staff, including inspection to ensure that the practices are performing properly. The inspection shall include inspection items identified in the maintenance requirements of the NYS stormwater Management Design Manual and SWPPP for the practice.

7.2 OBJECTIVE

The goal of the Post-Construction portion of the Stormwater Management Program is to ensure that the controls to prevent or minimize water quality impacts are in place and are maintained.

7.3 MAINTENANCE OF STORMWATER FACILITIES

The Town of Amherst will assume maintenance and operation of stormwater facilities within improved public road right-of-way that receive stormwater from public facilities. The Town does allow such facilities to be maintained by the homeowners association or similar entity acceptable to the Town with an approved maintenance agreement in place.

Stormwater facilities to be maintained and operated by the Town must be located in the right-of-way or maintenance easement dedicated to the Town. Access roads serving these facilities must also be located in the easement or right-of-way and must be connected to an improved public road right-of-way.

7.4 FACILITIES MAINTAINED AND OWNED BY PRIVATE PARTIES

All privately maintained drainage facilities must be maintained in accordance with a recorded Operations and Maintenance Agreement with the County clerk. A copy of the Operations and Maintenance Manual shall be retained by the entity responsible for maintenance and transferred with the property as ownership changes. In addition to the maintenance activities, the owner is responsible for annual inspections, record keeping and reporting.

7.5 INSPECTION FREQUENCY

All structural stormwater management facilities shall be inspected during installation. Facilities maintained by the Town shall the inspected prior to taking over maintenance duties.
All privately maintained facilities that discharge, or overflow to the municipal separate storm sewer system shall be inspected at least once every 5 years after final installation by qualified personnel. Access shall be granted to the Town staff or qualified personnel to perform required inspections. Private property owners must provide an annual certification per Appendix B prepared by a qualified third party indicating that adequate maintenance has been performed and the facilities are operating as designed to protect water quality.

7.6 EVALUATING AND MEASURING PROGRESS

The Town will keep an inventory of the stormwater management practices within its realm of responsibility and will track inspection and maintenance activities. The Town will also keep a record of MCM 4 & 5 Town enforcement activity and compliance by construction site operators and developers. The Town will track new installations of green technologies such as rain gardens, and swales.

7.7 ANNUAL REPORTING

The annual reporting period begins on March 10 and ends on March 9 of the following year. The annual report must be sent to the DEC by June 1 of each reporting year. For MCM 5, the Town will supply the DEC with the following information:

- How many and what type of post-construction stormwater management practices has the Town inventoried, inspected, implemented in the period.
- Does the Town use GIS or spreadsheets to track post-construction BMPs, inspections and maintenance?
- What types of non-structural practices have been used to implement the Low Impact Development/Better Site Design/Green Infrastructure principles?

8. MINIMUM CONTROL MEASURE 6 – POLLUTION PREVENTION/ GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

8.1 INTRODUCTION

The Pollution Prevention / Good Housekeeping minimum control measure consists of Best Management Practices (BMPs) that focus on training and on the prevention or reduction of pollutant runoff from municipal operations. The BMPs describe the training program; specific municipal operations that are impacted by the proposed operation and maintenance programs (BMPs); maintenance activities, schedules and long term inspection procedures for controls to reduce floatables and other pollutants; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations; procedures for the proper disposal of waste removed from the MS4 and municipal operations, including dredge spoil, accumulated sediments, floatables and other debris.

8.2 OBJECTIVES

To design and implement an operation and maintenance program to reduce and prevent discharge of pollutants to the maximum extent practicable from municipal operations and facilities. Include training in the program on pollution prevention and good housekeeping techniques in municipal operations; Select and implement management practices for pollution prevention and good housekeeping in municipal operations; and Develop measurable goals to ensure the reduction of all pollutants of concern in stormwater discharges to the maximum extent practicable. Ensure contractors and professional service vendors understand the importance of Stormwater management while designing works for and performing contracting work for the Town of Amherst. In all contracts involving contractors working on earth work projects, and/or consultants working on site designs, the Town requires a third party certification from those vendors acknowledging that the Town is a regulated MS4 and abiding to best management practices while working within the Town.

8.3 STAFF TRAINING

The Town has implemented a system of staff training and assessment utilizing training modules and quizzes through the WNYSC. The WNYSC has prepared training documents and videos to Highway Staff and Engineering Staff. This is performed on an annual basis. The Town shall track participation. Annual sign in sheets are maintained in Appendix G.

8.4 TOWN FACILITIES AND OPERATIONS

The Town has many facilities which it operates. Information regarding these properties and facilities and location map are located in Appendix G and are sorted by Department. The Town owns approximately 40 facilities throughout the Town; many of these sites have on site

drainage and are nonindustrial. They include parks, community centers, and maintenance facilities. The Town has mapped each one of these and assesses their potential to discharge to MS4 in the existing on site drainage, and the topography of the site. All sites have the potential to discharge to the MS4 storm sewershed in the event of an intense rainfall. The information contained within the database and detail sheets are updated on an annual basis. These facilities are inspected on a 3 year frequency and changes are made if necessary to account for changes in use, or recommended good housekeeping procedures.

8.5 BUILDING MAINTENANCE

The Town Division of Building Maintenance maintains all Town buildings in terms of maintenance and repairs with the exception of some recreational buildings. The Town utilizes green practices when purchasing paper and cleaning supplies used for building maintenance activities. We only order enough to maintain buildings for a 6 month time frame. The Town is making strides to improve building efficiency, health, and reduce operational costs. When existing mercury containing lighting is at the end of its useful life albeit fluorescent interior lighting or exterior street lights, the Town stores these materials for pick up by a registered / licensed recycling facility in accordance with the Federal legislation.

8.6 CATCH BASIN MAINTENANCE

The Highway Department performs catch basin cleaning and inspection operations. All Town owned catch basins and stormwater inlets are routinely maintained and inspected to reduce sediment and floatable material discharges. The Highway Dept follows its salting route map (Map attached in Appendix G) with 15 routes to maintain and inspect all the catch basins and storm inlets. It takes the highway approximately 3 years to complete one round of cleaning all the catch basin within the Town. Out of the three vacuum trucks and depending if any are in maintenance the Highway Dept tries to dedicate at least one vacuum truck cleaning catch basin on a daily basis. Catch basin receiver grates are replaced/ repaired as necessary.

8.7 STREET SWEEPING

The Highway Department performs street sweeping operations. There are currently three street sweepers in the Town that are used to regularly maintain the streets in the Town. The equipment is regularly maintained by the Highway Dept. All Town streets and roadways are swept to reduce the amount of sediment and associated pollutants discharged to the MS4. The highway Dept. follows its tree planting map when sweeping streets (attached in Appendix G). All streets and roadways are swept a minimum of three times a year. All debris is collected into the hopper attachment of the sweeper and is appropriately emptied in designated area.

8.8 VEHICLE WASHING AND MAINTENANCE

The Town has dedicated locations for vehicle washing at the Highway and Engineering Departments. Cleaning is performed with pressurized cold water, without the use of soaps.

Wash water from the Highway Department vehicle wash area goes through a hydrodynamic separator before discharging to surface water and the wash water at the Engineering Dept. goes into sanitary sewers. All Police Dept. vehicles are washed at privately owned vehicle washing business.

All vehicle maintenance is done indoors. Routine maintenance on all vehicles is performed according to manufacturer's specifications. All floor drains in vehicle maintenance are goes to an oil water separator before discharging to sanitary sewers. Spilled material is cleaned up immediately using speedy dri. Appropriate recycling/ disposal options for waste have been identified. All vehicles are inspected daily for fluid leaks and scheduled for maintenance if needed.

8.9 FERTILIZER USE

The Town does not use any fertilizers in the Town parks. All Town owned golf courses are maintained by private companies. The private companies abide by all NYSDEC requirements regarding the application of fertilizers to reduce potential overloading of nitrogen.

8.10 MOSQUITO CONTROL

The standard operating procedure and mosquito treatment area map are attached in Appendix G

8.11 ROAD KILL REMOVAL

Town’s highway department has adopted composting road kill program published by Cornell Waste Management Institute. The Town has a dedicated area on the New Rd spoils site where an adequate bed of chips are piled beneath and surrounding the carcasses. The compost pile allows for natural aeration allowing for little or no turning. The composting is done in a location to avoid pathogens to enter the surface waters during and after a rain event.

8.12 GRASS MOWING

The Department of Parks and Recreation does not bag grass clippings, but allows them to stay on the lawn. Mowers are maintained by the Parks Department, with regular inspections for leaks, and efficient operation.

8.13 ROADWAY MAINTENANCE

During milling the field crews place a metal plate over the catch basin when the machine approaches the catch basin, the road is then cleaned and plates are removed. During paving the crews again place a metal plate over the catch basin and remove it when the paver clears the catch basin. All milling and paving activities are done during dry weather only.

8.14 ROAD SALT STORAGE AND APPLICATION

All salt is stored in a covered facility (salt barn) at the Highway yard. Salt spreaders are calibrated as necessary. Salt deliveries are unloaded directly into the barn.

8.15 EVALUATING AND MEASURING PROGRESS

The Town will address Good Housekeeping evaluation in accordance with the NYS DEC Pollution Prevention and Good Housekeeping guidance document and the MCM 6 procedures.

8.16 ANNUAL REPORTING

The annual reporting period begins on March 10 and ends on March 9 of the following year. The annual report must be sent to the DEC by June 1 of each reporting year. For MCM 6, the Town will supply the DEC with the following information:

- List each municipal operation/facility that contributes or may potentially contribute POCs to the MS4 system.
- List of Municipal Operations good housekeeping programs.
- Acres of parking lots swept.
- Miles of street swept.
- Inspections of Post Construction Control Practices.
- Lbs of Phosphorus applied in chemical fertilizer.
- Lbs of nitrogen applied in chemical fertilizer.
- Lbs of pesticide/herbicide applied as pure product.
- Quantity of stormwater management trainings that have been provided to municipal employees.
- Date of last training(s).
- Quantity of municipal employees that have been trained in this reporting period.
- Percentage of municipal employees in relevant positions and departments receiving stormwater management training.

APPENDIX A

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PERMITS

A.1 NYS DEC SPDES GENERAL PERMIT FOR STORMEWATER DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4) PERMIT NO. GP-0-15-003

A.2 NYSDEC SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES – PERMIT NO. GP-0-15-002

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

Permit No. GP-0-15-003

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: May 1, 2015 Expiration Date: April 30, 2017

Modification Dates
July 15, 2015 - Correction of Table IX.C and Appendix 2 to reflect GP-0-10-002 October 2011 Modification

January 13, 2016 - Additional reporting for covered entities in the watersheds listed in Part IX

Stu Fox
Deputy Chief Permit Administrator

Stuart M. Fox 1 / 12 / 16

Authorized Signature Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-17

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), operators of *small municipal separate storm sewer systems* ("small MS4s"), located in *urbanized areas* ("UA") and those *additionally designated* by New York State are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System* ("NPDES") permit or by a state permit program. New York's *State Pollutant Discharge Elimination System* ("SPDES") is an NPDES-approved program with permits issued in accordance with the *Environmental Conservation Law* ("ECL").

Only those *small MS4 operators* who *develop* and *implement* a *stormwater management program* (SWMP) and obtain permit coverage in accordance with Part II of this *SPDES general permit* are authorized to *discharge stormwater* from their *small MS4* under this *SPDES general permit*.

A *covered entity* authorized under GP-0-10-002 as of the effective date of GP-0-15-003, shall be permitted to discharge in accordance with the renewed permit, GP-0-15-003, upon the submission of their Annual Report, unless otherwise notified by the *Department*.

An *operator* not authorized under GP-0-15-003 may[1] obtain coverage under this *SPDES general permit* by submitting a Notice of Intent (NOI) to the address provided on the NOI form. For newly regulated MS4s, authorization under this *SPDES general permit* is effective upon written notification from the *Department* of the receipt of a complete NOI. Copies of this *SPDES general permit* and the NOI for New York are available by calling (518) 402 - 8109 or at any Department of Environmental Conservation (*Department*) regional office (Appendix A). They are also available on the *Department*'s website:

http://www.dec.ny.gov/permits/6045.html

Submitting an NOI is an affirmation that an initial *SWMP* has been *developed* and will be *implemented* in accordance with the terms of this *SPDES general permit*.

* **Note: all italicized words within this** *SPDES general permit* **are defined in Part X. Acronyms and Definitions.**

[1] The term "may is used to recognize that there are circumstances under which the *operator* is ineligible for coverage under this *g SPDES general permit* because of exclusionary provisions of this permit. *Operators* that are excluded from coverage under this *SPDES general permit* as provided for in Part I, for example, are not authorized to *discharge* under this permit. This clarification also applies to situations in which an NOI has been submitted; submission of an NOI by an entity excluded from *SPDES general permit* coverage does not authorize the *small MS4* to *discharge stormwater* runoff under the authority of this *SPDES general permit.*

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

Table of Contents

Part I. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

1. This *SPDES general permit* authorizes *discharges* of *stormwater* from *small municipal separate storm sewer system*s ("MS4"s) as defined in 40 CFR 122.26(b)(16), provided all of the eligibility provisions of this *SPDES general permit* are met.

2. Exempt Non-Stormwater Discharges. The following non-stormwater *discharges* are exempt from the need for *SPDES general permit* coverage unless the *Department* has determined them to be substantial contributors of pollutants to a particular *small MS4* applying for coverage under this *SPDES general permit*. If the *Department* determines that one or more of the *discharges* listed below is a substantial contributor of pollutants to a *small MS4*, the identified *discharges* will be considered *illicit*. In that event, the *covered entity* must eliminate such discharges by following the *illicit discharge* minimum control measure ("MCM") requirements (See Part VII.A.3 or VIII.A.3, and Part IX.A.3, B.3, C.3, and D.3 where applicable).

   a. water line flushing
   b. landscape irrigation
   c. diverted stream flows
   d. rising ground waters
   e. uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
   f. uncontaminated ground water
   g. discharges from potable water sources
   h. foundation drains
   i. air conditioning condensate
   j. irrigation water
   k. springs
   l. water from crawl space and basement sump pumps
   m. footing drains
   n. lawn and landscape watering runoff provided that all pesticides and fertilizers have been applied in accordance with the manufacturer's product label;
   o. water from individual residential car washing
   p. flows from riparian habitats and wetlands
   q. dechlorinated swimming pool discharges
   r. residual street wash water
   s. discharges or flows from firefighting activities

(Part I.A.2.)

t. dechlorinated water reservoir discharges
u. any SPDES permitted discharge.

Even if the non-stormwater discharges are determined not to be substantial contributors of pollutants, the *Department* recommends that the *covered entity's stormwater management program* ("SWMP") include public education and outreach activities directed at reducing pollution from these discharges.

B. Limitations on Coverage

The following are not authorized by this *SPDES general permit*:

1. *Stormwater discharges* whose unmitigated, direct, indirect, interrelated, interconnected, or interdependent impacts would jeopardize a listed endangered or threatened species or adversely modify designated critical habitat;

2. *Stormwater discharges* or *implementation* of a *covered entity's SWMP*, which adversely affect properties listed or eligible for listing in the National Register of Historic Places, unless the covered entity is in compliance with requirements of the National Historic Preservation Act and has coordinated with the appropriate State Historic Preservation Office any activities necessary to avoid or minimize impacts;

3. *Stormwater discharges* to territorial seas not of the State of New York, the contiguous zone, and the oceans unless such *discharges* are in compliance with the ocean *discharge* criteria of 40 CFR 125 subpart M;

4. *Stormwater discharges*, the permitting of which is prohibited under 40 CFR 122.4 and/ or the *ECL*;

C. Exemption Criteria

For *stormwater discharges* from a designated *small MS4* that are mixed with non-*stormwater* or *stormwater* associated with *industrial activity*, the *Department* may determine them to be exempt from the requirements of this *SPDES general permit* if the *discharges* are:

1. Effectively addressed by and in compliance with a different *SPDES general permit* or an *individual SPDES permit*; or

2. Identified by and in compliance with Part I.A.2 of this *SPDES general permit*.

Part II. OBTAINING PERMIT COVERAGE

A. Permit coverage is obtained by submission of a complete and accurate Notice of Intent.

B. Permit coverage is public noticed by the Department.

NOIs will be public noticed and an opportunity for public comment provided on the contents of submitted NOIs.

a. NOIs and the location of the SWMPs and Annual Reports for existing MS4s will be posted in the Environmental Notice Bulletin (ENB).

b. A deadline of 28 calendar days from the posting in the ENB will be provided for receiving comments.

c. After the public comment period has expired, the *Department* may extend the public comment period, require submission of an application for an individual SPDES permit or alternative *SPDES general permit*, or accept the NOI or SWMP as complete.

C. Continuance of Permit Coverage for Covered Entities Authorized by GP-0-10-002 (Continuing Covered Entities)

As of May 1, 2015, entities with coverage under GP-0-10-002 will continue to have authorization to discharge on an interim basis for up to 180 days from the effective date of this *SPDES general permit*. Covered entities may gain coverage under this *SPDES general permit* by submission of their 2014 Annual Report due in June 2015. For public participation purposes, the updated Annual Report will be considered equivalent to submission of an NOI.

When the operator changes, a new operator is added, or the individual responsible for the SWMP changes, these changes must be indicated on the MCC form submitted in accordance with Part V.D. It is not necessary to submit a revised Notice of Intent (NOI).

D. Permit Coverage for Covered Entities Newly Designated Under GP-0-15-003 (Small MS4s not Previously Authorized by GP-0-10-002)

Certain *small MS4s* designated by 40CFR Section 122.32(a)(1) were not authorized by GP-0-10-002, but are now required to gain coverage under this *SPDES general permit*. The *small MS4s* were not previously authorized because they were either:

- required to gain coverage under GP-0-10-002, but were granted a waiver from that requirement;

- were not required to gain coverage under GP-0-10-002 based on the designation criteria, but they are now within an *Additionally Designated Area*; or

(Part II.D.)

- were otherwise not permitted under GP-0-10-002.

1. In order for *stormwater discharges* from *small MS4s* to be newly authorized under this *SPDES general permit*, an *operator* must:

   a. within 180 days of receiving written notification from the *Department* that a permit for discharges from MS4s is required, prepare an NOI using the form provided by the *Department* (or a photocopy thereof); and

   b. submit the NOI, signed in accordance with Part VI.J of this *SPDES general permit*, to:

      NOTICE OF INTENT
      NYS DEC, Bureau of Water Permits
      625 Broadway, 4th Floor
      Albany, NY 12233-3505

2. *Operators* who submit a complete NOI in accordance with the requirements of this *SPDES general permit* are authorized to *discharge stormwater* from *small MS4s,* under the terms and conditions of this *SPDES general permit,* upon written notification from the Department that a complete NOI has been received.

E Small MS4s Not Required to Gain Coverage

Operators of unregulated *small MS4s* may apply for coverage under this *SPDES general permit* at any time, per Part II.B.

F. Extension of Permit Coverage to Covered Entity's Full Jurisdiction

Operators of traditional land use control MS4s must extend the implementation of minimum control measures (MCMs) 4 and 5 in accordance with *Criterion 3* of the Designation Criteria or apply for a waiver, if eligible.

Operators of all regulated *small MS4*s may also extend the implementation of any of the six MCMs to areas under their control, but outside of the existing area covered by this *SPDES general permit*. This may be done by describing the program components (MCMs) being extended and the geographic extent to which they are being extended in the annual report (Part V.C.) and indicating in the Municipal Compliance Certification (MCC) form (Part V.D.) that the program was extended to the *covered entity's* full jurisdiction.

(Part II.)

G. Single Entity to Cover the MS4

A single entity may gain coverage for, and on behalf of, one or more regulated MS4s to implement a part of an MCM, one, or all the MCMs. A single entity shall be defined by watershed, municipal boundaries, special district boundaries, or other specifically defined boundaries. The single entity must demonstrate to the *Department* that it was formed in accordance with applicable state and/or local legislation, and that it has the legal authority and capacity (financial, resources, etc.) to meet the requirements of this *SPDES general permit*. Depending on the MCM(s) implemented, the single entity shall demonstrate that it has the following capacities, as applicable for each MCM that the single entity is seeking coverage under this SPDES general permit:

1. Initiate and administer appropriate enforcement procedures,
2. Collect, finance, bond or otherwise borrow money for capital projects,
3. Control the management and operation of the storm sewer system,
4. Implement best management practices at all municipal facilities discharging to the MS4, and
5. Obtain access to property that may be necessary for siting stormwater management facilities and/or practices.

The single entity must submit a complete NOI form to the *Department*, detailing which of the regulated MS4s it will gain coverage for and which of the MCMs, or parts of MCMs, it will implement for each particular regulated MS4. A copy of the document forming the single entity, and detailing the legal authority and capacity of the single entity, must be attached to the NOI. Prior to the single entity gaining coverage under this SPDES general permit, each regulated MS4, for which the single entity will implementing one or more MCM must submit a complete notice of termination (NOT). This notice shall specify which of the minimum control measures the single entity will implement for the MS4 and which of the minimum control measures the MS4 will implement.

Part III. SPECIAL CONDITIONS

A. Discharge Compliance with Water Quality Standards

Where a *discharge* is already authorized under this *SPDES general permit* and is later determined to directly or indirectly cause or have the reasonable potential to cause or contribute to the violation of an applicable *water quality standard*, the *Department* will notify the *covered entity* of such violation(s) and may take enforcement actions for such violations. The *covered entity* must take all necessary actions to ensure future *discharges* do not directly or indirectly cause or contribute to the violation of a *water quality standard*, and the *covered entity* must document these actions in the *SWMP*.

(Part III.A.)

Compliance with this requirement does not preclude, limit, or eliminate any enforcement activity as provided by the Federal and / or State law for the underlying violation. Additionally, if violations of applicable water quality standards occur, then coverage under this *SPDES general permit* may be terminated by the *Department* in accordance with 750-1.21(e), and the Department may require an application for an alternative *SPDES general permit* or *individual SPDES permit* may be issued.

B. Impaired Waters

1. Impaired Waters Without Watershed Improvement Strategies or Future TMDLs

If a *small MS4 discharges* a stormwater pollutant of concern (POC) to an *impaired* water listed in Appendix 2, the covered entity must ensure no net increase in its *discharge* of the listed *POC* to that water.

By January 8, 2013, *covered entities* must assess potential sources of discharge of stormwater *POC*(s), identify potential stormwater pollutant reduction measures, and evaluate their progress in addressing the POC(S). Newly authorized covered entities must perform the above tasks within 5 years after gaining coverage under this SPDES general permit. Covered entities must evaluate their *SWMP* with respect to the MS4's effectiveness in ensuring there is no net increase discharge of stormwater *POC*(s) to the impaired waters for *storm sewersheds* that have undergone non-negligible changes such as changes to land use and impervious cover greater than one acre, or stormwater management practices during the time the MS4 has been covered by this *SPDES general permit*. This assessment shall be conducted for the portions of the *small MS4 storm sewershed* that *discharge* to the listed waters (see Appendix 2). The assessment shall be done using *Department* supported modeling of pollutant loading.

If the modeling shows increases in loading of the POC, the SWMP must be modified to reduce the loading to meet the no net increase requirement. The subsequent annual reports must contain an assessment of priority stormwater problems, potential management practices that are effective for reduction of stormwater POC(s), and document a gross estimate of the extent and cost of the potential improvements.

2. Watershed Improvement Strategies

The *SWMP*s for *covered entities* in the watersheds listed below must be modified to comply with the following requirements and the watershed improvement strategies. *Covered entities* implementing the pollutant-specific BMPs in addition to the BMPs required of all *covered entities* will be taking satisfactory steps towards achieving compliance with TMDL requirements. *Covered entities* under the MS4 *SPDES general*

(Part III.B.2.)

permit are required to make best efforts to participate in locally based watershed planning efforts that involve the NYSDEC, other covered entities, stakeholders and other interested parties for implementation of load reduction BMPs. Covered entities may form a Regional Stormwater Entity (RSE) to implement stormwater retrofits collectively. The *covered entities* must ensure that discharges of the *POC* to the *TMDL* waterbody are reduced through these or additional changes to the *SWMP* so that the waste load allocation is met.

MS4s are required to meet the reduction of the POC defined by the TMDL program defined in Part IX of this *SPDES general permit*. By the deadlines defined in Part IX of the general permit, *covered entities* must assess their progress and evaluate their *SWMP* to determine the *MS4's* effectiveness in reducing their discharges of *TMDL POC*(s) to *TMDL* water bodies. Newly designated watershed improvement strategy areas must perform the assessment within 5 years from authorization under this SPDES general permit. This assessment shall be conducted for the portions of the *small MS4 storm sewershed* that are within the *TMDL* watershed. The assessment shall be done using *Department* supported modeling of pollutant loading from the *storm sewershed*. The *covered entities* or an RSE must prepare and implement, participate in or utilize the results of existing or ongoing ambient water quality monitoring programs to validate the accuracy of models and evaluate the effectiveness of the additional BMPS for watershed improvement strategies.

If the modeling shows that loading of the POC is not being reduced to meet the waste load allocation, the SWMP must be modified to reduce the pollutant loading to meet the waste load allocation.

Each regulated MS4 is responsible for an individual load reduction, which is a fraction of the total required load reduction in the TMDL. If MS4s form an RSE and stormwater retrofits are approached collectively, the *Department* would allow compliance with this condition of the SPDES general permit to be achieved on a regional basis.

In this case the load reduction requirement for each participating MS4 will be aggregated, to create an RSE load reduction, to allow design and installation of retrofits where they are most feasible, without restricting MS4s to site retrofit projects within their municipal boundaries.

Each member of an RSE is in compliance if the aggregate reduction number associated with the retrofit plans is met. If the aggregate number is not met, each of the participating MS4s would be deemed non-compliant until such time as they had met their individual load reduction requirements.

(Part III.B.2.)

a. New York City Watershed East of the Hudson River
Covered entities shall modify their *SWMP* to meet the additional requirements as set forth in Part IX.A to address phosphorus as the *POC* for the portion of their *storm sewershed* in the watershed. A map of the watershed is shown in Appendix 3.

b. Other Phosphorus Watersheds
Covered entities shall modify their *SWMP* to meet the additional requirements as set forth in Part IX.B to address phosphorus as the *POC* for the portion of their *storm sewershed* in the watershed. Maps of the watersheds are shown in Appendices 4, 5, and 10.

c. Pathogen Watersheds
Covered entities shall modify their SWMP to meet the additional requirements as set forth in Part IX.C to address pathogens as the *POC* for the portion of their *storm sewershed* in any of the watersheds. Maps of the watersheds are shown in Appendices 6, 7, and 9.

d. Nitrogen Watersheds
Covered entities shall modify their *SWMP* to meet the additional requirements as set forth in Part IX.D to address nitrogen as the *POC* for the portion of their *storm sewershed* in the watershed. Maps of the watersheds are shown in Appendix 8.

3. Future TMDL Areas
If a *TMDL* is approved in the future by EPA for any waterbody or watershed into which a *small MS4 discharges*, the *covered entity* must review the applicable *TMDL* to see if it includes requirements for control of *stormwater discharges*. If a *covered entity* is not meeting the *TMDL* wasteload allocations, it must, within 180 days of written notification from the *Department*, modify its *SWMP* to ensure that the reduction of the *POC* specified in the *TMDL* is achieved. It will be the MS4's obligation to meet the waste load allocations specified in the TMDL through modification of its *SWMP plan* according to the schedule of Part IX of this *SPDES general permit.*

Modifications must be considered for each of the six MCMs. Refer to assistance documents or enhanced requirements for specific pollutants in documents on the *Department*'s website for modifications specific to the *TMDL*. Revised *SWMPs* must include updated schedules for implementation.

(Part III.B.3.)

Within three years of having modified its SWMP to ensure that reduction of the POC specified in the TMDL is achieved, covered entities in future TMDL areas must assess their progress and evaluate their *SWMP* to determine the *MS4's* effectiveness in reducing their discharges of *TMDL POC*(s) to *TMDL* water bodies. This assessment shall be conducted for the portions of the *small MS4 storm sewershed* that are within the *TMDL* watershed. The assessment shall be done using *Department* supported modeling of pollutant loading from the *storm sewershed*.

Part IV. Stormwater Management Program (SWMP) Requirements

A. SWMP Background

Covered entities must *develop (for newly authorized MS4s, implement)*, and enforce a *SWMP* designed to reduce the *discharge* of pollutants from *small MS4s* to the *maximum extent practicable* ("MEP") in order to protect water quality and to satisfy the appropriate water quality requirements of the *ECL* and the CWA. The objective of the permit is for MS4s to assure achievement of the applicable water quality standards. *Covered entities* under GP-0-10-002 must have prepared a *SWMP plan* documenting modifications to their *SWMP*. See Part X.B. (Definitions) for more information about the *SWMP* and *SWMP plan*.

The *SWMP* and *SWMP plan* may be created by an individual *covered entity,* by a shared effort through a group or coalition of individual *covered entities,* or by a third party entity. The *SWMP plan* shall be made readily available to covered entity's staff, to the public and to *Department* and EPA staff.

B. Cooperation Between Covered Entities Encouraged

The *Department* encourages *covered entities* to cooperate when *developing* and *implementing* their *SWMP*[2]. However, each *covered entity* is responsible for obtaining its own permit coverage and for filing its own NOI. Irrespective of any agreements between *covered entities*, each individual *covered entity* remains legally responsible for satisfying all GP-0-15-003 requirements and for its own *discharges*. If one *covered entity* is relying on another *covered entity* to satisfy one or more of its permit obligations, that fact must be noted on the *covered entity's* MCC form. The other entity must, in fact,

[2] For example, villages are encouraged to cooperate with towns, towns with counties, and adjacent counties with each other. In addition, municipal governments are encouraged to coordinate and cooperate with non-traditional MS4s such as DOT, school and fire districts, Federal and State facilities located within and adjacent to their jurisdictions. Sewer boards, water boards, or other non-traditional entities are encouraged to partner with the municipality (municipalities) that they serve.

implement the MCM(s) and must agree to *implement* the MCM(s) on the first *covered entity's* behalf. This agreement between the two or more parties must be documented in writing and signed by both (all) parties. Part IV.G. below may apply if such an agreement is not already in place. The agreement must be included in the *SWMP plan*, and be retained by the *covered entity* for the duration of this *SPDES general permit*, including any administrative extensions of the permit term.

Covered entities that are working together to *develop (for newly authorized MS4s)* or *implement* their *SWMP*s are encouraged to complete shared annual reports. *Covered entities* may also hold a group meeting to present their annual reports to the public and to receive comments on their annual reports. These options are discussed in more detail in Part V.C.2.

C. SWMP Coverage Area

At a minimum, *covered entities* are required to *develop (for newly authorized MS4s)* and *implement SWMP*s in the automatically designated *urbanized areas* ("UA") and *additionally designated* areas (40CFR Section 122.32(a)(1) or 122.32(a)(2)) under their jurisdiction[3].

SWMP coverage shall include all UA or additionally designated areas within the *covered entity*'s jurisdiction that drain into their *small MS4* and subsequently *discharge* to *surface waters of the State* directly or through other *small MS4s*.

Operators of *small MS4s* whose jurisdiction includes regulated and unregulated areas are encouraged to include their entire jurisdiction in their *SWMP* (refer to Part II.D).

D. SWMP Development and Implementation for Covered entities Authorized by GP-0-10-002(Continuing Covered entities)

Covered entities authorized under GP-0-10-002 shall continue to fully *implement* their *SWMP,* unless otherwise stated in this *SPDES general permit*. A *covered entity* may modify its *SWMP* if it determines changes are needed to improve *implementation* of its *SWMP*. Any changes to a *SWMP* shall be reported to the *Department* in the MS4's

[3] The purpose of this section is to minimize conflicts between adjacent *small MS4s*. For the purposes of this *SPDES general permit*, areas under the *covered entity's* jurisdiction shall mean areas where the legal authority exists for the subject *covered entity* to *develop* and *implement* an *SWMP* including the six MCMs. It is not a permit requirement for *covered entities* to *implement* and enforce any portion of their *SWMP* in any area that is under the jurisdiction of another *covered entity*. For example, if a portion of a town drains directly into a stormwater system owned and operated by the State DOT, and this area of the town is regulated, the DOT will not be required to implement and enforce any portion of a *SWMP* in the area lying outside of its right of way. In this case, the town would be required to implement the program in the subject area in accordance with this *SPDES general permit*, this despite the fact that the subject drainage does not directly enter the town's system.

annual report and Municipal Compliance Certification (MCC) form (See Part V.C and V.D).

E. SWMP Development and Implementation for Newly Regulated Covered entities (Small MS4s not Previously Authorized by GP-0-10-002)

Certain *small MS4s* designated by 40CFR Section 122.32(a)(1) were not authorized by GP-0-10-002, but are now required to gain coverage under this *SPDES general permit*. The *small MS4s* were not previously authorized because they were either:

- required to gain coverage under GP-0-10-002, but were granted a waiver from that requirement;
- were not required to gain coverage under GP-0-10-002 based on the designation criteria, but they now meet the additional designation criteria in NYS DEC "Designation Criteria for Identifying Regulated Municipal Separate Storm Sewer Systems" ; or
- were otherwise not permitted under GP-0-10-002.

Operators of *small MS4s* newly regulated under this *SPDES general permit* must *develop* an initial *SWMP* and provide adequate resources to fully *implement* the *SWMP* no later than three years from the date of the individual MS4's authorization.

A newly regulated *covered entity* may modify its *SWMP* to comply with the terms and conditions of this *SPDES general permit* if it determines changes are needed to improve *implementation* of its *SWMP*. Any changes to a *SWMP* shall be documented in the *SWMP plan* and reported to the *Department* in the annual report (See Part V.C).

Covered entities are required to make steady progress toward full *implementation* in the first three years after the date of authorization. Full *implementation* of *SWMP*s for newly regulated *small MS4s* is expected no later than three years from the date of coverage under this *SPDES general permit*.

F. Minimum Control Measures

Each *covered entity* is required to develop *(for newly authorized MS4s)* and implement a *SWMP* that satisfies the requirements for each of six required program components, known as minimum control measures (MCMs).

The MCMs for *traditional land use control MS4s* are listed in Part VII. The MCMs for *traditional non-land use control MS4s* and *non-traditional MS4s* are listed in Part VIII. Additional MCMs that *covered entities* in watersheds with improvement strategies must address, referred to in Part III.B.2, are described in Part IX.

(Part IV.)

G. Reliance Upon Third Parties

This section applies when a *covered entity* relies upon any third party entity to *develop* or *implement* any portion of its *SWMP*. Examples of such entities include, but are not

limited to a non-government, commercial entity that receives payment from the *covered entity* for services provided (for example businesses that create policies or procedures for *covered entities*, perform illicit discharge identification and track down, maintain roads, remove snow, clean storm sewer system, sweep streets, etc. as contracted by the covered entity).

The covered entity must, through a signed certification statement, contract or agreement provide adequate assurance that the third parties will comply with permit requirements applicable to the work performed by the third party. The certification statement, contract or other agreement must:

- provide adequate assurance that the third party will comply with permit requirements;
- identify the activities that the third party entity will be responsible for and include the name and title of the person providing the signature;
- the name, address and telephone number of the third party entity;
- an identifying description of the location of the work performed; and
- the date the certification statement, contract or other agreement is signed.

Example certification language is provided below:

Contracted Entity Certification Statement:

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the (covered entity's name) stormwater management program and agree to implement any corrective actions identified by the (covered entity's name) or a representative. I also understand that the (covered entity's name) must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from the Municipal Separate Storm Sewer Systems ("MS4s") and that it is unlawful for any person to directly or indirectly cause or contribute to a violation of water quality standards. Further, I understand that any non-compliance by (covered entity's name) will not diminish, eliminate, or lessen my own liability."

Part V. PROGRAM ASSESSMENT, RECORD KEEPING, REPORTING AND CERTIFICATION REQUIREMENTS

A. Assessment

Covered entities are required to collect and report information about the *development* and *implementation* of their SWMPs. Specific information the *small MS4s* are required to collect is identified in Parts VII or VIII, depending on the type of *small MS4*. The *small MS4s* are encouraged to collect additional information that will help them evaluate their *SWMP*. Collection of information over time will facilitate the evaluation of the *covered entity's SWMP* by allowing the examination of trends in the information collected.

The *covered entity* must conduct an annual evaluation of its program compliance, the appropriateness of its identified *BMPs*, meeting new permit requirements, and progress towards achieving its identified *measurable goals*, which must include reducing the *discharge* of pollutants to the *MEP*.
Where the evaluation shows that the SWMP is not reducing discharges to the *MEP*, the SWMP shall be revised to reduce discharges to the *MEP*. Update to the SWMP and the SWMP plan must be completed within a year from the annual evaluation of their SWMP with an implementation schedule no later than 3 years from the annual evaluation.

B. Recordkeeping

The *covered entity* must keep records required by this *SPDES general permit* (records that document *SWMP*, records included in *SWMP plan*, other records that verify reporting required by the permit, NOI, past annual reports, and comments from the public and the *Department*, etc.) for at least five (5) years after they are generated. Records must be submitted to the *Department* within 5 business days of receipt of a *Department* request for such information. The *covered entity* shall keep duplicate records (either hard copy or electronic), to have one copy for public observation and a separate working copy where the *covered entity's* staff, other individuals responsible for the *SWMP* and regulators, such as *Department* and EPA staff can access them. Records, including the NOI and the *SWMP plan*, must be available to the public at reasonable times during regular business hours.

C. Annual Reporting

1. Annual Report Submittal

The annual reporting period ends March 9 of each year. The annual report must be received in the *Department*'s Central Office, electronic or hard copy, no later than June 1 of each reporting year. If electronic, submit in accordance with procedures set forth by the *Department*. If mailed, send to the address below:

(Part V.C.1.)

NYS DEC "MS4 Coordinator"
Bureau of Water Permits
625 Broadway, 4th Floor
Albany, NY 12233-3505

Failure to submit a complete annual report and a complete MCC form (Part V.D) shall constitute a permit violation.

a. **Annual Report Submittal for Newly Regulated Covered entities (Small MS4s not Previously Authorized by GP-0-10-002)**
Newly regulated covered entities *developing* their *SWMP* are to submit their Annual Report in a format provided by the *Department*. They will provide, at a minimum, the information on the annual report form and the information required by Parts VII or VIII.

Newly regulated *covered entities* are required to submit their first annual report the year that authorization is granted if authorization is granted on or before December 31 of that reporting year.

b. **Annual Report Submittal for Covered entities Authorized by GP-0-10-002 (Continuing Covered entities)**
Beginning with annual reports due in 2010 *covered entities* implementing their *SWMP* shall submit, at a minimum, information specified by the *Department* in Part VII or VIII in a format provided by the *Department*.

2. **Shared Annual Reporting and Submittal**
Covered entities working together to *develop (for newly authorized MS4s)* and /or *implement* their *SWMP*s may complete a shared annual report. The shared annual report is an annual report that outlines and explains group activities, but also includes the tasks performed by individual *covered entities* (*BMPs, measurable goals*, schedules of planned activities, etc.). To facilitate the submission of one annual report for the entire group of *covered entities*, individual *covered entity's* activities may be incorporated into the report by either:

- providing the details specific to their *small MS4*(s) to a person(s) who incorporates that information into the group report. That one group report is submitted to the *Department* for all participating *small MS4s*; or
- providing the details specific to their *small MS4*(s) on a separate sheet(s) that will be attached with the one group report.

(Part V.C.2.)

Regardless of the method chosen, each *covered entity* must, by June 1 of the annual reporting year:

a. Provide their individual MCC form (see Part V.D) to be submitted with the shared annual report. Each *covered entity* must sign and submit an MCC form to take responsibility for all of the information in the annual report, which includes specific endorsement or acceptance of the shared annual report on behalf of the individual *covered entity*;

b. Present their draft annual report at a meeting (see Part VII.A.2.d or Part VIII.A.2.d for more information). For completed shared annual reports, the report may be presented by each participating individual *covered entity* at an existing *municipal* meeting or may be made available for comments on the internet. Additionally, *covered entities* participating in shared annual reporting may combine meetings to have a group or regional meeting. While the group meeting is allowable, each *covered entity* shall ensure that local public officials and members of the public are informed about the program, activities and progress made; and

c. Submit a summary of any comments received and (intended) responses on the individual *covered entity*'s information or the shared annual report information, as applicable. This information should be included with the annual report submission. Changes made to the *SWMP* in response to comments should be described in the annual report.

3. Annual Report Content

The annual report shall summarize the activities performed throughout the reporting period (March 10 to March 9) and must include at a minimum:

a. The status of compliance with permit conditions, including Watershed Improvement Strategy conditions;
b. An assessment/evaluation of:
   i. the appropriateness of the identified *BMPs*;
   ii. progress towards achieving the statutory goal of reducing the *discharge* of pollutants to the *MEP*; and
   iii. the identified *measurable goals* for each of the MCMs.
c. Results of information collected and analyzed, monitoring data, and an assessment of the *small MS4*'s *SWMP* progress toward the statutory goal of reducing the *discharge* of *pollutants* to the *MEP* during the reporting period. This could include results from required *SWMP* reporting, estimates of pollutant loading (from parameters such as identified illicit discharges, physically interconnected *small MS4*s that may contribute substantially to pollutant

loadings from the *small MS4*) and pollutant load reductions (such as illicit discharges removed). This assessment may be submitted as an attachment;

d. When required to be completed, results of assessments of effectiveness in meeting no net increase requirements or TMDL loadings as required by III. B.1 and 2. These results must be submitted in evaluation forms and as an attachment;

e. A summary of the stormwater activities planned to be undertaken during the next reporting cycle (including an implementation schedule);

f. Any change in identified *BMPs* or *measurable goals* and justification for those changes;

g. Notice that a *small MS4* is relying on another entity to satisfy some or all of its permit obligations (if applicable);

h. A summary of the public comments received on this annual report at the public presentation required in Part VII.A.2. or VIII.A.2. And, as appropriate, how the *small MS4* will respond to comments and modify the program in response to the comments;

i. A statement that the final report and, beginning in 2009, the SWMP plan are available for public review and the location where they are available; and

j. The information specified under the reporting requirements for each MCM (Part VII or VIII).

D. Interim Progress Reporting

In accordance with 6 NYCRR Part 750-1.14*, covered entities* that own or operate MS4s within the watersheds listed in Part IX must submit to the Department interim progress reports no later than December 1 of each year. These interim progress reports will identify the activities that have been performed during the period of March 10 through September 9 of each year, which demonstrates that there is progress being made by the *covered entity* towards completion of the reduction requirements, prescribed in Part IX. Progress made during the period of September 10 through March 9 shall be reported with the annual report that is due no later than June 1 of each year.

E. Annual Report Certification

A signed original hard copy and a photocopy of the MCC form must be submitted to the *Department* no later than June 1 of each reporting year. If the annual report is mailed (Part V.C. above), the MCC form must be submitted with the annual report.

The MCC form, provided by the *Department*, certifies that all applicable conditions of Parts IV, VII, VIII and IX of this *SPDES general permit* are being *developed*, *implemented* and complied with. It must be signed by an individual as described in Part VI.J.2. The certification provided by the MCC form does not affect, replace or negate the certification required under Part VI.J.2 (d). If compliance with any requirement cannot be certified to on the MCC form, a complete explanation with a description of corrective measures must be included as requested on the MCC form.

Failure to submit a complete annual report (Part V.C.) and a complete MCC form shall constitute a permit violation.

Part VI. STANDARD PERMIT CONDITIONS

A. General Authority to Enforce

Three of the MCMs (illicit discharge detection and elimination, construction site *stormwater* runoff control and post-construction *stormwater* management) require local laws, ordinances or other regulatory mechanisms to ensure successful implementation of the MCMs. Some *covered entities*, however, are not enabled by state law to adopt local laws or ordinances. Those *covered entities* (typically non-traditional MS4s and traditional, non-land use control MS4s) are expected to utilize the authority they do possess to create or modify existing regulatory mechanisms, including but not limited to contracts, bid specifications, requests for proposals, etc. to ensure successful implementation.

B. Duty To Comply

A *covered entity* must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the CWA and the *ECL* and is grounds for enforcement action.

C. Enforcement

Failure of the *covered entity,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the *SPDES general permit* requirements contained herein shall constitute a permit violation. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Continuation of the Expired SPDES General Permit

This *SPDES general permit* expires five years from the effective date of this permit. However, an administratively extended *SPDES general permit* continues in force and effect until the *Department* issues a new permit, unless a *covered entity* receives written notice from the *Department* to the contrary. *Operators* of the *MS4s* authorized under the administratively extended expiring *SPDES general permit* seeking coverage under the new *SPDES general permit* must refer to the terms within the new *SPDES general permit* to continue coverage.

E. Technology Standards

Covered entities, in accordance with written notification by the *Department*, must comply with all applicable technology-based effluent standards or limitations promulgated by EPA pursuant to Sections 301 and 304 of the CWA. If an effluent standard or limitation more stringent than any effluent limitation in the *SPDES general permit* or controlling a pollutant not limited in the permit is promulgated or approved

after the permit is issued, the *SWMP plan* shall be promptly modified to include that effluent standard or limitation.

F. Need To Halt or Reduce Activity Not a Defense

It shall not be a defense for a *covered entity* in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this *SPDES general permit*.

G. Duty to Mitigate

The *covered entity* shall take all reasonable steps to minimize or prevent any *discharge* in violation of this *SPDES general permit* which has a reasonable likelihood of adversely affecting human health or the environment.

H. Duty to Provide Information

The *covered entity* shall, within five (5) business days, make available for inspection and copying or furnish to the *Department* or an authorized representative of the *Department* any information that is requested to determine compliance with this *SPDES general permit*. Failure to provide information requested shall be a violation of the terms of this *SPDES general permit* and applicable regulation.

I. Other Information

Covered entities who become aware of a failure to submit any relevant facts or have submitted incorrect information in the NOI or in any other report to the *Department* must promptly submit such facts or information.

J. Signatory Requirements

All NOIs, reports, certifications or information submitted to the *Department*, or that this *SPDES general permit* requires be maintained by the *covered entity*, shall be signed as follows:

1. Notices of Intent

All NOIs shall be signed by either a principal executive officer or ranking elected official. Principal executive officer includes (1) the chief executive officer of the municipal entity agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports Required and Other Information Requested

All reports required by this *SPDES general permit* and other information requested by the *Department,* including MCC forms (part V.D.), shall be signed by a person

(Part VI.J.2.)

described above or by a duly authorized representative of that person[4]. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in VI.J.1 above and submitted to the *Department*; and

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the *covered entity* (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and

c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the MCC form; and

d. **Changes to authorization.** If an authorization to discharge is no longer accurate because a different *covered entity* has responsibility for the overall operation of another *covered entity's* program, these changes must be indicated on the MCC form submitted to the *Department* per Part V.D.

e. **Initial signatory authorization or changes to signatory authorization.** The initial signatory authorization must be submitted to the *Department* with any reports to be signed by a signatory representative. If a signatory authorization under VI.J.2 is no longer accurate because a different individual, or position, has responsibility for the overall operation of the facility, a new signatory authorization satisfying the requirements of VI.J.2 must be submitted to the *Department* with any reports to be signed by an authorized representative.

f. **Certification.** Any person signing documents under paragraph VI.H shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the

[4]Positions that must be duly authorized include, but are not limited to, Environmental Directors, Deputy Supervisors, Safety and Environmental Managers, Assistant Directors, and Chief Health and Safety Officers.

(Part VI.J.2.f.)

information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information."

Under Part VI.J. (Signatory Requirements), it shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, and/or reports.

K. Penalties for Falsification of Reports

Article 17 of the *ECL* provides a civil penalty of $37,500 per day per violation of this permit. Articles 175 and 210 of the New York State Penal Law provide for a criminal penalty of a fine and / or imprisonment for falsifying reports required under this permit..

L. Oil and Hazardous Substance Liability

Nothing in this *SPDES general permit* shall be construed to preclude the institution of any legal action or relieve the *covered entity* from any responsibilities, liabilities, or penalties to which it is or may be subject under section 311 of the CWA or section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

M. Property Rights

The issuance of this *SPDES general permit* does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations, nor does it limit, diminish and / or stay compliance with any terms of this permit.

N. Severability

The provisions of this *SPDES general permit* are severable, and if any provision of this *SPDES general permit*, or the application of any provision of this *SPDES general permit* to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

O. Requiring an Individual Permit or an Alternative General Permit

1. In its sole discretion, the *Department* may require any person authorized by this *SPDES general permit* to apply for and/or obtain either an *individual SPDES permit* or an alternative *SPDES general permit*. Where the *Department* requires a *covered entity* to apply for an *individual SPDES permit*, the *Department* will notify such

person in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for filing the application, and a deadline not sooner than 180 days from covered entity's receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Regional Office. The *Department* may grant additional time to submit the application upon request of the applicant.

2. Any *covered entity* authorized by this *SPDES general permit* may request to be excluded from the coverage of this *SPDES general permit* by applying for an *individual SPDES permit or an alternative SPDES general permit*. In such cases, a *covered entity* must submit an individual application or an application for an alternative *SPDES general permit* in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to the *Department* at the address for the appropriate Regional Office. The request may be granted by issuance of any *individual SPDES permit* or an alternative *SPDES general permit* if the reasons cited by the *covered entity* are adequate to support the request.

3. When an individual SPDES permit is issued to a discharger authorized to discharge under a *SPDES general permit* for the same discharge(s), the general permit authorization for outfalls authorized under the individual permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

P. Other State Environmental Laws

1. Nothing in this *SPDES general permit* shall be construed to preclude the institution of any legal action or relieve a *covered entity* from any responsibilities, liabilities, or penalties established pursuant to any applicable *State* law or regulation under authority preserved by section 510 of the CWA.

2. No condition of this *SPDES general permit* releases the *covered entity* from any responsibility or requirements under other environmental statutes or regulations.

Q. Proper Operation and Maintenance

A *covered entity* must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *covered entity* to achieve compliance with the conditions of this *SPDES general permit*. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems,

installed by a *covered entity* only when necessary to achieve compliance with the conditions of the *SPDES general permit*.

R. Inspection and Entry

The *covered entity* shall allow the Commissioner of NYSDEC, the Regional Administrator of the USEPA, the applicable county health department, or their authorized representatives, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the *covered entity's* premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this *SPDES general permit*;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit.

S. Permit Actions

At the *Department*'s sole discretion, this *SPDES general permit* may be modified, revoked, suspended, or renewed for cause at any time.

T. Anticipated noncompliance

The covered entity shall give advance notice to the *Department* of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of planned changes or anticipated noncompliance does not limit, diminish and / or stay compliance with any terms of this permit.

U. Permit Transfers.

Coverage under this *SPDES general permit* is not transferable to any person except after notice to the *Department.* The *Department* may require modification or revocation and reissuance of this SPDES general permit to change the responsible party and incorporate such other requirements as may be necessary.

Part VII. MINIMUM CONTROL MEASURES - TRADITIONAL LAND USE CONTROL

A. Traditional Land-Use Control MS4 Minimum Control Measures (MCMs)

These MCMs apply to *traditional land use control MS4s* (cities, towns, villages). The SWMP for these *small MS4s* must be comprised of the 6 MCMs below. It is recommended that covered entities refer to assistance and guidance documents available from the *State* and EPA.

Continuing covered entities were required to develop a SWMP with the MCM requirements below by January 8, 2008 (if authorized by GP-02-02) and within three years of gaining coverage (if authorized by GP-0-10-002). Under this *SPDES general permit*, the continuing *covered entities* are required to implement their SWMP, including the MCM requirements below. Notwithstanding any sooner deadlines contained elsewhere within this permit, newly regulated *covered entities* are required to develop their SWMP, containing the MCM requirements below, within the first 3 years of coverage and then commence implementation.

For each of the elements of the SWMP plan, the *covered entity* must identify (i) the agencies and/or offices that would be responsible for implementing the SWMP plan element and (ii) any protocols for coordination among such agencies and/or offices necessary for the implementation of the plan element.

The *covered entity* may *develop (for newly authorized MS4s)* and /or *implement* their *SWMP* within their jurisdiction on their own. The *covered entity* may also *develop (for newly authorized MS4s)* and / or *implement* part or all of their *SWMP* through an intermunicipal program with another *covered entity*(s) or through other cooperative or contractual agreements with third parties that provide services to the *covered entities*.

1. **Public Education and Outreach - SWMP Development / Implementation**
   At a minimum, all *covered entities* must:

   a. Identify *POCs*, waterbodies of concern, geographic areas of concern, target audiences;

   b. *Develop (for newly authorized MS4s)* and *implement* an ongoing public education and outreach program designed to describe to the general public and target audiences:
      i. the impacts of *stormwater discharges* on waterbodies;
      ii. *POC*s and their sources;
      iii. steps that contributors of these pollutants can take to reduce pollutants in *stormwater* runoff; and

(Part VII.A.1.b.)

iv. steps that contributors of non-*stormwater discharges* can take to reduce pollutants (non-*stormwater discharges* are listed in Part I.A.2);

c. *Develop (for newly authorized MS4s)*, record, periodically assess, and modify as needed, *measurable goals*; and

d. Select and implement appropriate education and outreach *activities* and *measurable goals* to ensure the reduction of all *POC*s in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

e. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. list education / outreach *activities* performed for the general public and target audiences and provide any results (for example, number of people attended, amount of materials distributed, etc.);
ii. *covered entities* performing the education and outreach activities required by other MCMs (listed below), may report on those activities in MCM 1 and provide the following information applicable to their program:
- IDDE education *activities* planned or completed for public employees, businesses, and the general public, as required by Part VII.A.3;
- construction site *stormwater* control training planned or completed, as required by Part VII.A.4; and
- employee pollution prevention / good housekeeping training planned or completed, as required by Part VII.A.6; and

To facilitate shared annual reporting, if the education and outreach activities above are implemented by a third party, and the third party is completing the associated portions of the annual report, that third party may report on the education and outreach activities within MCM 1 of the annual report and not within the MCMs that the education and outreach activities are required by,
iii. report on effectiveness of program, *BMP* and *measurable goal* assessment; and
iv. maintain records of all training activities.

f. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. **program *development* deadlines and reporting**:

(Part VII.A.1.f.i.)

Complete in Year 1 (report changes in Year 2 and 3 as needed):
- list (and describe if necessary) *POCs*;
- *development* of education and outreach program and *activities* for the general public and target or priority audiences that address *POC*s, geographic areas of concern, and / or *discharges* to *303(d)* / *TMDL* waterbodies;
- *covered entities* developing education and outreach programs required by other MCMs (listed below), may report on development (and implementation of those activities, if occurring during the three year development period) in MCM 1 and provide the following information applicable to their program:
  - IDDE education *activities* planned or completed for public employees, businesses, and the general public for IDDE, as required by Part VII.A.3;
  - Construction site stormwater control training planned or completed, as required by Part VII.A.4; and
  - employee pollution prevention / good housekeeping training planned or completed, as required by Part VII.A.6;

  To facilitate shared annual reporting, if the education and outreach activities above are developed by a third party, and the third party is completing the associated portions of the annual report, that third party may report on the education and outreach activities within MCM 1 of the annual report and not within the MCMs that the education and outreach activities are required by.

ii. **program *implementation* reporting** as set forth in Part VII.A.1(e) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during *development* period.

2. **Public Involvement / Participation - SWMP Development / Implementation**
   At a minimum, all *covered entities* must:

   a. Comply with the *State Open Meetings Law* and local public notice requirements, such as *Open Meetings Law*, when implementing a public involvement / participation program;

   b. *Develop (for newly authorized MS4s)* and *implement* a public involvement/participation program that:

      i. identifies key individuals and groups, public and private, who are interested in or affected by the *SWMP* ;

(Part VII.A.2.b.)

ii. identifies types of input the *covered entity* will seek from the key individuals and groups, public and private, to support *development* and *implementation* of the SWMP program and how the input will be used; and

iii. describes the public involvement / participation activities the *covered entity* will undertake to provide program access to those who want it and to gather the needed input. The activities included, but are not limited to a water quality hotline (report spills, dumping, construction sites of concern, etc.), stewardship activities like stream cleanups, storm drain marking, and volunteer water quality monitoring;

iv. provide the opportunity for the public to participate in the *development*, *implementation,* review, and revision of the *SWMP.*

c. **Local stormwater public contact.**
Identify a local point of contact for public concerns regarding *stormwater* management and compliance with this *SPDES general permit*. The name or title of this contact and the telephone number must be published in public outreach and public participation materials and kept updated with the *Department* on the MCC form;

d. **Annual report presentation.**
Below are the requirements for the annual report presentation:

i. prior to submitting the final annual report to the *Department*, by June 1 of each reporting year (see Part V.C.), present the draft annual report in a format that is open to the public, where the public can ask questions about and make comments on the report. This can be done:

- at a meeting that is open to the public, where the public attendees are able to ask questions about and make comments on the report. This may be a regular meeting of an existing board, such as planning, zoning or the town board. It may also be a separate meeting, specifically for *stormwater*. If multiple *covered entities* are working together, they may have a group meeting (refer to Part V.C.2); or

- on the internet by:
  - making the annual report available to the public on a website;
  - providing the public the opportunity to provide comments on the internet or otherwise; and

(Part VII.A.2.d.i.)

- making available the opportunity for the public to request an open meeting to ask questions about and make comments on the report. If a public meeting is requested by 2 or more persons, the covered entity must hold such a meeting. However, the covered entity need only hold a public meeting once to satisfy this requirement.

ii. provide public notice about the presentation, making public the following information when noticing the presentation in accordance with the local public notice requirements:

- the placement of the annual report on the agenda of this meeting or location on the internet;
- the opportunity for public comment. This *SPDES general permit* does not require a specified time frame for public comments, although it is recommended that *covered entities* do provide the public an opportunity to comment for a period after the meeting. Comments received after the final annual report is submitted shall be reported with the following year's annual report. *Covered entities* must take into account those comments in the following year;
- the date and time of the meeting or the date the annual report becomes available on the internet; and
- the availability of the draft report for prior review prior to the public meeting or duration of availability of annual report on the internet;

iii. the *Department* recommends that announcements be sent directly to individuals (public and private) known to have a specific interest in the *covered entity's SWMP*;

iv. include a summary of comments and (intended) responses with the final annual report. Changes made to the *SWMP* in response to comments should be described in the annual report; and

v. ensure that a copy of the final report and, beginning in 2009, the SWMP plan are available for public inspection;

e. *Develop (for newly authorized MS4s)*, record, periodically assess and modify as needed *measurable goals*; and

(Part VII.A.2.)

f. Select and implement appropriate public involvement / participation *activities* and *measurable goals* to ensure the reduction of *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

g. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

   i. annual report presentation information (date, time, attendees) or information about how the annual report was made available for comment;
   ii. comments received and intended responses (as an attachment);
   iii. public involvement / participation *activities* (for example stream cleanups including the number of people participating, the number of calls to a water quality hotline, the number and extent of storm drain stenciling); and
   iv. report on effectiveness of program, *BMP* and *measurable goal* assessment.

h. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

   i. **program *development* deadlines and reporting**:
   Complete for Year 1, 2 and 3:
   - annual report presentation information (date, time, attendees);
   - comments received and intended responses (as an attachment);

   Complete by end of Year 2 (report changes by end of Year 3 as needed):
   - key stake holders identified;
   - *development* of public involvement / participation plan based on the *covered entity's* needs, *POCs*, target audiences, geographic areas of concern, *discharges* to *303(d)* / *TMDL* waterbodies; and
   - *development* of public involvement / participation *activities* (for example stream cleanups including the number of people participating, the number of calls to a dumping / water quality hotline, the number or percent of storm drains stenciled);

   ii. **program *implementation* reporting**, as set forth in Part VII.A.2(g) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during development period.

(Part VII.A.)

3. **Illicit Discharge Detection and Elimination (IDDE) - SWMP Development / Implementation**

   At a minimum, all *covered entities* must:

   a. *Develop (for newly authorized MS4s), implement* and enforce a program to detect and eliminate *illicit discharges* (as defined at 40CFR 122.26(b)(2)) into the *small MS4*;

   b. *Develop (for newly authorized MS4s)* and maintain a map, at a minimum within the *covered entity's* jurisdiction in the *urbanized area* and *additionally designated* area, showing:

      i. the location of all *outfalls* and the names and location of all *surface waters of the State* that receive *discharges* from those *outfalls*;
      ii. by March 9, 2010, the preliminary boundaries of the *covered entity's storm sewersheds* have been determined using GIS or other tools, even if they extend outside of the *urbanized area* (to facilitate track down), and *additionally designated* area within the *covered entity's* jurisdiction; and
      iii. when grant funds are made available or for sewer lines surveyed during an illicit discharge track down, the *covered entity's* storm sewer system in accordance with available *State* and EPA guidance;

   c. Field verify *outfall* locations;

   d. Conduct an outfall reconnaissance inventory, as described in the EPA publication entitled Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, addressing every *outfall* within the *urbanized area* and *additionally designated area* within the *covered entity's* jurisdiction at least once every five years, with reasonable progress each year;

   e. Map new *outfalls* as they are constructed or newly discovered within the *urbanized area* and *additionally designated area*;

   f. Prohibit, through a law, ordinance, or other regulatory mechanism, *illicit discharges* into the *small MS4* and *implement* appropriate enforcement procedures and actions. This mechanism must be equivalent to the *State's* model IDDE local law "NYSDEC Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems". The mechanism must be certified by the attorney representing the *small MS4* as being equivalent to the *State*'s model illicit discharge local law. Laws adopted during the GP-02-02 permit cycle must also be attorney-certified as effectively assuring implementation of the *State*'s model IDDE law;

(Part VII.A.3.)

g. *Develop (for newly authorized MS4s)* and *implement* a program to detect and address non-stormwater *discharges,* including illegal dumping, to the *small MS4* in accordance with current assistance and guidance documents from the State and EPA. The program must include: procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for the IDDE program; description of priority areas of concern, available equipment, staff, funding, etc.; procedures for identifying and locating *illicit discharges* (trackdown); procedures for eliminating *illicit discharges*; and procedures for documenting actions;

h. Inform public employees, businesses, and the general public of the hazards associated with illegal *discharges* and improper disposal of waste, and maintain records of notifications;

i. Address the categories of non-stormwater *discharges* or flows listed in Part I.A.2 as necessary;

j. *Develop (for newly authorized MS4s)*, record, periodically assess, and modify as needed, *measurable goals*; and

k. Select and implement appropriate IDDE *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

l. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. number and percent of *outfalls* mapped;
ii. number of *illicit discharges* detected and eliminated;
iii. percent of outfalls for which an outfall reconnaissance inventory has been performed. ;
iv. status of system mapping;
v. activities in and results from informing public employees, businesses, and the general public of hazards associated with illegal *discharges* and improper disposal of waste;
vi. regulatory mechanism status - certification that law is equivalent to the *State's* model IDDE law (if not already completed and submitted with an earlier annual report); and
vii. report on effectiveness of program, *BMP* and *measurable goal* assessment.

(Part VII.A.3.)

m. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. **program *development* deadlines and reporting**:
Complete in Year 1 (revise in Year 2 and 3 if changes are made):
- describe procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for IDDE program;
- describe priority areas of concern, available equipment, staff, funding, etc.;

Initiate by end of Year 1; complete by end of Year 2 (revise in Year 3 if changes are made):

- describe procedures for identifying and locating *illicit discharges* (trackdown);
- describe procedures for eliminating *illicit discharges*;
- describe procedures for enforcing against illicit dischargers;
- describe procedures for documenting actions;
- describe the program being developed for informing public employees, businesses, and the general public of hazards associated with illegal *discharges* and improper disposal of waste;

Initiate by end of Year 1; complete by end of Year 3:
- regulatory mechanism status development and adoption - by end of Year 3 certify that regulatory mechanism is equivalent to the *State's* model IDDE law (if not already completed and submitted with an earlier report);

Initiate by end of Year 2; complete by end of Year 3:
- number and percent of *outfalls* mapped; and

Complete by Year 3:
- *outfall* map.

ii. **program *implementation* reporting** as set forth in Part VIII.A.3(l) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during development period.

4. Construction Site Stormwater Runoff Control - SWMP Development / Implementation
At a minimum, all *covered entities* must:
a. *Develop (for newly authorized MS4s)*, *implement*, and enforce a program that:

(Part VII.A.4.a.)

i. provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities (either GP-02-01, GP-0-08-001 or GP-0-15-002), unless more stringent requirements are contained within this *SPDES general permit*;

ii. addresses *stormwater* runoff to the *small MS4* from *construction activities* that result in a land disturbance of greater than or equal to one acre. Control of *stormwater discharges* from *construction activity* disturbing less than one acre must be included in the program if:
   - that *construction activity* is part of a *larger common plan of development or sale* that would disturb one acre or more; or
   - if controlling such activities in a particular watershed is required by the *Department*;

iii. includes a law, ordinance or other regulatory mechanism to require a *SWPPP* for each applicable land disturbing activity that includes erosion and sediment controls that meet the *State's* most current technical standards:
   - this mechanism must be equivalent to one of the versions of the "NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control"; and
   - equivalence must be documented
     -by adoption of one of the sample local laws without changes;
     - by using the NYSDEC Gap Analysis Workbook; or
     - by adoption of a modified version of the sample law, or an alternative law, and, in either scenario, certification by the attorney representing the small MS4 that the adopted law is equivalent to one of the sample local laws.

iv. contains requirements for construction site operators to implement erosion and sediment control management practices;

v. allows for sanctions to ensure compliance to the extent allowable by State law;

vi. contains requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality, pursuant to the requirement of construction permit;

vii. describes procedures for *SWPPP* review with consideration of potential water quality impacts and review of individual *SWPPP*s to ensure consistency with *State* and local sediment and erosion control requirements;

(Part VII.A.4.a.vii.)

- ensure that the individuals performing the reviews are adequately trained and understand the *State* and local sediment and erosion control requirements;
- all *SWPPP*s must be reviewed for sites where the disturbance is one acre or greater; and
- after review of *SWPPP*s, the *covered entity* must utilize the "MS4 SWPPP Acceptance Form" created by the *Department* and required by the SPDES General Permit for Stormwater Discharges from Construction Activity when notifying construction site owner / operators that their plans have been accepted by the *covered entity*;

viii. describes procedures for receipt and follow up on complaints or other information submitted by the public regarding construction site storm water runoff;

ix. describes procedures for site inspections and enforcement of erosion and sediment control measures including steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water;
- the *covered entity* must ensure that the individual(s) performing the inspections are adequately trained and understand the *State* and local sediment and erosion control requirements. Adequately trained means receiving inspector training by a *Department* sponsored or approved training;
- all sites must be inspected where the disturbance is one acre or greater;
- *covered entities* must determine that it is acceptable for the owner or operator of a construction project to submit the Notice of Termination (NOT) to the *Department* by performing a final site inspection themselves or by accepting the Qualified Inspector's final inspection certification(s) required by the SPDES General Permit for Stormwater Discharges from Construction Activity. The principal executive officer, ranking elected official, or duly authorized representative (see Part VI.J.) shall document their determination by signing the "MS4 Acceptance" statement on the NOT.

x. educates construction site owner / operators, design engineers, *municipal* staff and other individuals to whom these regulations apply about the *municipality's* construction *stormwater* requirements, when construction *stormwater* requirements apply, to whom they apply, the procedures for submission of *SWPPP*s, construction site inspections, and other procedures associated with control of construction stormwater;

(Part VII.A.4.a.)

xi. ensures that construction site operators have received erosion and sediment control training before they do work within the *covered entity's* jurisdiction and maintain records of that training. Small home site construction (construction where the Erosion and Sediment Control Plan is developed in accordance with Appendix E of the "New York Standards and Specifications for Erosion and Sediment Control") is exempt from the requirements below:
   - training may be provided by the *Department* or other qualified entities (such as Soil and Water Conservation Districts);
   - the *covered entity* is not expected to perform such training, but they may co-sponsor training for construction site operators in their area;
   - the *covered entity* may ask for a certificate of completion or other such proof of training; and
   - the *covered entity* may provide notice of upcoming sediment and erosion control training by posting in the building department or distribute with building permit application;

xii. establishes and maintains an inventory of active construction sites, including the location of the site, owner / operator contact information;

xiii. *develop (for newly authorized MS4s)*, record, periodically assess and modify as needed *measurable goals*; and

xiv. select and appropriate construction *stormwater BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

b. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. number of *SWPPPs* reviewed;
ii. number and type of enforcement actions;
iii. percent of active construction sites inspected once;
iv. percent of active construction sites inspected more than once;
v. number of construction sites authorized for disturbances of one acre or more; and
vi. report on effectiveness of program, *BMP* and *measurable goal* assessment.

c. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

(Part VII.A.4.c.)

i. **program *development* deadlines and reporting**:

Initiate by end of Year 1:

- procedures, activities and identify personnel to educate and train construction site operators about requirements to develop and implement a SWPPP and any other requirements that must be met within the MS4's jurisdiction;

Complete in Year 1 (revise in Year 2 and 3 if changes are made):

- describe procedures for the receipt and consideration of information submitted by the public. Identify the responsible personnel;

Initiate by end of Year 1; complete by end of Year 3:

- regulatory mechanism development and adoption status - by end of Year 3 certify that regulatory mechanism is equivalent to one of the NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control (if not already completed and submitted with an earlier report);

Initiate by end of Year 2; complete by end of Year 3:

- describe procedures for SWPPP review that incorporate consideration of potential water quality impacts and ensure consistency with local sediment and erosion control requirements;
- describe procedures for construction site inspections; and
- describe procedures for enforcement of control measures and sanctions to ensure compliance.

ii. **program *implementation* reporting** as set forth in Part VII.A.4(b) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during development period.

5. Post-Construction Stormwater Management - **SWMP Development/Implementation**

At a minimum, all *covered entities* must:

a. *Develop (for newly authorized MS4s)*, *implement*, and enforce a program that:

i. provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities (either GP-02-01, GP-0-08-001, or GP-0-15-002), unless more stringent requirements are contained within this *SPDES general permit*;

ii. addresses *stormwater* runoff from new development and redevelopment projects to the *small MS4* from projects that result in a land disturbance of greater than or

equal to one acre. Control of *stormwater discharges* from projects of less than one acre must be included in the program if:

- that project is part of a *larger common plan of development or sale*; or
- if controlling such activities in a particular watershed is required by the *Department*;

iii. includes a law, ordinance or other regulatory mechanism to require post construction runoff controls from new development and re-development projects to the extent allowable under *State* law that meet the *State*'s most current technical standards:

- the mechanism must be equivalent to one of the versions of the" NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control"; and
- equivalence must be documented
  -by adoption of one of the sample local laws without changes;
  - by using the NYSDEC Gap Analysis Workbook; or
  - by adoption of a modified version of the sample law, or an alternative law, and, in either scenario and certification by the attorney representing the small MS4 that the adopted law is equivalent to one of the sample local laws;

iv. includes a combination of structural or non-structural management practices (according to standards defined in the most current version of the NYS Stormwater management Design Manual) that will reduce the *discharge* of pollutants to the MEP. In the development of the watershed plans, municipal comprehensive plans, open space preservation programs, local law, ordinances and land use regulations, covered entities must consider principles of *Low Impact Development* (LID), *Better Site Design* (BSD), and other *Green Infrastructure* practices to the MEP. In the development of the watershed plans, municipal comprehensive plans, open space preservation programs, local law, ordinances and land use regulations, covered entities must consider smart growth principles, natural resource protection, impervious area reduction, maintaining natural hydrologic conditions in developments, riparian buffers or set back distances for protection of environmentally sensitive areas such as streams, wetlands, and erodible soils.

- *covered entities* are required to review according to the *Green Infrastructure* practices defined in the Design Manual at a site level, and are encouraged to review, and revise where appropriate, local codes and laws that include provisions that preclude green infrastructure or construction techniques that minimize or reduce pollutant loadings.

(Part VII.A.5.a.iv.)

- if a *stormwater* management practice is designed and installed in accordance with the New York State Stormwater Management Design Manual or has been demonstrated to be equivalent and is properly operated and maintained, then *MEP* will be assumed to be met for post-construction *stormwater* discharged by the practice;

v. describes procedures for *SWPPP* review with consideration of potential water quality impacts and review of individual *SWPPP*s to ensure consistency with state and local post-construction *stormwater* requirements;
   - ensure that the individuals performing the reviews are adequately trained and understand the *State* and local post construction *stormwater* requirements;
   - ensure that the individuals performing the reviews for SWPPPs that include post-construction stormwater management practices are *qualified professionals* or under the supervision of a *qualified professional*;
   - all *SWPPP*s must be reviewed for sites where the disturbance is one acre or greater;
   - after review of *SWPPPs*, the *covered entity* must utilize the "MS4 SWPPP Acceptance Form" created by the *Department* and required by the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) when notifying construction site owner / operators that their plans have been accepted by the *covered entity*;

   - utilize available training from sources such as Soil and Water Conservation Districts, Planning Councils, The New York State Department of State, USEPA, and/or the *Department* to educate municipal boards and Planning and Zoning Boards on low impact development principles, better site design approach, and green infrastructure applications.

vi. maintain an inventory of post-construction stormwater management practices within the *covered entities* jurisdiction. At a minimum, include practices discharging to the *small MS4* that have been installed since March 10, 2003, all practices owned by the *small MS4*, and those practices found to cause or contribute to water quality standard violations.
   - the inventory shall include at a minimum: location of practice (street address or coordinates); type of practice; maintenance needed per the NYS Stormwater Management Design Manual, *SWPPP*, or other provided documentation; and dates and type of maintenance performed; and

(Part VII.A.5.a.)

vii. ensures adequate long-term operation and maintenance of management practices identified in Part VII.5.a.vi by trained staff, including inspection to ensure that practices are performing properly.
- The inspection shall include inspection items identified in the maintenance requirements (NYS Stormwater Management Design Manual, *SWPPP*, or other maintenance information) for the practice. *Covered entities* are not required to collect *stormwater* samples and perform specific chemical analysis;

viii. Covered entities may include in the SWMP Plan provisions for development of a banking and credit system. MS4s must have an existing watershed plan based on which offsite alternative stormwater management in lieu of or in addition to on-site stormwater management practices are evaluated. Redevelopment projects must be evaluated for pollutant reduction greater than required treatment by the state standards. The individual project must be reviewed and approved by the *Department*. Use of a banking and credit system for new development is only acceptable in the impaired watersheds to achieve the no net increase requirement and watershed improvement strategy areas to achieve pollutant reductions in accordance with watershed plan load reduction goals. A banking and credit system must at minimum include:
- Ensure that offset exceeds a standard reduction by factor of at least 2
- Offset is implemented within the same watershed
- Proposed offset addresses the POC of the watershed
- Tracking system is established for the watershed
- Mitigation is applied for retrofit or redevelopment
- Offset project is completed prior to beginning of the proposed construction
- A legal mechanism is established to implement the banking and credit system

b. *Develop (for newly authorized MS4s)*, *implement*, and provide adequate resources for a program to inspect development and re-development sites by trained staff and to enforce and penalize violators;

c. *Develop (for newly authorized MS4s)*, record, annually assess and modify as needed *measurable goals*; and

d. Select and implement appropriate post-construction *stormwater BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

(Part VII.A.5.)

Required SWMP Reporting

e. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

   i. number of *SWPPPs* reviewed;
   ii. number and type of enforcement actions;
   iii. number and type of post-construction stormwater management practices inventoried;
   iv. number and type of post-construction stormwater management practices inspected;
   v. number and type of post-construction stormwater management practices maintained;
   vi. regulatory mechanism status - certification that regulatory mechanism is equivalent to one of the "NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control" (if not already done); and
   vii. report on effectiveness of program, BMP and measurable goal assessment, and implementation of a banking and credit system, if applicable;

f. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

   i. **program *development* deadlines and reporting**:
   Initiate by end of Year 1; complete by end of Year 3:
   - regulatory mechanism development and adoption status - by end of Year 3 certify that regulatory mechanism is equivalent to one of the NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control (if not already completed and submitted with an earlier report);

   Initiate by end of Year 2; complete by end of Year 3:
   - procedures for SWPPP review to ensure that post-construction stormwater management practices meet the most current version of the state technical standards;
   - procedures for inspection and maintenance of post-construction management practices;
   - procedures for enforcement and penalization of violators; and

   Complete by the end of year 3:

(Part VII.A.5.f.i.)

- provide resources for the program to inspect new and re-development sites and for the enforcement and penalization of violators.

ii. **program *implementation* reporting** as set forth in Part VII.A.5(e) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during *development* period.

6. Pollution Prevention/Good Housekeeping For Municipal Operations - SWMP Development / Implementation

At a minimum, all *covered entities* must:

a. *Develop (for newly authorized MS4s)* and *implement* a pollution prevention / good housekeeping program for *municipal* operations and facilities that:

i. addresses *municipal* operations and facilities that contribute or potentially contribute *POCs* to the *small MS4* system. The operations and facilities may include, but are not limited to: street and bridge maintenance; winter road maintenance; stormwater system maintenance; vehicle and fleet maintenance; park and open space maintenance; municipal building maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; hydrologic habitat modification; or other;

ii. at a minimum frequency of once every three years, perform and document a self assessment of all municipal operations addressed by the SWMP to:
- determine the sources of pollutants potentially generated by the *covered entity*'s operations and facilities; and
- identify the *municipal* operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already;

iii. determines *management practices*, policies, procedures, etc. that will be *developed* and *implemented* to reduce or prevent the discharge of (potential) pollutants. Refer to management practices identified in the "NYS Pollution Prevention and Good Housekeeping Assistance Document" and other guidance materials available from the EPA, *State,* or other organizations;

iv. prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and *covered entity*'s capabilities;

(Part VII.A.6.a.)

v. addresses pollution prevention and good housekeeping priorities;

vi. includes an employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;

vii. requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet permit requirements as the requirements apply to the activity performed ; and

viii. requires *municipal* operations and facilities that would otherwise be subject to the NYS Multi-sector General Permit (MSGP, GP-0-12-001) for industrial stormwater discharges to prepare and *implement* provisions in the SWMP that comply with Parts III. A, C, D, J, K and L of the MSGP. The covered entity must also perform monitoring and record keeping in accordance with Part IV. of the MSGP. Discharge monitoring reports must be attached to the MS4 annual report. Those operations or facilities are not required to gain coverage under the MSGP. *Implementation* of the above noted provisions of the SWMP will ensure that MEP is met for discharges from those facilities;

b. Consider and incorporate cost effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing stormwater conveyance systems and municipal properties to the MEP. Some examples include replacement of closed drainage with grass swales, replacement of existing islands in parking lots with rain gardens, or curb cuts to route the flow through below grade infiltration areas or other low cost improvements that provide runoff treatment or reduction.

c. *Develop (for newly authorized MS4s)*, record, periodically assess and modify as needed measurable goals; and

d. Select and implement appropriate pollution prevention and good housekeeping *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

e. Adopt techniques to reduce the use of fertilizers, pesticides, and herbicides, as well as potential impact to surface water.

Required SWMP Reporting

f. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). *Covered entities* are required to report on

(Part VII.A.6.f.)

all *municipal* operations and facilities within their jurisdiction (*urbanized area* and *additionally designated area*) that their program is addressing. The *covered entity* shall report at a minimum on the items below:

i. indicate the *municipal* operations and facilities that the pollution prevention and good housekeeping program assessed;
ii. describe, if not done so already, the management practices, policies and procedures that have been developed, modified, and / or implemented and report, at a minimum, on the items below that the *covered entity's* pollution prevention and good housekeeping program addressed during the reporting year:

   – acres of parking lot swept;
   – miles of street swept;
   – number of catch basins inspected and, where necessary, cleaned;
   – post-construction control stormwater management practices inspected and, where necessary, cleaned;
   – pounds of phosphorus applied in chemical fertilizer
   – pounds of nitrogen applied in chemical fertilizer; and
   – acres of pesticides / herbicides applied.

iii. staff training events and number of staff trained; and
iv. report on effectiveness of program, *BMP* and *measurable goal* assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Part VII.A.6.a(ii), the *covered entity* shall report on items that will demonstrate program effectiveness.

g. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). *Covered entities* are required to report on all *municipal* operations and facilities within their jurisdiction (*urbanized area* and *additionally designated area*) that their program is addressing. The *covered entity* shall report at a minimum on the items below:

i. **program *development* deadlines and reporting** (first three years after authorization is granted):
   Complete by end of Year 1:
   - identify the municipal operations and facilities that will be considered for inclusion in the pollution prevention and good housekeeping program;
   - describe the pollution prevention and good housekeeping program priorities (geographic area, potential to improve water quality; facilities or operations most in need of modification or improvement);

(Part VII.A.6.g.i.)

- describe management practices, policies, procedures, etc. that will be developed or modified;
- identify the staff and equipment available;

Initiate by end of Year 2; complete by end of Year 3:

- describe employee pollution prevention and good housekeeping program training program and begin training, report on number of staff trained; and

Complete by end of Year 3:

- description of developed management practices.

ii. **program *implementation* reporting** as set forth in Part VII.A.6.(d) above. Commence reporting after three year *development* permit. *Implementation* reporting may begin earlier if *implementation* begins during development period.

PART VIII. MINIMUM CONTROL MEASURES - TRADITIONAL NON-LAND USE CONTROL AND NON-TRADITIONAL MS4s

A. Traditional Non-Land Use Control and Non-traditional MS4 Minimum Control Measures (MCMs)

These MCMs apply to *traditional non-land use control MS4s* and *non-traditional MS4s*. The SWMP for these *small MS4s* must be comprised of the 6 MCMs below. It is recommended that covered entities refer to assistance and guidance documents available from the *State* and EPA.

Under this *SPDES general permit*, the continuing *covered entities* are required to implement their SWMP, including the MCM requirements below. Newly regulated covered entities are required to develop their SWMP, containing the MCM requirements below, within the first 3 years of coverage and then commence implementation.

The *covered entity* may *develop (for newly authorized MS4s)* and / or *implement* their *SWMP* within their jurisdiction on their own. The *covered entity* may also *develop (for newly authorized MS4s)* and / or *implement* part or all of their *SWMP* through an intermunicipal program with another *covered entity*(s) or through other cooperative or contractual agreements with third parties that provide services to the *covered entity(s)*.

For each of the elements of the SWMP plan, the *covered entity* must identify (i) the agencies and/or offices that would be responsible for implementing the SWMP plan element and (ii) any protocols for coordination among such agencies and/or offices necessary for the implementation of the plan element.

To comply with the requirements of this *SPDES general permit*, the *traditional non-land use control MS4s* and *non-traditional MS4s* should consider their public to be the employee / user population, visitors, or contractors / developers. Examples of the public include, but are not limited to:

- transportation *covered entities* - general public using or living along transportation systems, staff, contractors;
- educational *covered entities* - faculty, other staff, students, visitors;
- other government *covered entities* - staff, contractors, visitors.

1. Public Education and Outreach on Stormwater Impacts SWMP Development / Implementation

At a minimum, all *covered entities* must:

a. Identify *POC*s, waterbodies of concern, geographic areas of concern, target audiences;

(Part VIII.A.1.)

b. *Develop (for newly authorized MS4s)* and *implement* an ongoing public education and outreach program designed to describe:
   i. the impacts of *stormwater discharges* on waterbodies;
   ii. *POCs* and their sources;
   iii. steps that contributors of these pollutants can take to reduce pollutants in *stormwater* runoff; and
   iv. steps that contributors of non-*stormwater discharges* can take to reduce pollutants (non-*stormwater discharges* are listed in Part I.A.2);

c. Educational materials may be made available at, locations including, but not limited to:
   i. at service areas, lobbies, or other locations where information is made available;
   ii. at staff training;
   iii. on *covered entity's* website;
   iv. with pay checks; and
   v. in employee break rooms;

d. *Develop (for newly authorized MS4s)*, record, periodically assess and modify as needed *measurable goals*; and

e. Select and implement appropriate education and outreach *activities* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

f. At a minimum, the *covered entity* shall report on the items below:

   i. list education / outreach *activities* performed and provide any results (number of people attended, amount of materials distributed, etc.);
   ii. education of the public about the hazards associated with illegal *discharges* and improper disposal of waste as required by Part VIII.A.3, may be reported in this section;
   iii. *covered entity's* performing the education and outreach activities required by other MCMs (listed below), may report on those activities in MCM 1 and provide the following information applicable to their program:
      - IDDE education *activities* planned or completed for the public, as required by Part VIII.A.3;
      - construction site *stormwater* control training planned or completed, as required by Part VIII.A.4; and
      - employee pollution prevention / good housekeeping training planned or completed, as required by Part VIII.A.6;

      To facilitate shared annual reporting, if the education and outreach activities

(Part VIII.A.1.f.iii.)

above are implemented by a third party, and the third party is completing the associated portions of the annual report, that third party may report on the education and outreach activities within MCM 1 of the annual report and not within the MCMs that the education and outreach activities are required by;

iv. report on effectiveness of program, *BMP* and *measurable goal* assessment; and

v. maintain records of all training activities

g. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. **program *development* deadlines and reporting**:
Complete in Year 1 (report changes in Year 2 and 3 as needed):

- list (and describe if necessary) POCs;
- *development* of education and outreach program and activities for the public that address *POCs*, geographic areas of concern, and / or *discharges* to *303(d)* / *TMDL* waterbodies;
- *covered entities* developing education and outreach programs required by other MCMs (listed below), may report on development (and implementation of
those activities, if occurring during the three year development period) in MCM 1 and provide the following information applicable to their program:
  - IDDE education *activities* planned or completed for the public, as required by Part VIII.A.3;
  - construction site *stormwater* control training planned or completed, as required by Part VIII.A.4; and
  - employee pollution prevention / good housekeeping training planned or completed, as required by Part VIII.A.6.

To facilitate shared annual reporting, if the education and outreach activities above are implemented by a third party, and the third party is completing the associated portions of the annual report, that third party may report on the education and outreach activities within MCM 1 of the annual report and not within the MCMs that the education and outreach activities are required by.

ii. **Program *implementation* reporting** as set forth in Part VIII.A.1(f) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during *development* period.

2. Public Involvement/Participation - **SWMP Development / Implementation**
At a minimum, all *covered entities* must:

(Part VIII.A.2.)

a. Comply with *State* and local public notice requirements identified below when implementing a public involvement / participation program:
   i. *traditional non-land use control MS4s* shall comply with the *State Open Meetings Law* and local public notice requirements, such as *Open Meetings Law*; and

   ii. *traditional non-land use control MS4s* and *non-traditional MS4s* may comply with this requirement by determining who their public is (staff, visitors, contractors, etc.) and posting notifications (as needed) in areas viewable by the public. Such areas include common areas, bulletin boards, agency/office web pages, etc. For *small MS4s* whose public are in multiple locations, notifications shall be made available to the public in all locations within the urbanized or additionally designated areas;

b. Provide the opportunity for the public to participate in the *development*, *implementation,* review, and revision of the *SWMP*;

c. **Local stormwater public contact.**
   Identify a local point of contact for public concerns regarding *stormwater* management and compliance with this *SPDES general permit*. The name or title of this contact and the telephone number must be published in public outreach and public participation materials and kept updated with the *Department* on the MCC form;

d. **Annual report presentation.**
   Below are the requirements for the annual report presentation:

   i. prior to submitting the final annual report to the *Department*, by June 1 of each reporting year (see Part V.C.), present the draft annual report in a format that is open to the public, where the public can ask questions and make comments on the report. This can be done:
      - at a meeting that is open to the public, where the public attendees are able to ask questions about and make comments on the report. This may be a regular meeting of an existing board. It may also be a separate meeting, specifically for *stormwater*. If multiple *covered entities* are working together, they may have a group meeting (refer to Part V.C.2); or
      - on the internet by:
        - making the annual report available to the public on a website:
        - providing the public the opportunity to provide comments on the internet or otherwise; and

(Part VIII.A.2.d.i.)

- making available the opportunity for the public to request an open public meeting to ask questions about and make comments on the report;

ii. *traditional non-land use control MS4s* must comply with Part VIII.A.2.(d)(i) above. If they choose to present the draft annual report at a meeting, it may be presented at an existing meeting (e.g. a meeting of the Environmental Management Council , Water Quality Coordinating Committee, other agencies, or a meeting specifically for stormwater), or made available for review on the internet. The *covered entity* must make public the following information when noticing the presentation in accordance with *Open Meetings Law* or other local public notice requirements:
   - the placement of the annual report on the agenda of this meeting or location on the internet;
   - the opportunity for public comment. This *SPDES general permit* does not require a specified time frame for public comments, although it is recommended that *covered entities* provide the public an opportunity to comment for a period after the meeting. Comments received after the final annual report is submitted shall be reported with the following year's annual report. *Covered entities* must take into account those comments in the following year;
   - the date and time of the meeting or date annual report becomes available on the internet; and
   - the availability of the draft report for review prior to the public meeting or duration of availability of the annual report on the internet;

iii. *non-traditional MS4s* typically do not have regular meetings during which a presentation on the annual report can be made. Those *covered entities* may comply with this requirement by either:
   - noticing the availability of the report for public comment by posting a sign, posting on web site, or other methods with information about the availability and location where the public can view it and contact information for those that read the report to submit comments; or
   - following the internet presentation as explained in Part VIII.A.2(d)(i) above;

iv. the *Department* recommends that announcements be sent directly to individuals (public and private interested parties) known to have a specific interest in the covered entity's *SWMP*;

(Part VIII.A.2.d.)

v. include a summary of comments and intended responses with the final annual report. Changes made to the *SWMP* in response to comments should be described in the annual report; and

vi. ensure that a copy of the final report and, beginning in 2009, the SWMP plan are available for public inspection;

e. *Develop (for newly authorized MS4s)*, record, periodically assess and modify as needed *measurable goals*; and

f. Select and implement appropriate public involvement / participation *activities* and *measurable goals* to ensure the reduction of all of the *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

g. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:
   i. annual report presentation information (date, time, attendees) or information about how the annual report was made available for comment;
   ii. comments received and intended responses (as an attachment); and
   iii. report on effectiveness of program, *BMP* and *measurable goal* assessment;

h. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:
   i. **program *development* deadlines and reporting**:
   Complete for Year 1, 2, and 3:
      - annual report presentation information (date, time, attendees) or information about how the annual report was made available for comment; and
      - comments received and intended responses (as an attachment).

   ii. **program *implementation* reporting** as set forth in Part VIII.A.2.g above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during development period.

3. Illicit Discharge Detection and Elimination (IDDE) - SWMP Development / Implementation

At a minimum, all *covered entities* must:

(Part VIII.A.3.)

a. *Develop (for newly authorized MS4s)*, *implement* and enforce a program to detect and eliminate *illicit discharges* (as defined at 40CFR 122.26(b)(2)) into the *small MS4;*

b. *Develop (for newly authorized MS4s)* and maintain a map, at a minimum within the *covered entity's* jurisdiction in the *urbanized area and additionally designated area*, showing:

   i. the location of all *outfalls* and the names and location of all *surface waters of the State* that receive *discharges* from those *outfalls*;
   ii. by March 9, 2010, the preliminary boundaries of the *covered entity's storm sewersheds* determined using GIS or other tools, even if they extend outside of the *urbanized area* (to facilitate trackdown), and *additionally designated* area within the *covered entity's* jurisdiction; and
   iii. when grant funds are made available or for sewer lines surveyed during an illicit discharge trackdown, the *covered entity's* storm sewer system in accordance with available *State* and EPA guidance;

c. Field verify *outfall* locations;

d. Conduct an outfall reconnaissance inventory, as described in the EPA publication entitled Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, addressing every *outfall* within the *urbanized area* and *additionally designated area* within the *covered entity's* jurisdiction at least once every five years, with reasonable progress each year;

e. Map new *outfalls* as they are constructed or discovered within the *urbanized area* or *additionally designated* area;

f. Prohibit *illicit discharges* into the *small MS4* and *implement* appropriate enforcement procedures and actions below, as applicable:

   i. for *traditional non-land use control MS4s*:
      - effectively prohibit, through a law, ordinance, or other regulatory mechanism, *illicit discharges* into the *small MS4* and *implement* appropriate enforcement procedures and actions; and
      - the law, ordinance, or other regulatory mechanism must be equivalent to the *State*'s model *IDDE* local law "NYSDEC Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems" developed by the *State*, as determined and certified to be equivalent by the attorney representing the *small MS4* ; and

(Part VIII.A.3.f.)

ii. for *non-traditional MS4s*:
- prohibit and enforce against *illicit discharges* through available mechanisms (i.e. tenant lease agreements, bid specifications, requests for proposals, standard contract provisions, connection permits, maintenance directives / BMPS, access permits, consultant agreements, internal policies);
- procedures or policies must be developed for implementation and enforcement of the mechanisms;
- a written directive from the person authorized to sign the NOI stating that updated mechanisms must be used and who (position(s)) is responsible for ensuring compliance with and enforcing the mechanisms for the *covered entity's IDDE* program; and
- the mechanisms and directive must be equivalent to the *State*'s model illicit discharge local law;

g. *Develop (for newly authorized MS4s)* and *implement* a program to detect and address non-stormwater *discharges*, including illegal dumping, to the *small MS4* . The program must include: procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for IDDE program; description of priority areas of concern, available equipment, staff,
funding, etc.; procedures for identifying and locating *illicit discharges* (trackdown); procedures for eliminating *illicit discharges*; and procedures for documenting actions;

h. Inform the public of the hazards associated with illegal *discharges* and the improper disposal of waste;

i. Address the categories of non-stormwater *discharges* or flows listed in Part I.A.2 as necessary and maintain records of notification;

j. *Develop (for newly authorized MS4s)*, record, periodically assess, and modify as needed, *measurable goals;* and

k. Select and implement appropriate IDDE *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*

Required SWMP Reporting

l. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. number and percent of *outfalls* mapped;

(Part VIII.A.3.l.)

ii. number of *illicit discharges* detected and eliminated;
iii. percent of outfalls for which an outfall reconnaissance inventory has been performed. ;
iv. status of system mapping;
v. activities to and results from informing the public of hazards associated with illegal *discharges* and improper disposal of waste;
vi. for traditional non-land use control MS4s, regulatory mechanism status - certification that law is equivalent to the *State*'s model *IDDE* local law (if not already completed and submitted with a prior annual report); and
vii. report on effectiveness of program, *BMP* and *measurable goal* assessment.

m. Required reporting for **newly authorized *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. **program *development* deadlines and reporting**:
Initiate by end of Year 1; complete by end of Year 3:
- regulatory mechanism development and adoption - by end of Year 3 certify that regulatory mechanism is equivalent to the *State's* model *IDDE* local law (traditional non-land use control MS4s) or certification of equivalence may be accomplished as set forth in Part VIII.A.3(f)(ii).

Complete in Year 1 (revise in Year 2 and 3 if changes are made):
- describe procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for IDDE program;
- describe priority areas of concern, available equipment, staff, funding, etc.;

Initiate by end of Year 1; complete by end of Year 2 (revise in Year 3 if changes are made):
- describe procedures for identifying and locating *illicit discharges* (trackdown);
- describe procedures for eliminating *illicit discharges*;
- describe procedures for enforcing against illicit dischargers;
- describe procedures for documenting actions;
- describe the program being developed for informing the public of hazards associated with illegal *discharges* and improper disposal of waste;

Initiate by end of Year 2; complete by end of Year 3:
- number and percent of *outfalls* mapped;

(Part VIII.A.3.m.i.)

Complete by Year 3:
- *outfall* map; and

ii. **program *implementatio*n reporting** as set forth in Part VIII.A.3(l) above. Commence *implementation* reporting after three year *development* period. *Implementation* reporting may begin earlier if *implementation* begins during development period.

4. Construction Site Stormwater Runoff Control - **SWMP Development / Implementation**
At a minimum, all *covered entities* must:

a. *Develop (for newly authorized MS4s)*, *implement*, and enforce a program that:

i. provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities, unless more stringent requirements are contained within this *SPDES general permit*;

ii. addresses *stormwater* runoff to the *small MS4* from *construction activities* that result in a land disturbance of greater than or equal to one acre. Control of *stormwater discharges* from *construction activity* disturbing less than one acre must be included in the program if:
- that *construction activity* is part of a *larger common plan of development or sale* that would disturb one acre or more; or
- if controlling such activities in a particular watershed is required by the *Department;*

iii. incorporates mechanisms for construction runoff requirements from new development and redevelopment projects to the extent allowable under *State* and local law that meet the *State*'s most current technical standards:
- through available mechanisms (i.e. tenant lease agreements, bid specifications, requests for proposals, standard contract provisions, connection permits, maintenance directives / BMPS, access permits, consultant agreements, internal policies);
- procedures or policies must be developed for implementation and enforcement of the mechanisms;
- a written directive from the person authorized to sign the NOI stating that updated mechanisms must be used and who (position(s)) is responsible for ensuring compliance with and enforcing the mechanisms for construction projects that occur on property owned, under easement to, within the

(Part VIII.A.4.a.iii.)

right-of-way of, or under the maintenance jurisdiction by the *covered entity* or within the maintenance jurisdiction of the MS4; and
- the mechanisms and directive must be equivalent to the requirements of the NYS SPDES General Permit for Stormwater Discharges from Construction Activities.

iv. allows for sanctions to ensure compliance to the extent allowable by *State* law;

v. describes procedures for receipt and follow up on complaints or other information submitted by the public regarding construction site stormwater runoff;

vi. educates construction site operators, design engineers, *municipal* staff and other individuals to whom these regulations apply about the construction requirements in the *covered entity's* jurisdiction, including the procedures for submission of *SWPPPs*, construction site inspections, and other procedures associated with control of construction stormwater;

vii. Ensures that construction site contractors have received erosion and sediment control training, including the *trained contractors* as defined in the SPDES general permit for construction, before they do work within the *covered entity's* jurisdiction:
- training may be provided by the *Department* or other qualified entities (such as Soil and Water Conservation Districts);
- the *covered entity* is not expected to perform such training, but they may co-sponsor training for construction site operators in their area;
- the *covered entity* may ask for a certificate of completion or other such proof of training; and
- the *covered entity* may provide notice of upcoming sediment and erosion control training by posting in the building department or distribute with building permit application.

viii. establishes and maintains an inventory of active construction sites, including the location of the site, owner / operator contact information;

ix. develop *(for newly authorized MS4s)*, record, periodically assess and modify as needed *measurable goals*; and

(Part VIII.A.4.a.)

x. select and implement appropriate construction stormwater *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

b. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:
   i. number and type of sanctions employed;
   ii. status of regulatory mechanism - certify that mechanisms will assure compliance with the NYS SPDES General Permit for Stormwater Discharges from Construction Activities;
   iii. number of construction sites authorized for disturbances of one acre or more; and
   iv. report on effectiveness of program, *BMP* and *measurable goal* assessment.

c. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:
   i. **Program *development* deadlines and reporting**:
   Initiate by end of Year 1:
   - procedures, activities and identify personnel to educate and train construction site operators about requirements to develop and implement a SWPPP and any other requirements that must be met within the MS4's jurisdiction;

   Initiate by the end of Year 1; complete by the end of Year 3:
   - status of mechanism for construction runoff requirements - by end of Year 3 certify that mechanisms will assure compliance with the NYS SPDES General Permit for Stormwater Discharges from Construction Activities; and

   Complete in Year 1 (revise in Year 2 and 3 if changes are made):
   - describe procedures for the receipt and consideration of information submitted by the public. Identify the responsible personnel.

   ii. Program implementation reporting as set forth in Part VIII.A.4(b) above. Commence *implementation* reporting after three year development period. *Implementation* reporting may begin earlier if *implementation* begins during development period.

(Part VIII.A.)

5. **Post-Construction Stormwater Management SWMP Development / Implementation**
   At a minimum, all *covered entities* must:
   a. *Develop (for newly authorized MS4s)*, *implement*, and enforce a program that:
      i. provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities, unless more stringent requirements are contained within this *SPDES general permit*;

      ii. addresses *stormwater* runoff from new development and redevelopment projects to the *small MS4* from projects that result in a land disturbance of greater than or equal to one acre. Control of *stormwater discharges* from projects of less than one acre must be included in the program if:
         - that project is part of a *larger common plan of development or sale*;
         - if controlling such activities in a particular watershed is required by the *Department*;

      iii. incorporates enforceable mechanisms for post-construction runoff control from new development and re-development projects to the extent allowable under *State* or local law that meet the *State*'s most current technical standards:
         - through available mechanisms (i.e. tenant lease agreements, bid specifications, requests for proposals, standard contract provisions, connection permits, maintenance directives / BMPS, access permits, consultant agreements, internal policies);
         - procedures or policies must be developed for implementation and enforcement of the mechanisms;
         - a written directive from the person authorized to sign the NOI stating that updated mechanisms must be used and who (position(s)) is responsible for ensuring compliance with and enforcing the mechanisms for construction projects that occur on property owned by the *covered entity* or within the maintenance jurisdiction of the MS4; and
         - the mechanisms and directive must assure compliance with the requirements of the NYS SPDES General Permit for Stormwater Discharges from Construction Activities;

      iv. includes a combination of structural or non-structural management practices (according to standards defined in the most current version of the NYS Stormwater management Design Manual) that will reduce the *discharge* of pollutants to the MEP. In the development of environmental plans such as watershed plans, open space preservation programs, local laws, and ordinances covered entities must incorporate principles of *Low Impact Development* (LID), *Better Site Design* (BSD) and other *Green Infrastructure* practices to the MEP.

(Part VIII.A.5.a.iv.)

Covered entities must consider natural resource protection, impervious area reduction, maintaining natural hydrologic condition in developments, buffers or set back distances for protection of environmentally sensitive areas such as streams, wetlands, and erodible soils in the development of environmental plans.

- if a *stormwater* management practice is designed and installed in accordance with the New York State Stormwater Management Design Manual or has been demonstrated to be equivalent and is properly operated and maintained, then *MEP* will be assumed to be met for the post construction *stormwater* discharged by the practice;

v. establish and maintain an inventory of post-construction stormwater management practices to include at a minimum practices discharging to the *small MS4* that have been installed since March 10, 2003, those owned by the small MS4, and those found to cause water quality standard violations.
   - the inventory shall include, at a minimum: location of practice (street address or coordinates); type of practice; maintenance needed per the NYS Stormwater Management Design Manual, *SWPPP*, or other provided documentation; and dates and type of maintenance performed; and

vi. ensures adequate long-term operation and maintenance of management practices by trained staff, including assessment to ensure that the practices are performing properly.
   - The assessment shall include the inspection items identified in the maintenance requirements (NYS Stormwater Management Design Manual, *SWPPP*, or other maintenance information) for the practice. *Covered entities* are not required to collect *stormwater* samples and perform specific chemical analysis;

vii. Covered entities may include in the SWMP Plan provisions for development of a banking and credit system. MS4s must have an existing watershed plan based on which offsite alternative stormwater management in lieu of or in addition to on-site stormwater management practices are evaluated. Redevelopment projects must be evaluated for pollutant reduction greater than required treatment by the state standards. The individual project must be reviewed and approved by the *Department*. Use of a banking and credit system for new development is only acceptable in the impaired watersheds to achieve the no net increase requirement and watershed improvement strategy areas to achieve pollutant reductions in accordance with watershed plan load reduction goals. A banking and credit system must at minimum include:

(Part VIII.A.5.a.vii.)

- Ensures offset exceeds standard reduction by factor of at least 2
- Offset is implemented within the same watershed
- Proposed offset addresses the POC of the watershed
- Tracking system is established for the watershed
- Mitigation is applied for retrofit or redevelopment
- Offset project is completed prior to beginning the proposed construction
- A legal mechanism is established to implement the banking and credit system

b. *Develop (for newly authorized MS4s)*, *implement*, and provide adequate resources for a program to inspect development and re-development sites by trained staff and to enforce and employ sanctions;

c. *Develop (for newly authorized MS4s)*, record, annually assess and modify as needed *measurable goals*; and

d. Select and implement appropriate post-construction *stormwater BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

Required SWMP Reporting

e. Program *implementation* reporting for continuing *covered entities* (MS4s covered for 3 or more years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

i. number and type of sanctions;
ii. number and type of post-construction stormwater management practices;
iii. number and type of post-construction stormwater management practices inspected;
iv. number and type of post-construction stormwater management practices maintained;
v. status of regulatory mechanism, equivalent mechanism, that regulatory mechanism is equivalent; and
vi. report on effectiveness of program, *BMP* and *measurable goal* assessment, and implementation of a banking and credit system, if applicable.

f. Program reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). At a minimum, the *covered entity* shall report on the items below:

(Part VIII.A.5.f.)

i. **program *development* deadlines and reporting**:

Initiate by end of Year 1; complete by end of Year 3:

- mechanism of post-construction stormwater management - by end of Year 3 certify that mechanisms will assure compliance with the NYS Construction General Permit (GP-0-15-002);

Initiate by end of Year 2; complete by end of Year 3:

- procedures for inspection and maintenance of post-construction management practices; and
- procedures for enforcement and penalization of violators;

ii. **program *implementation* reporting** as set forth in Part VIII.A.5(e). Commence *implementation* reporting after three year development period. *Implementation* reporting may begin earlier if *implementation* begins during *development* period.

6. Pollution Prevention/Good Housekeeping For Municipal Operations

SWMP Development / Implementation

At a minimum, all *covered entities* must:

a. *Develop (for newly authorized MS4s)* and *implement* a pollution prevention / good housekeeping program for *municipal* operations and facilities that:

i. addresses *municipal* operations and facilities that contribute or potentially contribute *POCs* to the *small MS4* system. The operations and facilities may include, but are not limited to: street and bridge maintenance; winter road maintenance; stormwater system maintenance; vehicle and fleet maintenance; park and open space maintenance; municipal building maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; hydrologic habitat modification, or other;

ii. includes the performance and documentation of a self assessment of all municipal operations to:
   - determine the sources of pollutants potentially generated by the *covered entity*'s operations and facilities; and
   - identify the *municipal* operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already;

iii. determines *management practices*, policies, procedures, etc. that will be *developed* and *implemented* to reduce or prevent the discharge of (potential)

(Part VIII.A.6.a.iii.)

pollutants. Refer to *management practices* identified in the "NYS Pollution Prevention and Good Housekeeping Assistance Document" or other guidance materials available from the EPA, the *State,* or other organizations;

iv. prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and *covered entity*'s capabilities;

v. addresses pollution prevention and good housekeeping priorities;

vi. includes an employee pollution prevention and good housekeeping training program and ensure that staff receive and utilize training;

vii. requires third party entities performing contracted services, including but not limited to, street sweeping, snow removal, lawn / grounds care, etc., to make the necessary certification in Part IV.G; and

viii. requires *municipal* operations and facilities that would otherwise be subject to the NYS Multisector General Permit (MSGP, GP-0-12-001) for industrial stormwater discharges to prepare and *implement* provisions in the SWMP that comply with Parts III. A, C, D, J, K and L of the MSGP. The covered entity must also perform monitoring and record keeping in accordance with Part IV. of the MSGP. Discharge monitoring reports must be attached to MS4 annual report. Those operations or facilities are not required to gain coverage under the MSGP. *Implementation* the above noted provisions of the SWMP will ensure that MEP is met for discharges from those facilities;

b. Consider and incorporate cost effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing stormwater conveyance systems and municipal properties to the MEP. Some examples include replacement of closed drainage with grass swales, replacement of the existing islands in parking lots with rain garden, or curb cuts to route the flow through below grade infiltration areas or other low cost improvements that provide runoff treatment or reduction.

c. *Develop (for newly authorized MS4s)*, record, periodically assess and modify as needed *measurable goals;* and

(Part VIII.A.6.)

d. Select and implement appropriate pollution prevention and good housekeeping *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

e. Adopt techniques to reduce the use of fertilizers, pesticides, and herbicides, as well as potential impact to surface water.

Required SWMP Reporting

f. **Program *implementation* reporting** for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). *Covered entities* are required to report on all *municipal* operations and facilities within their jurisdiction (*urbanized area* and *additionally designated area*) that their program is addressing. The *covered entity* shall report at a minimum on the items below:

   i. indicate the *municipal* operations and facilities that the pollution prevention and good housekeeping program assessed;
   ii. describe, if not done so already, the management practices, policies and procedures that have been developed, modified, and / or implemented and report, at a minimum, on the items below that the *covered entity's* pollution prevention and good housekeeping program addresses during the reporting year:

      – acres of parking lot swept;
      – miles of street swept;
      – number of catch basins inspected and, where necessary, cleaned;
      – post-construction control stormwater management practices inspected and, where necessary, cleaned;
      – pounds of phosphorus applied in chemical fertilizer
      – pounds of nitrogen applied in chemical fertilizer; and
      – acres of pesticides / herbicides applied.

   iii. staff training events and number of staff trained; and
   iv. report on effectiveness of program, *BMP* and *measurable goal* assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Part VIII.A.6.a(ii), the *covered entity* shall report on items that will demonstrate program effectiveness.

g. Reporting for **newly regulated *covered entities*** (MS4s covered for less than 3 years on the *reporting date*). *Covered entities* are required to report on all *municipal* operations and facilities within their jurisdiction (*urbanized area* and *additionally*

(Part VIII.A.6.g.)

designated area) that their program is addressing. The *covered entity* shall report at a minimum on the items below:

i. **program *development* deadlines and reporting**:

Complete by end of Year 1:

- identify the municipal operations and facilities that will be considered for inclusion in the pollution prevention and good housekeeping program;
- describe the pollution prevention and good housekeeping program priorities (geographic area, potential to improve water quality; facilities or operations most in need of modification or improvement);
- describe management practices, policies, procedures, etc. that will be developed or modified;
- identify the staff and equipment available;

Initiate by Year 2; complete Year 3:

- describe employee pollution prevention and good housekeeping program training program and begin training, report on number of staff trained;

Complete by end of Year 3:

- description of developed management practices.

ii. **program *implementation* reporting** as set forth in Part VIII.A.6(d) above. Commence *implementation* reporting after three year *development* permit. *Implementation* reporting may begin earlier if *implementation* begins during *development* period.

Part IX. WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS

The covered entities in the watershed improvement strategy areas must develop or modify their SWMP to address the additional watershed specific requirements to achieve the pollutant load reduction by the deadlines specified in Tables IX.A through D. The requirements contained in this Part are in addition to the applicable requirements in Part VII or VIII, depending on the type of MS4. The Pollutant Load Reductions are the reductions necessary from the discharge loads associated with MS4s that, when combined with reductions in the discharge loads from non-MS4s to the waterbody, will meet water quality standards. The calculated reductions are based on TMDL models and may be recalculated according to 40CFR Part 130.

The MS4 portion of the pollutant load reduction shall be achieved by implementation of BMPs required of all MS4s, reductions from implementation of additional BMPS for watershed improvement strategy areas including any retrofits required by this permit. These reductions are intended to be targeted and credited using models, loading factors and load reductions predicted based on the best scientific information available. In accordance with NYCRR Part 750-1.14, all covered entities that own or operate MS4s in the watershed improvement strategy areas shall submit to the Department progress reports, described in Part V.D, identifying the activities that have been performed during the period of March 10 through September 9 of each year, and demonstrating that progress is being made towards completion of the reduction requirements, as required by this Part.

The Pollutant Load Reduction Deadlines are deadlines by which the MS4 portion of the pollutant load reduction must be met. Watershed Improvement Strategy Deadlines are the deadlines by which the watershed improvement strategy requirements for addressing the POC are to be completed and implemented. Retrofit Plan Submission Deadlines are the deadlines by which the retrofit plan component of the watershed improvement strategies are submitted to the *Department* for review and approval.

Ultimately, the effectiveness of the load reductions in meeting water quality standards will be verified by ambient monitoring of the affected waterbody. Where ambient monitoring demonstrates consistent compliance with water quality standards, the covered entity may request that the *Department* suspend the additional BMP requirements to install stormwater retrofits.

(Part IX.)

A. New York City East of Hudson Watershed MS4s - (Mapped in Appendix 3)

Table IX.A - Pollutant Load Reduction and Timetable for New York City East of Hudson Phosphorus Watershed Improvement Strategy Area

Watershed	Watershed Improvement Strategy Deadline	Retrofit Plan Submission Deadline	Pollutant Load Reduction (Load Allocation)	Pollutant Load Reduction Deadline
New York City East of Hudson Watershed	05/01/2011	03/09/ 2009 (single) and 12/ 31/2009 (RSE)	In accordance with the TMDL Implementation Plan	03/09/2019 (single) 12/31/2019 (RSE)

By the deadlines specified in Table IX.A, covered entities that own or operate MS4s within the listed watershed shall develop and implement the following pollutant specific BMPs. Covered entities that own or operate MS4s in these watersheds shall also submit to the Department, progress reports as specified in Part V.D.

1. Public Education and Outreach on Stormwater Impacts- applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

a. Plan and conduct an ongoing public education and outreach program designed to describe the impacts of phosphorus (the *POC*) on waterbodies. The program must identify potential sources of phosphorus in *stormwater* runoff and describe steps that contributors can take to reduce the concentration of this *POC* in *stormwater* runoff. The program must also describe steps that contributors of non-*stormwater* discharges (Part I.A.2) can take to reduce phosphorus.

b. Develop, or acquire if currently available, specific educational material dealing with sources of phosphorus in *stormwater* and pollutant reduction practices. At a minimum, the educational material should address the following topics:

i. understanding the phosphorus issue;

ii. septic systems as a source of phosphorus;

iii. phosphorus concerns with fertilizer use;

iv. phosphorus concerns with grass clippings and leaves entering streets and storm sewers;

v. construction sites as a source of phosphorus; and

vi. phosphorus concerns with detergent use.

2. Public Involvement/ Participation
No additional requirements proposed for this permit term.

3. Illicit Discharge Detection and Elimination

a. Mapping - applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.
Develop and maintain a map showing the entire *small MS4* conveyance system. The *covered entity* shall complete the mapping of approximately 20% of the system every year, with the entire system being mapped by January 8, 2013.

At a minimum, the map and/or supportive documentation for the conveyance system should include the following information:

i. type of conveyance system - closed pipe or open drainage;

ii. for closed pipe systems - pipe material, shape, and size;

iii. for open drainage systems - channel/ditch lining material, shape, and dimensions; location and dimensions of any culvert crossings;

iv. drop inlet, catch basin, and manhole locations; and

v. number and size of connections (inlets/outlets) to catch basins and manholes, direction of flow.

All information shall be prepared in digital format suitable for use in GIS software and in accordance with the *Department's* guidance on Illicit Discharge Detection and Elimination. The scale shall be 1:24,000 or better.

b. On-site wastewater systems - applicable to *traditional land use control* and *traditional non-land use control MS4s*.

- *Develop*, *implement* and enforce a program that ensures that on-site sanitary systems designed for less than 1000 gallons per day (septic systems, cesspools, including any installed absorption fields) are inspected at a minimum frequency of once every five years and, where necessary, maintained or rehabilitated. Regular field investigations/inspections should be done in accordance with the most current

version of the EPA publication entitled Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, to detect the presence of ongoing and/or intermittent on-site sanitary discharges to the storm sewer system. An advanced system inspection requiring completion by a certified professional is not required by this permit, but may be used where site specific conditions warrant. Program development shall include the establishment of the necessary legal authority to implement the program.

4. Construction Site Stormwater Runoff Control- applicable to *traditional land use control MS4s*.

a. *Develop*, *implement* and enforce a program to reduce pollutants in *stormwater* runoff to the *small MS4* from construction activities that result in a land disturbance of greater than or equal to five thousand (5000) square feet. At a minimum, the program must provide equivalent protection to the NYS DEC SPDES General Permit for Stormwater Discharges from Construction Activity and must include the development and implementation of:

   i. by December 31, 2009, an ordinance or other regulatory mechanism that requires erosion and sediment controls designed in accordance with the most current version of the technical standard New York State Standards and Specifications for Erosion and Sediment Control for all construction activities that disturb between five thousand (5000) square feet and one acre of land. For construction activities that disturb between five thousand (5000) square feet and one (1) acre of land, one of the standard erosion and sediment control plans included in Appendix E (Erosion & Sediment Control Plan For Small Homesite Construction) of the New York Standards and Specifications for Erosion and Sediment Control may be used as the Stormwater Pollution Prevention Plan (SWPPP);

   ii. policy and procedures for the *covered entity* to perform, or cause to be performed, compliance inspections at all sites with a disturbance of one (1) or more acres. By December 31, 2009, the *covered entity* shall have started performing, or cause to be performed, compliance inspections at all sites with a disturbance between five thousand (5000) square feet and one (1) acre of land;

5. Post-Construction Stormwater Management

a. Construction stormwater program - applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

(Part IX.A.5.a.)

Develop, *implement* and enforce a program to address post-construction *stormwater* runoff from new development and redevelopment projects that disturb greater than or equal to one (1) acre. This includes projects of less than one acre that are part of a larger common plan of development or sale. At a minimum, the program must provide equivalent protection to the NYS DEC SPDES General Permit for Stormwater Discharges from Construction Activity and must include the *development* and *implementation* of:

i. a law or other mechanism that requires post-construction stormwater management controls designed in accordance with the most current version of the technical standards the New York State Stormwater Management Design Manual including the Enhanced Phosphorus Removal Design Standards. An MS4 must ensure that their ordinance or other mechanism requires post-construction stormwater management controls to be designed in accordance with the final version of the Enhanced Phosphorus Removal Design Standards by September 30, 2008.

b. Retrofit program - applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

Develop and commence implementation of a Retrofit Program that addresses runoff from sites to correct or reduce existing erosion and/or pollutant loading problems, with a particular emphasis placed on the pollutant phosphorus. At a minimum, the MS4 shall:

i. establish procedures to identify sites with erosion and/or pollutant loading problems;

ii. establish policy and procedures for project selection. Project selection should be based on the phosphorus reduction potential of the specific retrofit being constructed/installed; the ability to use standard, proven technologies; and the economic feasibility of constructing/installing the retrofit. As part of the project selection process, the *covered entity* should participate in locally based watershed planning efforts which involve the *Department*, other *covered entities*, stakeholders and other interested parties;

iii. establish policy and procedures for project permitting, design, funding, construction and maintenance.

iv. for covered entities that develop their own retrofit program, by March 9, 2009 develop and submit approvable plans with schedules for completing retrofit projects, including identification of funding sources. Upon DEC approval of those schedules, the plans and schedules shall become enforceable requirements of this permit.

v. pursuant to Part IV. B (Cooperation Between Covered entities Encouraged), retrofit projects can be completed in cooperation with other covered entities in the East of Hudson Watershed through the formation of a cooperative entity with other MS4s. Participating MS4s shall work with the Department and other members of the cooperative entity in implementing the requirements of i, ii and iii above. In addition, each covered entity that becomes a member of the cooperative entity shall work closely with the Department and other members of the cooperative entity to, by December 31, 2009, develop and submit approvable plans and schedules for completing retrofit projects, including identification of funding sources. Upon DEC approval of those plans and schedules, the plans and schedules shall become enforceable requirements of this permit.

6. Pollution Prevention/Good Housekeeping For Municipal Operations- applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

a. By December 31, 2009, develop and implement a Stormwater Conveyance System inspection and maintenance program. At a minimum, the program shall include the following:

i. policy and procedures for the inspection and maintenance of catch basin and manhole sumps. Catch basin and manhole sumps should be inspected in the early spring and late fall for sediment and debris build-up. If sediment and debris fills greater than 50% of the sump volume, the sump should be cleaned. All sediment and debris removed from the catch basins and manholes shall be properly disposed of;

ii. policy and procedures for the inspection, maintenance and repair of conveyance system *outfalls*. Beginning June 30, 2008, the MS4 must inspect 20% of their *outfalls* each year and make repairs as necessary. All outfall protection and/or bank stability problems identified during the inspection shall be corrected in accordance with the New York Standards and Specifications for Erosion and Sediment Control;

(Part IX.A.6.a.)

iii. policy and procedures for the inspection, maintenance and repair of a *covered entity's* stormwater management practices. The inspection and maintenance schedule for all stormwater management practices shall assure continued operation of stormwater management practices; and

iv. develop a Corrective Action Plan for each Stormwater Conveyance System component that has been identified as needing repair. A file of all corrective actions implemented and *illicit discharges* detected and repaired should be maintained for a period of not less than five years.

b. By December 31, 2010, develop and implement a turf management practices and procedures policy. The policy shall address the following:

i. procedures for proper fertilizer application on municipally-owned lands. The application of any phosphorus-containing fertilizer (as labeled) shall only be allowed following a proper soil test and analysis documenting that soil phosphorus concentrations are inadequate;

ii. procedures for the proper disposal of grass clippings from municipally-owned lawns where grass clipping collection equipment is used. Grass clippings shall be disposed of in a compost pile or a proper containment device so that they cannot enter the *small MS4* or surface waters;

iii. procedures for the proper disposal of leaves from municipally-owned lands where leaves are collected. Leaves shall be disposed of in a compost pile or a proper containment device so that they cannot enter *small MS4s* or surface waters;

iv. for municipalities with lawn waste collection programs, the development of a curbside lawn waste management policy which ensures that lawn waste does not decay and release phosphorus to the storm sewer system; and

v. the planting of wildflowers and other native plant material to lessen the frequency of mowing and the use of chemicals to control vegetation.

(Part IX.)

B. Other Phosphorus Watershed MS4s (Mapped in Appendices 4, 5, and 10)

Table IX.B - Pollutant Load Reduction and Timetable for Other Phosphorus Watershed Improvement Strategy Areas

Watershed	Watershed Improvement Strategy Deadline	Retrofit Plan Submission Deadline	Pollutant Load Reduction (Waste Load Allocation %*)	Pollutant Load Reduction Deadline
Greenwood Lake	05/01/2011	03/09/2011	43* (load allocation)	03/09/2011
Onondaga Lake	TMDL approval + 3 years	TMDL approval + 3 years	TBD	TMDL approval + 13 years
Oscawana Lake	05/01/2013	Not Applicable	18	2020

By the deadlines specified in Table IX.B, covered entities that own or operate MS4s within the listed watersheds shall develop and implement the following pollutant specific BMPs for MS4 sewersheds discharging to the listed waterbody. Covered entities that own or operate MS4s in these watersheds shall also submit to the Department, progress reports as specified in Part V.D.

1. Public Education and Outreach on Stormwater Impacts- applicable to *traditional land use* control, *traditional non-land use control* and *non-traditional MS4s*.

a. Plan and conduct an ongoing public education and outreach program designed to describe the impacts of phosphorus (the POC) on waterbodies. The program must identify potential sources of Phosphorus in stormwater runoff and describe steps that contributors can take to reduce Phosphorus in stormwater runoff.

b. develop, or acquire if currently available, specific educational material dealing with sources of Phosphorus in stormwater and pollutant reduction practices. At a minimum, the educational material should address the following topics:
   i. understanding the phosphorus issue;
   ii. septic systems as a source of phosphorus; and
   iii. phosphorus concerns with fertilizer use.

2. Public Involvement/ Participation

No additional requirements proposed for at this time.

3. Illicit Discharge Detection and Elimination applicable to *traditional land use control* and *traditional non-land use control* MS4s, except within the Onondaga Lake Watershed.

a. *Develop*, *implement* and enforce a program that ensures that on-site sanitary systems designed for less than 1000 gallons per day (septic systems, cesspools, including any installed absorption fields) are inspected at a minimum frequency of once every five

years and, where necessary, maintained or rehabilitated. Conduct of regular field investigations/inspections should be done in accordance with the most current version of the EPA publication entitled Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, to detect the presence of ongoing and/or intermittent on-site sanitary discharges to the storm sewer system. An advanced system inspection requiring completion by a certified professional is not required by this permit, but may be used where site specific conditions warrant. Program development shall include the establishment of the necessary legal authority to implement the program.

4. Construction Site Stormwater Runoff Control

No additional requirements at this time.

5. Post-Construction Stormwater Management, - applicable to *traditional land use*, *traditional non-land use control* and *non-traditional MS4s*.

a. The *covered entity* must require the use of the "Enhanced Phosphorus Removal Design Standards"in accordance with NYS Stormwater Design Manual;

b. *Develop* and commence implementation of a Retrofit Program that addresses runoff from sites to correct or reduce existing erosion and/or pollutant loading problems, with a particular emphasis placed on the pollutant Phosphorus. At a minimum, the MS4 shall:

   i. establish procedures to identify sites with erosion and/or pollutant loading problems;

   ii. establish policy and procedures for project selection. Project selection should be based on the Phosphorus reduction potential of the specific retrofit being constructed/installed; the ability to use standard, proven technologies; and the economic feasibility of constructing/installing the retrofit. As part of the project selection process, the *covered entity* should participate in locally based watershed planning efforts which involve the *Department*, other *covered entities*, stakeholders and other interested parties;

   iii. establish policy and procedures for project permitting, design, funding, construction and maintenance

   iv. by the date specified for each watershed in the appropriate Watershed Improvement Strategy Requirement Table develop and submit approvable plans and schedules for completing retrofit projects, including identification of funding

sources. Upon DEC approval of those plans and schedules, the plans and schedules shall become enforceable requirements of this permit.

6. Pollution Prevention/Good Housekeeping For Municipal Operations applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

a. Develop a turf management practices and procedures policy. The policy should address the following:

   i. procedures for proper fertilizer application on municipally-owned lands. The application of any phosphorus-containing fertilizer (as labeled) shall only be allowed following a proper soil test and analysis documenting that soil phosphorus concentrations are inadequate; and

   ii. the planting of native plant material to lessen the frequency of mowing and the use of chemicals to control vegetation.

(Part IX.)

C. Pathogen Impaired Watershed MS4s (Mapped in Appendix 6, 7 and 9)

Table IX.C - Pollutant Load Reduction and Timetable for Pathogen Impaired Watershed Improvement Strategy Areas

Watershed	Watershed Improvement Strategy Deadline	Retrofit Plan Submission Deadline	Pollutant Load Reduction (Waste Load Allocation %)	Pollutant Load Reduction Deadline
Budds Pond*	05/01/2013	09/30/2012	61	09/30/2022
Stirling Creek*	05/01/2013	09/30/2012	28	09/30/2022
Town & Jockey Creeks*	05/01/2013	09/30/2012	76	09/30/2022
Goose Creek*	05/01/2013	09/30/2012	70	09/30/2022
Hashamomuck Pond, Zone HP-1*	05/01/2013	09/30/2012	77	09/30/2022
Hashamomuck Pond , Zone HP-2*	05/01/2013	09/30/2012	43	09/30/2022
Richmond Creek*	05/01/2013	09/30/2012	71	09/30/2022
Deep Hole Creek*	05/01/2013	09/30/2012	29	09/30/2022
James Creek*	05/01/2013	09/30/2012	51	09/30/2022
Flanders Bay	05/01/2012	03/09/2012	98	03/09/2021
Reeves Bay	05/01/2012	03/09/2012	97	03/09/2021
Sebonac Creek	05/01/2012	03/09/2012	58	03/09/2021
North Sea Harbor, Zone NSH-1	05/01/2012	03/09/2012	97	03/09/2021
North Sea Harbor, Zone NSH-2	05/01/2012	03/09/2012	62	03/09/2021
North Sea Harbor, Zone NSH-3	05/01/2012	03/09/2012	99	03/09/2021
North Sea Harbor, Zone NSH-5	05/01/2012	03/09/2012	74	03/09/2021
Wooley Pond	05/01/2012	03/09/2012	97	03/09/2021
Noyac Creek, Zone NC-1	05/01/2012	03/09/2012	64	03/09/2021
Sag Harbor, Zone SH-2*	05/01/2013	09/30/2012	50	09/30/2022
Northwest Creek*	05/01/2013	09/30/2012	76	09/30/2022
Acabonac Harbor, Zone AH-2*	05/01/2013	09/30/2012	42	09/30/2022
Acabonac Harbor, Zone AH-3*	05/01/2013	09/30/2012	85	09/30/2022
Acabonac Harbor, Zone AH-4*	05/01/2013	09/30/2012	81	09/30/2022
Acabonac Harbor, Zone AH-5*	05/01/2013	09/30/2012	87	09/30/2022
Montauk Lake, Zone LM-1*	05/01/2013	09/30/2012	52	09/30/2022
Montauk Lake, Zone LM-2*	05/01/2013	09/30/2012	52	09/30/2022
Montauk Lake, Zone LM-3*	05/01/2013	09/30/2012	48	09/30/2022
Little Sebonac Creek	05/01/2012	03/09/2012	70	03/09/2021
Oyster Bay (Harbor 2)	05/01/2012	03/09/2012	20	03/09/2021
Oyster Bay (Harbor 3)	05/01/2012	03/09/2012	90	03/09/2021

*Additionally Designated Area

Watershed	Watershed Improvement Strategy Deadline	First Retrofit Plan Submission Deadline	Pollutant Reduction (Waste Load Allocation %)	Pollutant Load Reduction Deadline
Hempstead Harbor, north, and tidal tributaries	05/01/2013	09/30/2012	95	09/30/2022
Cold Spring Harbor, and tidal tributaries, Inner	05/01/2013	09/30/2012	95	09/30/2022
Cold Spring Harbor, Eel Creek	05/01/2013	09/30/2012	90	09/30/2022
Huntington Harbor	05/01/2013	09/30/2012	89	09/30/2022
Centerport Harbor	05/01/2013	09/30/2012	91	09/30/2022
Northport Harbor	05/01/2013	09/30/2012	92	09/30/2022
Stony Brook Harbor and West Meadow Creek	05/01/2013	09/30/2012	99	09/30/2022
Stony Brook Creek	05/01/2013	09/30/2012	99	09/30/2022
Stony Brook Yacht Club	05/01/2013	09/30/2012	48	09/30/2022
Port Jefferson Harbor, North and tribs	05/01/2013	09/30/2012	94	09/30/2022
Conscience Bay and tidal tribs	05/01/2013	09/30/2012	99	09/30/2022
Setaukut Harbor, Little Bay	05/01/2013	09/30/2012	84	09/30/2022
Setauket Harbor, East Setauket	05/01/2013	09/30/2012	79	09/30/2022
Setauket Harbor, Poquot	05/01/2013	09/30/2012	100	09/30/2022
Mt. Sinai Harbor, Crystal Brook	05/01/2013	09/30/2012	88	09/30/2022
Mt. Sinai Harbor, Inner Harbor	05/01/2013	09/30/2012	96	09/30/2022
Mt. Sinai Harbor, Pipe Stave Hollow	05/01/2013	09/30/2012	93	09/30/2022
Mattituck Inlet/Creek, Low, and tidal tributaries	05/01/2013	09/30/2012	64	09/30/2022
Goldsmith Inlet	05/01/2013	09/30/2012	91	09/30/2022
West Harbor - Darby Cove	05/01/2013	09/30/2012	41	09/30/2022
Georgica Pond, Upper	05/01/2013	09/30/2012	93	09/30/2022

Georgica Pond, Lower	05/01/2013	09/30/2012	93	09/30/2022
Georgica Pond Cove	05/01/2013	09/30/2012	92	09/30/2022
Sagaponack Pond	05/01/2013	09/30/2012	88	09/30/2022
Mecox Bay and tributaries	05/01/2013	09/30/2012	89	09/30/2022
Heady Creek and tributaries	05/01/2013	09/30/2012	88	09/30/2022
Taylor Creek and tributaries	05/01/2013	09/30/2012	52	09/30/2022
Penny Pond	05/01/2013	09/30/2012	31	09/30/2022
Weesuck Creek and tidal tributaries	05/01/2013	09/30/2012	37	09/30/2022
Penniman Creek and tidal tributaries	05/01/2013	09/30/2012	32	09/30/2022
Ogden Pond	05/01/2013	09/30/2012	28	09/30/2022
Quantuck Bay-Quantuck Creek	05/01/2013	09/30/2012	91	09/30/2022
Quantuck Canal/Moneybogue Bay	05/01/2013	09/30/2012	62	09/30/2022
Seatuck Cove	05/01/2013	09/30/2012	94	09/30/2022
Harts Cove	05/01/2013	09/30/2012	12	09/30/2022
Narrow Bay	05/01/2013	09/30/2012	16	09/30/2022
Bellport Bay, Beaver Dam Creek	05/01/2013	09/30/2012	94	09/30/2022
Bellport Bay, West Cove	05/01/2013	09/30/2012	94	09/30/2022
Patchogue Bay, Swan River	05/01/2013	09/30/2012	90	09/30/2022
Patchogue Bay, Mud Creek	05/01/2013	09/30/2012	71	09/30/2022

By the deadlines specified in Table IX.C, covered entities that own or operate MS4s within the listed watersheds shall develop and implement the following pollutant specific BMPs in MS4 sewersheds discharging to the listed waters. Covered entities who own or operate MS4s within these watersheds shall also submit to the Department, progress reports as specified in Part V.D.

(Part IX.C)

1. Public Education and Outreach on Stormwater Impacts- applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*

a. Plan and conduct an ongoing public education and outreach program designed to describe the impacts of Pathogens (the *POC*) on waterbodies. The program must identify potential sources of Pathogens in *stormwater* runoff and describe steps that contributors can take to reduce the Pathogens in *stormwater* runoff. The program must also describe steps that contributors of non-*stormwater discharges* can take to reduce Pathogens.

b. *Develop*, or acquire if currently available, specific educational material dealing with sources of Pathogens in *stormwater* and pollutant reduction practices. At a minimum, the educational material should address the following topics:

i. where, why, and how Pathogens pose threats to the environment and to the community;

ii. septic systems, geese and pets as a source of pathogens;

iii. dissemination of educational materials / surveys to households/businesses in proximity to Pathogen *TMDL* waterbodies; and

iv. education for livestock / horse boarders regarding manure *BMP*s.

2. Public Involvement / Participation

No additional requirements proposed at this time.

3. Illicit Discharge Detection and Elimination, **SWMP Development / Implementation**- Mapping applicable to *traditional land use* control and *traditional non-land use control MS4s*.

a. Develop, implement, and enforce a program to detect and eliminate discharges to the municipal separate storm sewer system from on-site sanitary systems in areas where factors such as shallow groundwater, low infiltrative soils, historical on-site sanitary system failures, or proximity to pathogen-impaired waterbodies, indicate a reasonable likelihood of system discharge.

In such areas, ensure that on-site sanitary systems designed for less than 1000 gallons per day (septic systems, cesspools, including any installed absorption fields) are inspected at a minimum frequency of once every five years and, where necessary, maintained or rehabilitated. Conduct regular field investigations/inspections in accordance with the most current version of the EPA publication entitled Illicit Discharge

(Part IX.C.3.a)

Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment, to detect the presence of ongoing and/or intermittent on-site sanitary discharges to the storm sewer system. An advanced system inspection requiring completion by a certified professional is not required by this permit, but may be used where site specific conditions warrant.

On-site sanitary system IDDE program development shall include the establishment of the necessary legal authority (such as new or revised local laws) for implementation and enforcement.

b. Develop and maintain a map showing the entire *small MS4* conveyance system. The *covered entity* shall complete the mapping of approximately 20% of the system every year, with the entire system being mapped by May 1, 2015. At a minimum, the map and/or supportive documentation for the conveyance system shall include the following information:

i. type of conveyance system - closed pipe or open drainage;
ii. for closed pipe systems - pipe material, shape, and size;
iii. for open drainage systems - channel/ditch lining material, shape, and dimensions; location and dimensions of any culvert crossings;
iv. drop inlet, catch basin, and manhole locations; and
v. number and size of connections (inlets/outlets) to catch basins and manholes, direction of flow.

All information shall be prepared in digital format suitable for use in GIS software and in accordance with the *Department's* guidance on Illicit Discharge Detection and Elimination. The scale shall be 1:24000 or better.

4. Construction Site Stormwater Runoff Control

No additional requirements at this time.

5. Post-Construction Stormwater Management- applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

Develop and commence implementation of a Retrofit Program that addresses runoff from sites to correct or reduce pollutant loading problems, with a particular emphasis placed on the pollutant Pathogens. At a minimum, the MS4 shall:

a. establish procedures to identify sites with erosion and/or pollutant loading problems;

(Part IX.C.5.)

b. establish policy and procedures for project selection. Project selection should be based on the Pathogen reduction potential of the specific retrofit being constructed/installed; the ability to use standard, proven technologies; and the economic feasibility of constructing/installing the retrofit. As part of the project selection process, the *covered entity* should participate in locally based watershed planning efforts which involve the *Department*, other *covered entities*, stakeholders and other interested parties;

c. establish policy and procedures for project permitting, design, funding, construction and maintenance

d. by March 9, 2011, develop and submit approvable plans and schedules for completing retrofit projects. Upon DEC approval of those plans and schedules and identification of funding sources, the plans and schedules shall become enforceable requirements of this permit.

6. Pollution Prevention/Good Housekeeping For Municipal Operations, - applicable to *traditional land use control* and traditional non-land use control MS4s.

a. *Develop*, enact and enforce a local law prohibiting pet waste on municipal properties and prohibiting goose feeding.

b. *Develop* and *implement* a pet waste bag program for collection and proper disposal of pet waste.

c. *Develop* a program to manage goose populations.

(Part IX.)

D. Nitrogen Watershed MS4s (Mapped in Appendix 8)

Table IX.D - Pollutant Load Reduction and Timetable for Nitrogen Watershed Improvement Strategy Area

Watershed	Watershed Improvement Strategy Deadline	Retrofit Plan Submission Deadline	Pollutant Reduction (Load Allocation %)	Pollutant Load Reduction Deadline
Lower Peconic River & Tidal Tributaries	05/01/2011	03/09/2011	15	03/09/2021
Western Flanders Bay & Lower Sawmill Creek				
Meetinghouse Creek				
Terrys Creek & Tributaries				

By the deadlines specified in Table IX.D, covered entities that own or operate MS4s within the listed watersheds shall develop and implement the following pollutant specific BMPs for MS4 sewersheds discharging to the listed waterbodies. Covered entities that own or operate MS4s within these watersheds shall also submit to the Department, progress reports as specified in Part V.D.

1. Public Education and Outreach on Stormwater Impacts - applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

a. Plan and conduct an ongoing public education and outreach program designed to describe the impacts of Nitrogen (the POC) on waterbodies. The program must identify potential sources of Nitrogen in stormwater runoff and describe steps that contributors can take to reduce the Nitrogen in stormwater runoff.

b. develop, or acquire if currently available, specific educational material dealing with sources of Nitrogen in stormwater and pollutant reduction practices. At a minimum, the educational material should address the following topics:

i. understanding the Nitrogen issue;

ii. septic systems as a source of Nitrogen; and

(Part IX.D.1.b)

iii. Nitrogen concerns with fertilizer use.

2. Public Involvement/ Participation

No additional requirements proposed for at this time.

3. Illicit Discharge Detection and Elimination - applicable to *traditional land use control* and *traditional non-land use control MS4s*

a. Develop and maintain a map showing the entire small MS4 conveyance system. The covered entity shall complete the mapping of approximately 20% of the system every year, with the entire system being mapped by May 1, 2015. At a minimum, the map and/or supportive documentation for the conveyance system shall include the following information:

i. type of conveyance system - closed pipe or open drainage;
ii. for closed pipe systems - pipe material, shape, and size;
iii. for open drainage systems - channel/ditch lining material, shape, and dimensions; location and dimensions of any culvert crossings;
iv. drop inlet, catch basin, and manhole locations; and
v. number and size of connections (inlets/outlets) to catch basins and manholes, direction of flow.

All information shall be prepared in digital format suitable for use in GIS software and in accordance with the *Department's* guidance on Illicit Discharge Detection and Elimination. The scale shall be 1:24000 or better.

4. Construction Site Stormwater Runoff Control

No additional requirements at this time.

5. Post-Construction Stormwater Management - applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.
Develop and commence implementation of a Retrofit Program that addresses runoff from sites to correct or reduce existing erosion and/or pollutant loading problems, with a particular emphasis placed on the pollutant Nitrogen. At a minimum, the MS4 shall:

a. establish procedures to identify sites with erosion and/or pollutant loading problems;

(Part IX.D.5)

b. establish policy and procedures for project selection. Project selection should be based on the Nitrogen reduction potential of the specific retrofit being constructed/installed; the ability to use standard, proven technologies; and the economic feasibility of constructing/installing the retrofit. As part of the project selection process, the *covered entity* should participate in locally based watershed planning efforts which involve the *Department*, other *covered entities*, stakeholders and other interested parties;

c. establish policy and procedures for project permitting, design, funding, construction and maintenance; and

d. by March 9, 2011, develop and submit approvable plans and schedules for completing retrofit projects, including identification of funding sources. Upon DEC approval of those plans and schedules, the plans and schedules shall become enforceable requirements of this permit.

6. Pollution Prevention/Good Housekeeping For Municipal Operations - applicable to *traditional land use control*, *traditional non-land use control* and *non-traditional MS4s*.

a. Develop a turf management practices and procedures policy. The policy should address the following:

i. procedures for proper fertilizer application on municipally-owned lands. The application of any Nitrogen-containing fertilizer shall only be allowed under the supervision of a Certified Crop Advisor or Certified Landscape Architect; and

ii. the planting of native plant material to lessen the frequency of mowing and reduce the use of chemicals to control vegetation.

Part X. ACRONYMS AND DEFINITIONS

A. Acronym List

BMP - Best Management Practice
CFR - Code of Federal Regulations
CWA - Clean Water Act
ECL - Environmental Conservation Law
MCC - Municipal Compliance Certification
MCM - Minimum Control Measure
MEP - Maximum Extent Practicable
MS4 - Municipal Separate Storm Sewer System
NPDES - National Pollutant Discharge Elimination System
POC - Pollutant of Concern
SPDES - State Pollutant Discharge Elimination System
SWMP - Stormwater Management Program
SWMP Plan - Stormwater Management Program Plan
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
UA - Urbanized Area

B. Definitions

Activities - See best management practice

Additionally Designated Areas - EPA required the Department to develop a set of criteria for designating additional MS4 areas as subject to these regulations. The following criteria have been adopted to designate additional MS4s in New York State:

Criteria 1: MS4s discharging to waters for which and EPA-approved TMDL required reduction of a pollutant associated with stormwater beyond what can be achieved with existing programs (and the area is not already covered under automatic designation as UA).

Criteria 2: MS4s contiguous to automatically designated urbanized areas (town lines) that discharge to sensitive waters classified as AA Special (fresh surface waters), AA (fresh surface waters) with filtration avoidance determination or SA (saline surface waters).

Criterion 3: Automatically designated MS4 areas are extended to Town, Village or City boundaries, but only for Town, Village or City implementation of Minimum Control Measures (4) Construction Site Stormwater Runoff Control and (5) Post Construction Stormwater Management in Development and Redevelopment. This additional designation may be waived, by written request to the Department, where the automatically designated area is a small portion of the total area of the Town, Village or City (less than 15 %) and where there is

little or no construction activity in the area outside of the automatically designated area (less than 5 disturbed acres per year).

Best Management Practice - means schedules activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements (if determined necessary by the covered entity), operating procedures, and practices to control runoff, spillage and leaks, sludge or waste disposal, or drainage from areas that could contribute pollutants to stormwater discharges. BMP is referred to in EPA's fact sheets and other materials. BMPs are also referred to as "activities" or "management practices" throughout this *SPDES general permit*.

Better Site Design (BSD) - Better Site Design incorporates non-structural and natural approaches to new and redevelopment projects to reduce impacts on watersheds by conserving natural areas, reducing impervious cover and better integrating stormwater treatment. Better site design is a form of Green Infrastructure and is similar to Low Impact Development (LID). See also Green Infrastructure and Low Impact Development.

Construction Activity(ies) - means any clearing, grading, excavation, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include but are not limited to logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Covered entity - means the holder of this *SPDES general permit* or an entity required to gain coverage under this *SPDES general permit*. The owner / operator of the small MS4.

Department - means the New York State Department of Environmental Conservation as well as meaning the Department 's designated agent.

Development - period after initial authorization under this *SPDES general permit* when the covered entity creates, designs or develops activities, BMPs, tasks or other measures to include in their SWMP

Discharge(s) - any addition of any pollutant to waters of the State through an outlet or point source.

Discharge Authorized by a SPDES Permit - means discharges of wastewater or stormwater from sources listed in the permit, that do not violate ECL Section 17-0501, that are through outfalls listed in the permit, and that are:

1. discharges within permit limitations of pollutants limited in the SPDES permit;

2. discharges within permit limitations of pollutants limited by an indicator limit in the SPDES permit;
3. discharges of pollutants subject to action level requirements in the SPDES permit;
4. discharges of pollutants not explicitly listed in the SPDES permit, but reported in the SPDES permit application record as detected in the discharge or as something the covered entity knows or has reason to believe to be present in the discharge, provided the special conditions section of the applicable SPDES permit does not otherwise forbid such a discharge and provided that such discharge does not exceed, by an amount in excess of normal effluent variability, the level of discharge that may reasonably be expected for that pollutant from information provided in the SPDES permit application record;
5. discharges of pollutants not required to be reported on the appropriate and current New York State SPDES permit application; provided the special conditions section of the permit does not otherwise forbid such a discharge. The Department may, in accordance with law and regulation, modify the permit to include limits for any pollutant even if that pollutant is not required to be reported on the SPDES permit application; or
6. discharges from fire fighting activities; fire hydrant flushings; testing of fire fighting equipment, provided that such equipment is for water only fire suppression; potable water sources including waterline flushings; irrigation drainage; lawn watering; uncontaminated infiltration and inflow; leakage from raw water conveyance systems; routine external building washdown and vehicle washing which does not use detergents or other compounds; pavement washwaters where spills or leaks of toxic or hazardous materials, other than minor and routine releases from motor vehicles, have not occurred (unless such material has been removed) and where detergents are not used; air conditioning and steam condensate; springs; uncontaminated groundwater; and foundation or footing drains where flows are not contaminated with process materials such as solvents provided that the covered entity has implemented an effective plan for minimizing the discharge of pollutants from all of the sources listed in this subparagraph.

Environmental Conservation Law - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Green Infrastructure - Green infrastructure approaches essentially infiltrate, evapotranspirate or reuse stormwater, with significant utilization of soils and vegetation rather than traditional hardscape collection, conveyance and storage structures . Common green infrastructure approaches include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, vegetated median strips, reforestation, and protection and enhancement of riparian buffers and floodplains. See also Low Impact Development and Better Site Design.

Groundwater - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the

atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Illicit Discharges - discharges not entirely composed of stormwater into the small MS4, except those identified in Part I.A.2. Examples of illicit discharges are non-permitted sanitary sewage, garage drain effluent, and waste motor oil. However, an illicit discharge could be any other non-permitted discharge which the covered entity or Department has determined to be a substantial contributor of pollutants to the small MS4.

Impaired Water - a water is impaired if it does not meet its designated use(s). For purposes of this permit 'impaired' refers to impaired waters for which TMDLs have been established, for which existing controls such as permits are expected to resolve the impairment, and those needing a TMDL. Impaired waters compilations are also sometimes referred to as 303(d) lists; 303(d) lists generally include only waters for which TMDLs have not yet been developed. States will generally have associated, but separate lists of impaired waters for which TMDLs have already been established.

Implementation - period after development of SWMP, where the covered entity puts into effect the practices, tasks and other activities in their SWMP.

Individual SPDES Permit - means a SPDES permit issued to a single facility in one location in accordance with this Part (as distinguished from a *SPDES general permit*).

Industrial Activity - as defined by the SPDES Multi-Sector General Permit (GP-0-12-001).

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct construction activities are occurring, or will occur, under one plan. The term "plan" in "larger common plan of development or sale" is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, State Environmental Quality Review Act Application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Low Impact Development - is a site design strategy with a goal of maintaining or replicating the predevelopment hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic landscape. Hydrologic functions of storage, infiltration,

and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro scale stormwater retention and detention areas, reduction of impervious surfaces, and the lengthening of flow paths and runoff time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable (mature) trees, flood plains, woodlands and highly permeable soils. LID principles are based on controlling stormwater at the source by the use of micro scale controls that are distributed throughout the site. This is unlike conventional approaches that typically convey and manage runoff in large facilities located at the base of drainage areas. See also Green Infrastructure and Better Site Design.

Management Practices - See best management practices

Maximum Extent Practicable - is a technology-based standard established by Congress in the Clean Water Act '402(p)(3)(B)(iii). Since no precise definition of MEP exists, it allows for maximum flexibility on the part of MS4 operators as they develop their programs. (40CFR 122.2 See also: Stormwater Phase II Compliance Assistance Guide EPA 833-R-00-002, March 2000). When trying to reduce pollutants to the MEP, there must be a serious attempt to comply, and practical solutions may not be lightly rejected. If a covered entity chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a covered entity employs all applicable BMPs except those where it can be shown that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP required covered entities to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive.

Measurable Goals - are the goals of the SWMP that should reflect the needs and characteristics of the covered entity and the areas served by its small MS4. Furthermore, the goals should be chosen using an integrated approach that fully addresses the requirements and intent of the MCM. The assumption is that the program schedules would be created over a 5 year period and goals would be integrated into that time frame. For example, a larger MS4 could do an outfall reconnaissance inventory for 20% of the collection system every year so that every outfall is inspected once within the permit cycle

Municipal / Municipalities - referred to in the federal rule that describes the Phase II stormwater program includes not only the State's municipal governments (cities, towns, villages and counties), but any publicly funded entity that owns or operates a separate storm sewer system. Examples of other public entities that are included in this program include the State Department of Transportation, State University Campuses, federal and State prisons, State and federal hospitals, Thruway and Dormitory Authorities, public housing authorities, school and other special districts.

Municipal Separate Storm Sewer System - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that discharges to surface waters of the State;
2. designed or used for collecting or conveying stormwater;
3. which is not a combined sewer; and
4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Non-traditional MS4s - state and federal prisons, office complexes, hospitals; state: transportation agencies; university campuses, public housing authorities, schools, other special districts.

Open Meetings Law - per Public Officers Law, Article 7, Open Meetings Law, Section 104, Public notice:
1. Public notice of the time and place of a meeting scheduled at least one week prior thereto shall be given to the news media and shall be conspicuously posted in one or more designated public locations at least seventy two hours before such meeting.
2. Public notice of the time and place of every other meeting shall be given, to the extent practicable, to the news media and shall be conspicuously posted in one or more designated public locations at a reasonable time prior thereto.
3. The public notice provided for by this section shall not be construed to require publication as a legal notice.
4. If videoconferencing is used to conduct a meeting, the public notice for the meeting shall inform the public that videoconferencing will be used, identify the locations for the meeting, and state that the public has the right to attend the meeting at any of the locations.

Operator - the person, persons or legal entity that is responsible for the small MS4, as indicated by signing the NOI to gain coverage for the MS4 under this *SPDES general permit*.

Outfall - is defined as any point where a municipally owned and operated separate storm sewer system discharges to either surface waters of the State or to another MS4. Outfalls

include discharges from pipes, ditches, swales, and other points of concentrated flow. However, areas of non-concentrated (sheet) flow which drain to surface waters of the State or to another MS4's system are not considered outfalls and should not be identified as such on the system map.

Pollutants of Concern - there are POCs that are primary (comprise the majority) sources of stormwater pollutants and others that are secondary (less likely).

- The POCs that are primarily of concern are: nitrogen, phosphorus, silt and sediment, pathogens, flow, and floatables impacting impaired waterbodies listed on the Priority Waterbody List known to come in contact with stormwater that could be discharged to that water body.

- The POCs that are secondarily of concern include but are not limited to petroleum hydrocarbons, heavy metals, and polycyclic aromatic hydrocarbons (PAHs), where stormwater or runoff is listed as the source of this impairment.

- The primary and secondary POCs can also impair waters not on the 303(d) list. Thus, it is important for the covered entity to assess known and potential POCs within the area served by their small MS4. This will allow the covered entity to address POCs appropriate to their MS4.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics in order to prepare a SWPPP that conforms to the Department's technical standard. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Reporting Date – means the end of the annual reporting period, March 9, as indicated in Part V.C.1.

Retrofit - means modifying or adding to existing infrastructure for the purpose of reducing pollutant loadings. Examples, some of which may not be effective for all pollutants, include:

Better site design approaches such as roof top disconnection, diversion of runoff to infiltration areas, soil de-compaction, riparian buffers, rain gardens, cisterns

Rehabilitation of existing storm sewer system by installation of standard stormwater treatment systems (ponds, wetlands, filtering, infiltration) or proprietary practices

Stabilize dirt roads (gravel, stone, water bar, check dam, diversion)

Conversion of dirt parking lots to pervious pavement, grassed or stone cover

Conversion of dry detention ponds to extended detention or wetland treatment systems

Retrofit by converting abandoned buildings to stormwater treatment systems

Retrofit of abandoned building to open space

Retrofit road ditches to enhance open channel design

Control the downstream effects of runoff from existing paved surfaces resulting in flooding and erosion in receiving waters

Control stream erosion by plunge pool, velocity dissipaters, and flow control devices for discharges from conveyance systems

Upgrade of an existing conveyance system to provide water quality and /or quantity control within the drainage structure

Section 303(d) Listed Waters - Section 303(d) is part of the federal CWA that requires the Department to periodically to prepare a list of all surface waters in the State for which beneficial uses of the water – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These are water quality-limited estuaries, lakes, and streams that fall short of state surface water quality standards, and are not expected to improve within the next two years. Refer to impaired waters for more information.

Single entity - An entity, formed in accordance with the applicable state and/or local legislation, with a legal authority and capacity (financial, resources, etc...) that gains coverage under the MS4 general permit to implement all or parts of the MS4 program within a jurisdiction on behalf of multiple MS4s in that geographic area.

Small MS4 - MS4 system within an urbanized area or other areas designated by the State.

SPDES general permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 authorizing a category of discharges.

Staff - actual employees of the covered entity or contracted entity.

State - means the State of New York.

State Pollutant Discharge Elimination System - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Stormwater - means that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the state.

Stormwater Management Program - the program implemented by the covered entity. Covered entities are required at a minimum to develop, implement and enforce a SWMP designed to address POCs and reduce the discharge of pollutants from the small MS4 to the MEP, to protect water quality, and to satisfy the appropriate water quality requirements of the *ECL* and Clean Water Act. The SWMP must address the MCM described in Part VIII.

The *SWMP* needs to include *measurable goals* for each of the *BMP*s. The measurable goals will help the covered entities assess the status and progress of their program. The SWMP should:

1. describe the BMP / measureable goal;
2. identify time lines / schedules and milestones for development and implementation;
3. include quantifiable goals to assess progress over time; and
4. describe how the covered entity will address POCs.

Guidance on developing SWMPs is available from the Department on its website. Examples of successful SWMPs and suggested measurable goals are also provided in EPA's Menu of BMPs available from its website. Note that this information is for guidance purposes only. An MS4 may choose to develop or implement equivalent methods equivalent to those made available by the Department and EPA to demonstrate compliance with the MCMs.

When creating the *SWMP*, the *covered entities s*hould assess activities already being performed that could help meet, or be modified to meet, permit requirements and be included in the *SWMP*. *Covered entities* can create their *SWMP* individually, with a group of other individual *covered entities* or a coalition of *covered entities*, or through the work of a third party entity.

Stormwater Management Program Plan- used by the covered entity to document developed, planned and implemented SWMP elements. The *SWMP plan* must describe how pollutants in stormwater runoff will be controlled. For previously unauthorized *small MS4s* seeking coverage, information included in the NOI should be obtained from the *SWMP plan*.

The *SWMP plan* is a separate document from the NOI and should not be submitted with the NOI or any annual reports unless requested.

The *SWMP plan* should include a detailed written explanation of all management practices, activities and other techniques the covered entity has developed, planned and implemented for their SWMP to address POCs and reduce pollutant discharges from their small MS4 to the MEP. The *SWMP plan* shall be revised to incorporate any new or modified *BMP*s or *measurable goals*.

Covered entities can create their *SWMP plan* individually, with a group of other individual *covered entities* or a coalition of *covered entities*, or through the work of a third party entity.

Documents to include are: applicable local laws, inter-municipal agreements and other legal authorities; staffing and staff development programs and organization charts; program budget; policy, procedures, and materials for each minimum measure; outfall and small MS4 system maps; stormwater management practice selection and measurable goals; operation and maintenance schedules; documentation of public outreach efforts and public comments; submitted construction site SWPPPs and review letters and construction site inspection reports.

The *SWMP plan* shall be made readily available to the covered entity's staff and to the public and regulators, such as *Department* and EPA staff. Portions of the *SWMP plan*, primarily policies and procedures, must be available to the management and staff of a *covered entity* that will be called upon to use them. For example, the technical standards and associated technical assistance documents and manuals for stormwater controls should be available to code enforcement officers, review engineers and planning boards. The local laws should be readily available to the town board and planning board. An integrated pest management program would have to be available to the parks department and the stormwater outfall and available sewer system mapping and catch basin cleaning schedule would have to be available to the department of public works.

Storm sewershed - the catchment area that drains into the storm sewer system based on the surface topography in the area served by the stormsewer. Adjacent catchment areas that drain to adjacent outfalls are not separate storm sewersheds.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Storm sewers are not waters of the state unless they are classified in 6 NYCRR Parts 800 to 941. Nonetheless, a discharge to a storm sewer shall be regulated as a discharge at the point where the storm sewer discharges to waters of the state. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Act and Environmental Conservation Law (other than cooling ponds as defined in 40 CFR 423.11(m)(see section 750 - 1.24) which also meet the criteria of this definition are not waters of the state. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the State (such as a disposal area in wetlands) nor resulted from impoundment of waters of the state.

SWPPP - as defined per the NYS DEC SPDES General Permit for Stormwater Discharges from Construction Activity or NYS DEC SPDES Multi-Sector General Permit for Stormwater Associated with Industrial Activity .

Total Maximum Daily Load - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations for point source discharges, load allocations for nonpoint sources, and a margin of safety.

Traditional Land Use Control MS4s - means a city, town or village with land use control authority.

Traditional Non-land Use Control MS4s - means any county agency without land use control.

Urbanized Area - is a land area comprising one or more places (central place(s)) and the adjacent densely settled surrounding area (urban fringe) that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile, as defined by the US Bureau of Census. Outlines the extent of automatically regulated areas, often do not extend to the political boundaries of a city, town, or village. SWMPs are only required within the UA. However, the Department encourages covered entities to voluntarily extend their SWMP programs at least to the extent of the storm sewershed that flows into the UA or extend further to their entire jurisdiction. For ease of creation and administration of local laws, ordinances or other regulatory mechanisms, these should be created to apply to the full jurisdictional boundary of municipalities.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

Part XI. RE-OPENER CLAUSE

If there is evidence indicating that the stormwater discharges authorized by this permit cause or have the reasonable potential to cause or contribute to a violation of a water quality standard, the covered entity may be required at the Department 's sole discretion to obtain an individual SPDES permit or an alternative *SPDES general permit* or the permit may be modified. In addition, coverage under this permit could terminate, meaning the discharge must cease.

APPENDICES

APPENDIX 1. LIST OF NYS DEC REGIONAL OFFICES

Region	COVERING THE FOLLOWING COUNTIES:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS	DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, PO BOX 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD, PO BOX 220 WARRENSBURG, NY 12885-0220 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX 2. IMPAIRED SEGMENTS AND PRIMARY POLLUTANTS OF CONCERN

APPENDIX 2 (CONTINUED)
IMPAIRED SEGMENTS AND SECONDARY POLLUTANTS OF CONCERN

COUNTY	WATERBODY NAME	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	phosphorus
Albany	Basic Creek Reservoir	phosphorus
Bronx	Van Cortlandt Lake	phosphorus
Bronx	Bronx River, Lower	pathogens
Bronx	Bronx River, Lower	floatables
Bronx	Bronx River, Middle, and tribs	pathogens
Bronx	Bronx River, Middle, and tribs	floatables
Bronx	Westchester Creek	floatables
Bronx	Hutchinson River, Lower, and tribs	Floatables
Broome	Susquehanna River, Lower, Main Stem	Pathogens
Broome	Whitney Point Lake/Reservoir	phosphorus
Broome	Park Creek and tribs	pathogens
Broome	Beaver Lake	phosphorus
Broome	White Birch Lake	phosphorus
Cayuga	Little Sodus Bay	phosphorus
Cayuga	Owasco Lake	pathogens
Cayuga, Tompkins	Owasco Inlet, Upper, and tribs	phosphorus
Chautauqua	Lake Erie (Dunkirk Harbor)	pathogens
Chautauqua	Chadakoin River and tribs	phosphorus
Chautauqua	Chautauqua Lake, South	phosphorus
Chautauqua	Chautauqua Lake, North	phosphorus
Chautauqua	Bear Lake	phosphorus
Chautauqua	Lower Cassadaga Lake	phosphorus
Chautauqua	Middle Cassadaga Lake	phosphorus
Chautauqua	Findley Lake	phosphorus
Chenango	Unadilla River, Lower, Main Stem	pathogens
Clinton	Lake Champlain, Main Lake, North	phosphorus
Clinton	Lake Champlain, Main Lake, Middle	phosphorus
Clinton	Great Chazy River, Lower, Main Stem	silt/sediment
Columbia	Robinson Pond	phosphorus
Columbia	Kinderhook Lake	phosphorus
Delaware	Cannonsville Reservoir	phosphorus
Dutchess	Hillside Lake	phosphorus
Dutchess	Wappinger Lakes	phosphorus
Dutchess	Wappinger Lakes	silt/sediment
Dutchess	Fall Kill and tribs	phosphorus
Dutchess	Rudd Pond	phosphorus

COUNTY	WATERBODY NAME	POLLUTANT
Erie	Ellicott Creek, Lower, and tribs	phosphorus
Erie	Ellicott Creek, Lower, and tribs	silt/sediment
Erie	Ransom Creek, Lower, and tribs	pathogens
Erie	Ransom Creek, Upper, and tribs	pathogens
Erie	Beeman Creek and tribs	phosphorus
Erie	Beeman Creek and tribs	pathogens
Erie	Murder Creek, Lower, and tribs	phosphorus
Erie	Murder Creek, Lower, and tribs	pathogens
Erie	Two Mile Creek and tribs	pathogens
Erie	Two Mile Creek and tribs	floatables
Erie	Scajaquada Creek, Lower, and tribs	floatables
Erie	Scajaquada Creek, Lower, and tribs	pathogens
Erie	South Branch Smoke Cr, Lower, and tribs	phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs	silt/sediment
Erie	Rush Creek and tribs	pathogens
Erie	Rush Creek and tribs	phosphorus
Erie	Little Sister Creek, Lower, and tribs	phosphorus
Erie	Little Sister Creek, Lower, and tribs	pathogens
Essex	Lake Champlain, Main Lake, South	phosphorus
Essex	Lake Champlain, South Lake	phosphorus
Genesee	Tonawanda Creek, Middle, Main Stem	phosphorus
Genesee	Tonawanda Creek, Middle, Main Stem	silt/sediment
Genesee	Tonawanda Creek, Upper, and minor tribs	silt/sediment
Genesee	Bowen Brook and tribs	phosphorus
Genesee	Little Tonawanda Creek, Lower, and tribs	silt/sediment
Genesee	Oak Orchard Cr, Upper, and tribs	phosphorus
Genesee	Black Creek, Upper, and minor tribs	phosphorus
Genesee	Bigelow Creek and tribs	phosphorus
Greene	Schoharie Reservoir	silt/sediment
Greene	Shingle Kill and tribs	pathogens
Greene	Sleepy Hollow Lake	silt/sediment
Herkimer	Unadilla River, Middle, and minor tribs	pathogens
Herkimer	Mohawk River, Main Stem	pathogens
Herkimer	Mohawk River, Main Stem	floatables
Herkimer	Steele Creek tribs	phosphorus
Herkimer	Steele Creek tribs	silt/sediment
Jefferson	Moon Lake	phosphorus
Kings	Coney Island Creek	pathogens
Kings	Coney Island Creek	floatables
Kings	Gowanus Canal	floatables
Kings	Hendrix Creek	nitrogen
Kings	Hendrix Creek	pathogens

COUNTY	WATERBODY NAME	POLLUTANT
Kings	Hendrix Creek	floatables
Kings	Paerdegat Basin	floatables
Kings	Mill Basin and tidal tribs	floatables
Lewis	Beaver River, Lower, and tribs	pathogens
Lewis	Beaver River, Lower, and tribs	floatables
Lewis	Mill Creek/South Branch, and tribs	phosphorus
Lewis	Mill Creek/South Branch, and tribs	pathogens
Livingston	Conesus Lake	phosphorus
Livingston	Jaycox Creek and tribs	phosphorus
Livingston	Jaycox Creek and tribs	silt/sediment
Livingston	Mill Creek and minor tribs	silt/sediment
Madison	Canastota Creek, Lower, and tribs	pathogens
Monroe	Rochester Embayment - West	pathogens
Monroe	Mill Creek and tribs	phosphorus
Monroe	Mill Creek and tribs	pathogens
Monroe	Shipbuilders Creek and tribs	phosphorus
Monroe	Shipbuilders Creek and tribs	pathogens
Monroe	Minor Tribs to Irondequoit Bay	phosphorus
Monroe	Minor Tribs to Irondequoit Bay	pathogens
Monroe	Thomas Creek/White Brook and tribs	phosphorus
Monroe	Buck Pond	phosphorus
Monroe	Long Pond	phosphorus
Monroe	Cranberry Pond	phosphorus
Monroe	Genesee River, Lower, Main Stem	phosphorus
Monroe	Genesee River, Lower, Main Stem	pathogens
Monroe	Genesee River, Lower, Main Stem	silt/sediment
Monroe	Genesee River, Middle, Main Stem	phosphorus
Monroe	Black Creek, Lower, and minor tribs	phosphorus
Nassau	Long Island Sound, Nassau County	pathogens
Nassau	Long Island Sound, Nassau County	nitrogen
Nassau	Manhasset Bay, and tidal tribs	pathogens
Nassau	Manhasset Bay, and tidal tribs	pathogens
Nassau	Hempstead Harbor, south, and tidal tribs	pathogens
Nassau	Glen Cove Creek, Lower, and tribs	pathogens
Nassau	Glen Cove Creek, Lower, and tribs	silt/sediment
Nassau	Dosoris Pond	pathogens
Nassau	Mill Neck Creek and tidal tribs	pathogens
Nassau	South Oyster Bay	pathogens
Nassau	East Bay	pathogens
Nassau	LI Tribs (fresh) to East Bay	phosphorus
Nassau	LI Tribs (fresh) to East Bay	silt/sediment
Nassau	Middle Bay	pathogens

COUNTY	WATERBODY NAME	POLLUTANT
Nassau	East Rockaway Inlet	pathogens
Nassau	Reynolds Channel, east	pathogens
Nassau	East Meadow Brook, Upper, and tribs	silt/sediment
Nassau	Hempstead Bay	Nitrogen
Nassau	Hempstead Bay	Pathogens
Nassau	Hempstead Lake	Phosphorus
Nassau	Grant Park Pond	Phosphorus
Nassau	Woodmere Channel	Pathogens
New York	East River, Lower	Floatables
New York	Harlem River	Floatables
Niagara	Bergholtz Creek and tribs	Phosphorus
Niagara	Bergholtz Creek and tribs	Pathogens
Oneida	Utica Harbor	Pathogens
Oneida	Utica Harbor	Floatables
Oneida	Mohawk River, Main Stem	Pathogens
Oneida	Mohawk River, Main Stem	Floatables
Oneida	Mohawk River, Main Stem	Pathogens
Oneida	Mohawk River, Main Stem	Floatables
Oneida	Ballou, Nail Creeks and tribs	Phosphorus
Oneida	Ninemile Creek, Lower, and tribs	Pathogens
Onondaga	Limestone Creek, Lower, and minor tribs	Pathogens
Onondaga	Seneca River, Lower, Main Stem	Pathogens
Onondaga	Onondaga Lake, northern end	Phosphorus
Onondaga	Onondaga Lake, southern end	pathogens
Onondaga	Onondaga Lake, southern end	phosphorus
Onondaga	Minor Tribs to Onondaga Lake	phosphorus
Onondaga	Minor Tribs to Onondaga Lake	pathogens
Onondaga	Bloody Brook and tribs	pathogens
Onondaga	Ley Creek and tribs	pathogens
Onondaga	Ley Creek and tribs	phosphorus
Onondaga	Onondaga Creek, Lower, and tribs	phosphorus
Onondaga	Onondaga Creek, Lower, and tribs	pathogens
Onondaga	Onondaga Creek, Middle, and tribs	silt/sediment
Onondaga	Onondaga Creek, Middle, and tribs	phosphorus
Onondaga	Onondaga Creek, Middle, and tribs	pathogens
Onondaga	Onondaga Creek, Upper, and minor tribs	silt/sediment
Onondaga	Harbor Brook, Lower, and tribs	phosphorus
Onondaga	Harbor Brook, Lower, and tribs	pathogens
Onondaga	Ninemile Creek, Lower, and tribs	phosphorus
Onondaga	Ninemile Creek, Lower, and tribs	pathogens
Ontario	Hemlock Lake Outlet and minor tribs	phosphorus
Ontario	Hemlock Lake Outlet and minor tribs	pathogens

COUNTY	WATERBODY NAME	POLLUTANT
Ontario	Honeoye Lake	phosphorus
Ontario	Great Brook and minor tribs	phosphorus
Ontario	Great Brook and minor tribs	silt/sediment
Orange	Greenwood Lake	phosphorus
Oswego	Lake Neatahwanta	phosphorus
Otsego	Susquehanna River, Main Stem	pathogens
Putnam	Croton Falls Reservoir	phosphorus
Putnam	West Branch Reservoir	phosphorus
Putnam	Boyd Corners Reservoir	phosphorus
Putnam	Middle Branch Reservoir	phosphorus
Putnam	Lake Carmel	phosphorus
Putnam	Diverting Reservoir	phosphorus
Putnam	East Branch Reservoir	phosphorus
Putnam	Bog Brook Reservoir	phosphorus
Putnam	Oscawana Lake	phosphorus
Queens	Newtown Creek and tidal tribs	floatables
Queens	East River, Upper	floatables
Queens	East River, Upper	floatables
Queens	Flushing Creek/Bay	nitrogen
Queens	Flushing Creek/Bay	floatables
Queens	Little Neck Bay	pathogens
Queens	Alley Creek/Little Neck Bay Trib	floatables
Queens	Jamaica Bay, Eastern, and tribs	nitrogen
Queens	Jamaica Bay, Eastern, and tribs	pathogens
Queens	Jamaica Bay, Eastern, and tribs	floatables
Queens	Thurston Basin	floatables
Queens	Bergen Basin	Nitrogen
Queens	Bergen Basin	pathogens
Queens	Bergen Basin	floatables
Queens	Shellbank Basin	nitrogen
Queens	Spring Creek and tribs	pathogens
Queens	Spring Creek and tribs	floatables
Rensselaer	Snyders Lake	phosphorus
Richmond	Raritan Bay (Class SA)	pathogens
Richmond	Arthur Kill (Class I) and minor tribs	floatables
Richmond	Newark Bay	floatables
Richmond	Kill Van Kull	floatables
Richmond	Grasmere, Arbutus and Wolfes Lakes	phosphorus
Saratoga	Dwaas Kill and tribs	Phosphorus
Saratoga	Dwaas Kill and tribs	silt/sediment
Saratoga	Schuyler Creek and tribs	phosphorus
Saratoga	Schuyler Creek and tribs	pathogens

COUNTY	WATERBODY NAME	POLLUTANT
Saratoga	Lake Lonely	phosphorus
Saratoga	Tribs to Lake Lonely	Phosphorus
Saratoga	Tribs to Lake Lonely	pathogens
Schenectady	Collins Lake	phosphorus
Schoharie	Cobleskill Creek, Lower, and tribs	pathogens
Schoharie	Engleville Pond	phosphorus
Schoharie	Summit Lake	phosphorus
St.Lawrence	Black Lake Outlet/Black Lake	phosphorus
Steuben	Lake Salubria	phosphorus
Steuben	Smith Pond	phosphorus
Suffolk	Millers Pond	phosphorus
Suffolk	Beach/Island Ponds, Fishers Island	pathogens
Suffolk	Dering Harbor	pathogens
Suffolk	Tidal Tribs to Gr Peconic Bay, Northshr	pathogens
Suffolk	Mattituck (Marratooka) Pond	phosphorus
Suffolk	Mattituck (Marratooka) Pond	pathogens
Suffolk	Flanders Bay, West/Lower Sawmill	nitrogen
Suffolk	Meetinghouse/Terrys Creeks and tribs	nitrogen
Suffolk	Meetinghouse/Terrys Creeks and tribs	pathogens
Suffolk	Peconic River, Lower, and tidal tribs	nitrogen
Suffolk	Peconic River, Lower, and tidal tribs	pathogens
Suffolk	Scallop Pond	pathogens
Suffolk	Oyster Pond/Lake Munchogue	pathogens
Suffolk	Phillips Creek, Lower, and tidal tribs	pathogens
Suffolk	Quogue Canal	pathogens
Suffolk	Forge River, Lower and Cove	pathogens
Suffolk	Tidal tribs to West Moriches Bay	Nitrogen
Suffolk	Tidal tribs to West Moriches Bay	pathogens
Suffolk	Canaan Lake	silt/sediment
Suffolk	Canaan Lake	phosphorus
Suffolk	Nicoll Bay	pathogens
Suffolk	Lake Ronkonkoma	phosphorus
Suffolk	Lake Ronkonkoma	pathogens
Suffolk	Great Cove	pathogens
Tompkins	Cayuga Lake, Southern End	phosphorus
Tompkins	Cayuga Lake, Southern End	silt/sediment
Tompkins	Cayuga Lake, Southern End	pathogens
Ulster	Ashokan Reservoir	silt/sediment
Ulster	Esopus Creek, Upper, and minor tribs	silt/sediment
Warren	Lake George	silt/sediment
Warren	Tribs to L.George, Village of L George	silt/sediment
Warren	Huddle/Finkle Brooks and tribs	silt/sediment

COUNTY	WATERBODY NAME	POLLUTANT
Warren	Indian Brook and tribs	silt/sediment
Warren	Hague Brook and tribs	silt/sediment
Washington	Lake Champlain, South Bay	phosphorus
Washington	Tribs to L.George, East Shore	silt/sediment
Washington	Cossayuna Lake	phosphorus
Wayne	Blind Sodus Bay	phosphorus
Wayne	Port Bay	phosphorus
Westchester	Saw Mill River, Lower, and tribs	floatables
Westchester	New Croton Reservoir	phosphorus
Westchester	Upper New Croton/Muscoot Reservoir	phosphorus
Westchester	Amawalk Reservoir	phosphorus
Westchester	Lake Lincolndale	phosphorus
Westchester	Peach Lake	pathogens
Westchester	Peach Lake	phosphorus
Westchester	Titicus Reservoir	phosphorus
Westchester	Cross River Reservoir	phosphorus
Westchester	Lake Meahaugh	phosphorus
Westchester	Bronx River, Upper, and tribs	pathogens
Westchester	New Rochelle Harbor	pathogens
Westchester	New Rochelle Harbor	floatables
Westchester	Long Island Sound, Westchester Co	pathogens
Westchester	Long Island Sound, Westchester Co	nitrogen
Westchester	Larchmont Harbor	pathogens
Westchester	Larchmont Harbor	floatables
Westchester	Hutchinson River, Middle, and tribs	pathogens
Westchester	Mamaroneck Harbor	pathogens
Westchester	Mamaroneck Harbor	floatables
Westchester	Mamaroneck River, Lower	silt/sediment
Westchester	Mamaroneck River, Upper, and minor	silt/sediment
Westchester	Sheldrake River and tribs	phosphorus
Westchester	Sheldrake River and tribs	silt/sediment
Westchester	Milton Harbor	pathogens
Westchester	Milton Harbor	floatables
Westchester	Blind Brook, Lower	silt/sediment
Westchester	Blind Brook, Upper, and tribs	silt/sediment
Westchester	Port Chester Harbor	pathogens
Westchester	Port Chester Harbor	floatables
Westchester	Byram River, Lower	pathogens
Wyoming	Java Lake	phosphorus
Wyoming	Silver Lake	phosphorus
Oneida	Mohawk River, Main Stem	Copper
Westchester	Hutchinson River, Middle, and tribs	Oil and Grease

APPENDIX 3. NEW YORK CITY WATERSHED EAST OF THE HUDSON RIVER WATERSHED MAP

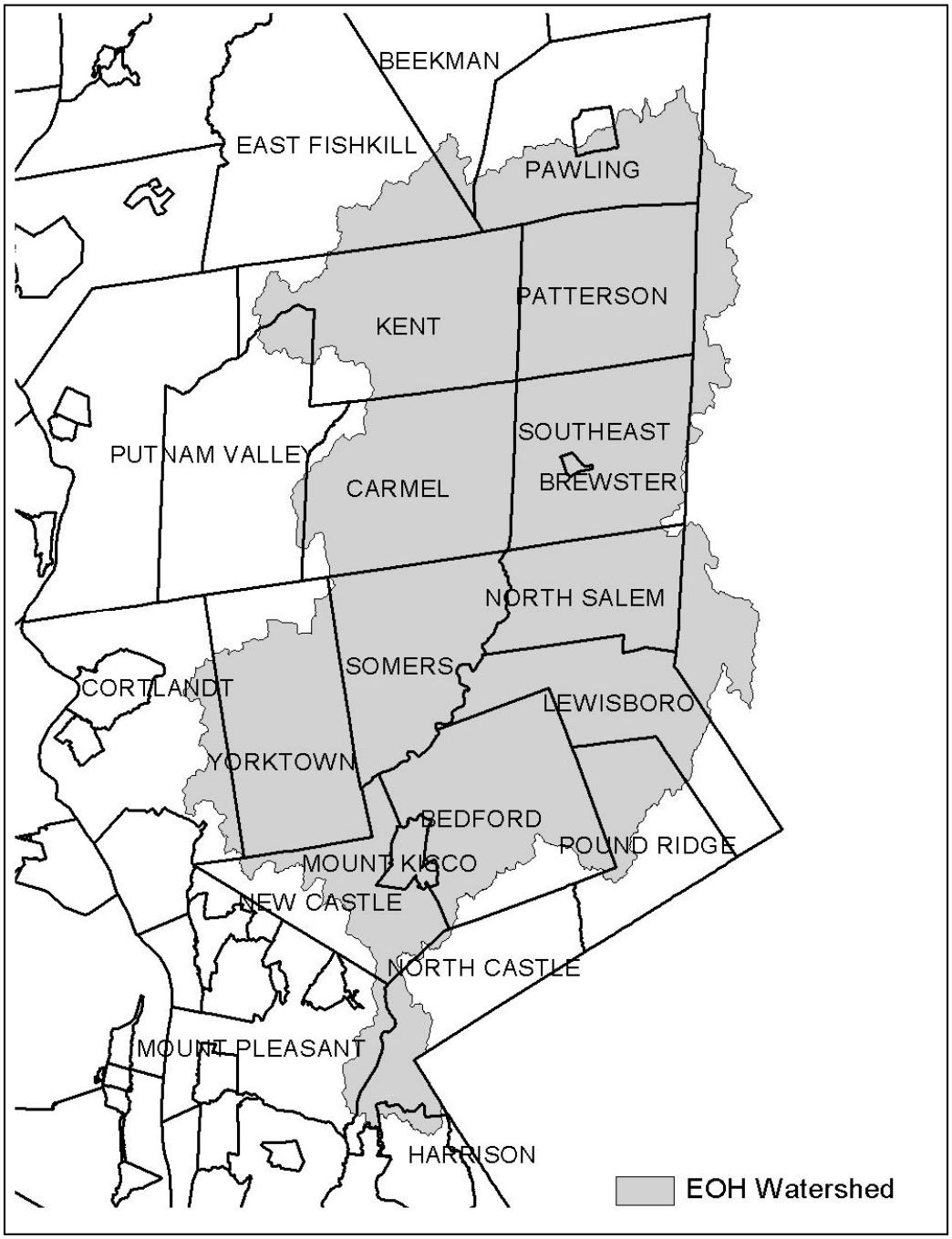


Figure 1. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 4. ONONDAGA LAKE WATERSHED MAP

Figure 2. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 5. GREENWOOD LAKE WATERSHED MAP

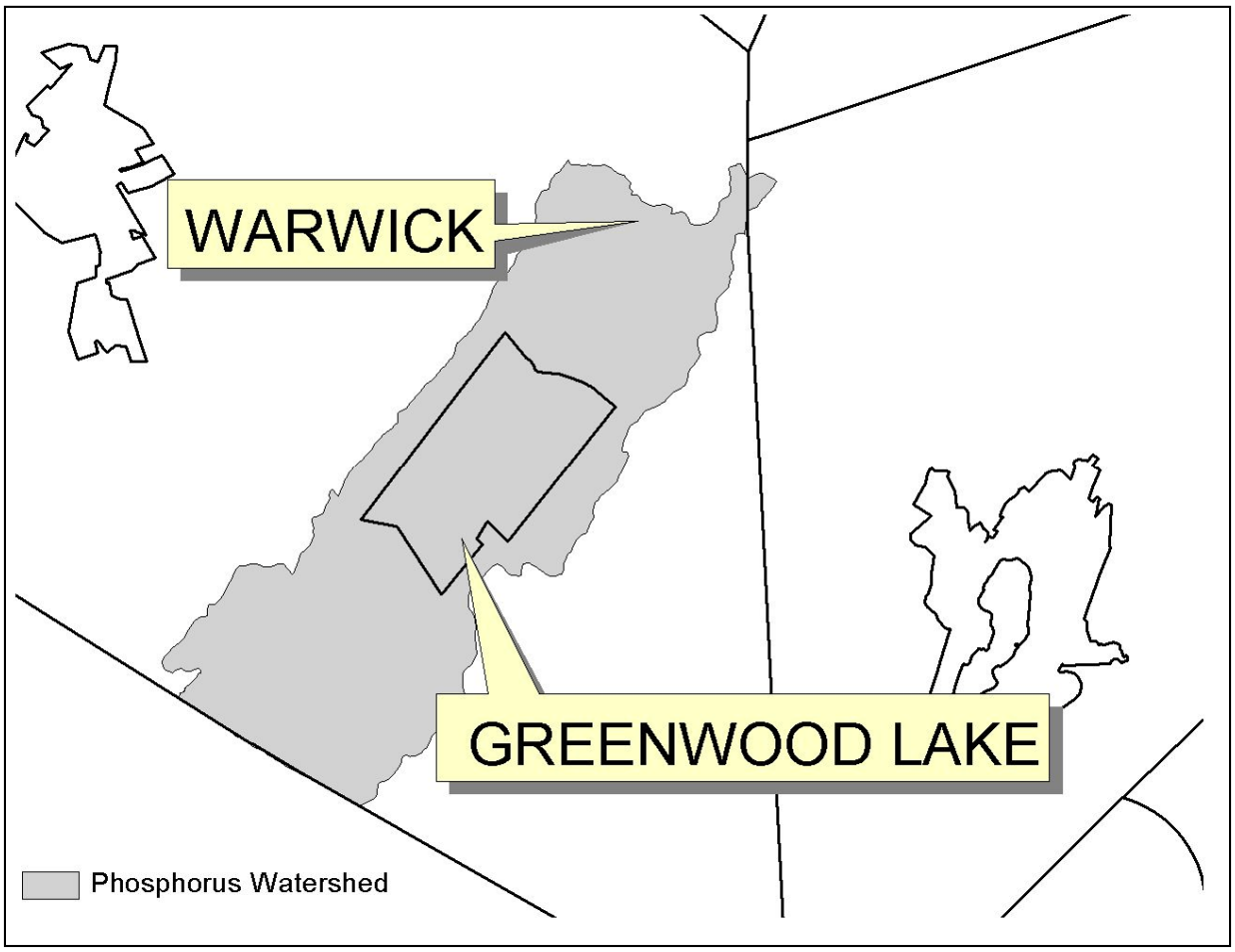


Figure 3. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 6. OYSTER BAY WATERSHED MAP

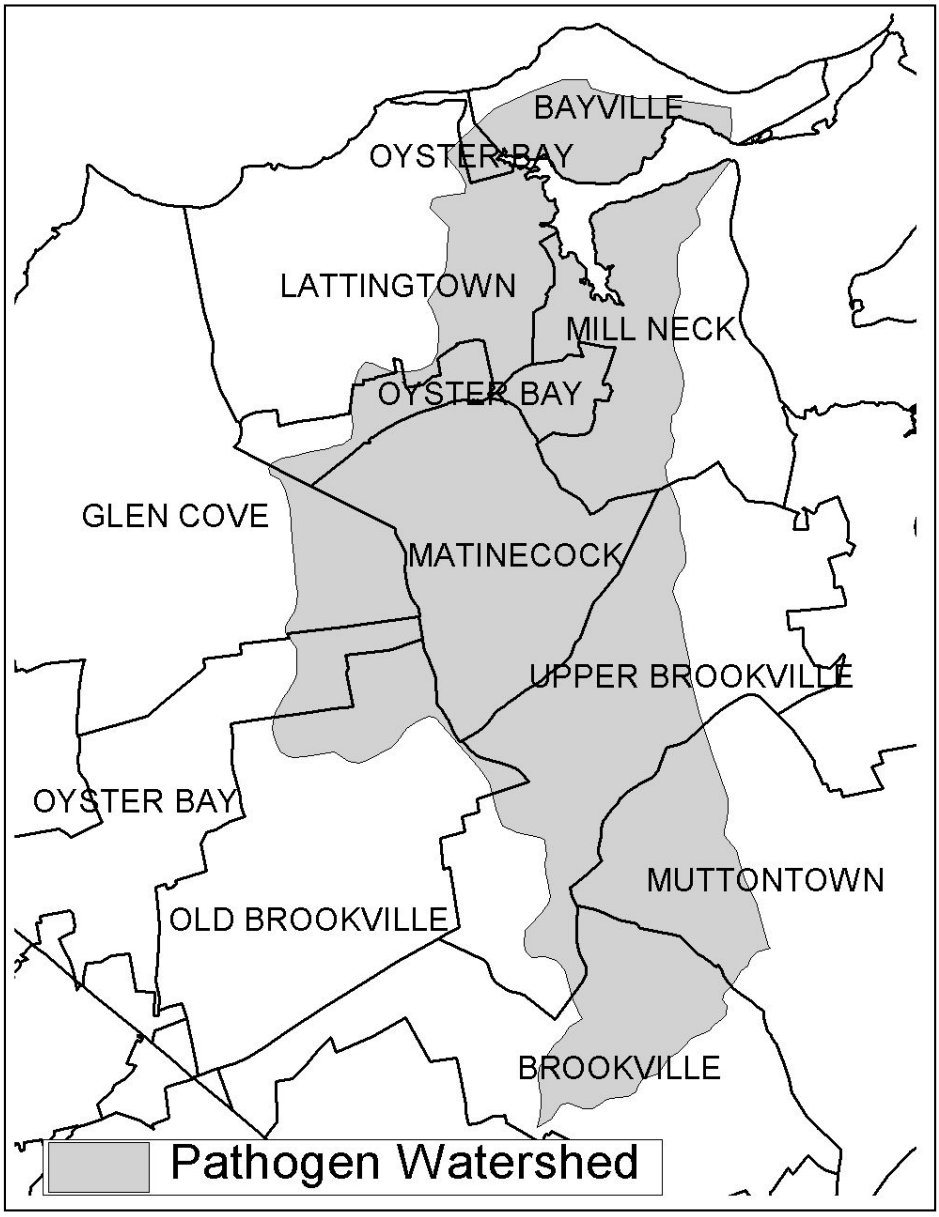


Figure 4. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 7. PECONIC ESTUARY PATHOGEN WATERSHED MAP

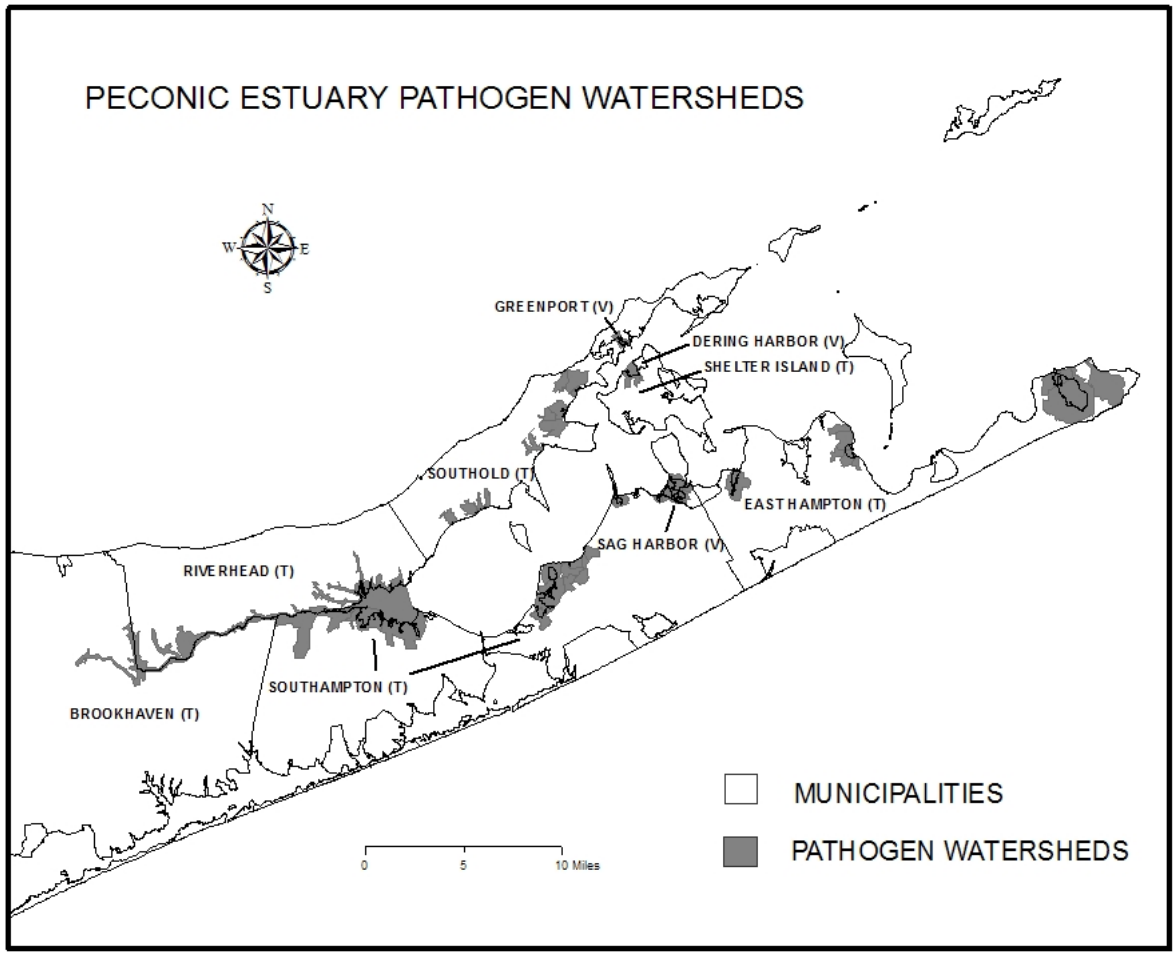


Figure 5. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 8. PECONIC ESTUARY NITROGEN WATERSHED MAP

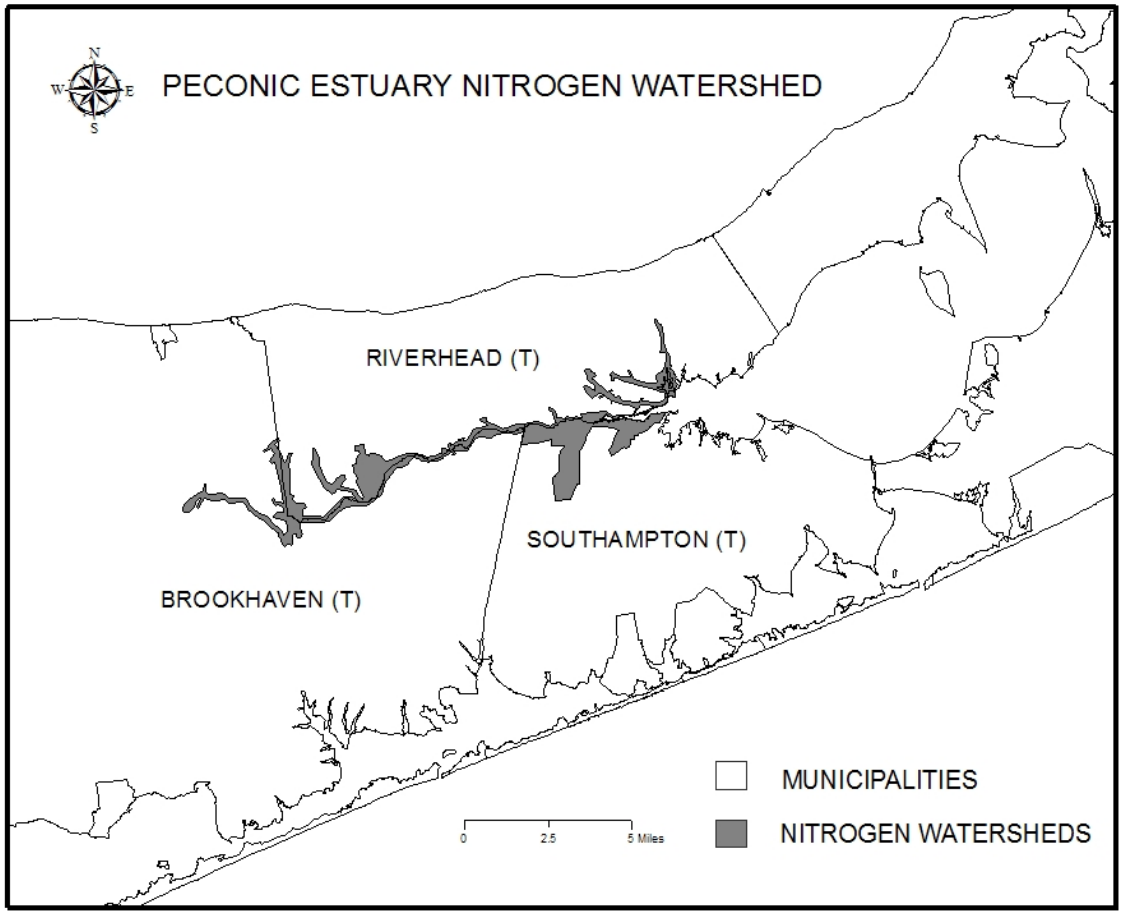


Figure 6. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 9. THE 27 LONG ISLAND SHELLFISHING IMAPIRED EMBAYMENT MAP

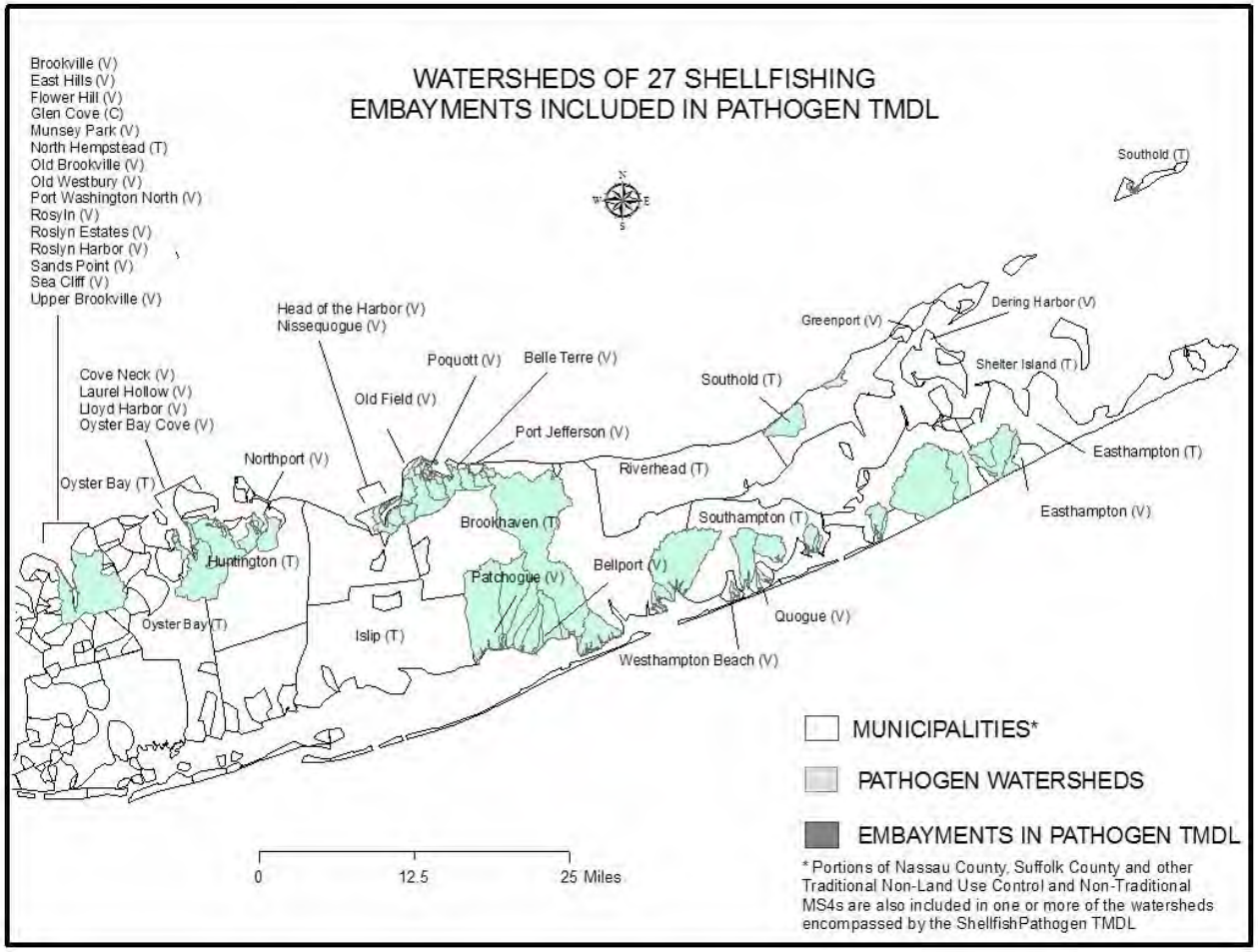


Figure 7. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

APPENDIX 10. LAKE OSCAWANA WATERSHED MAP

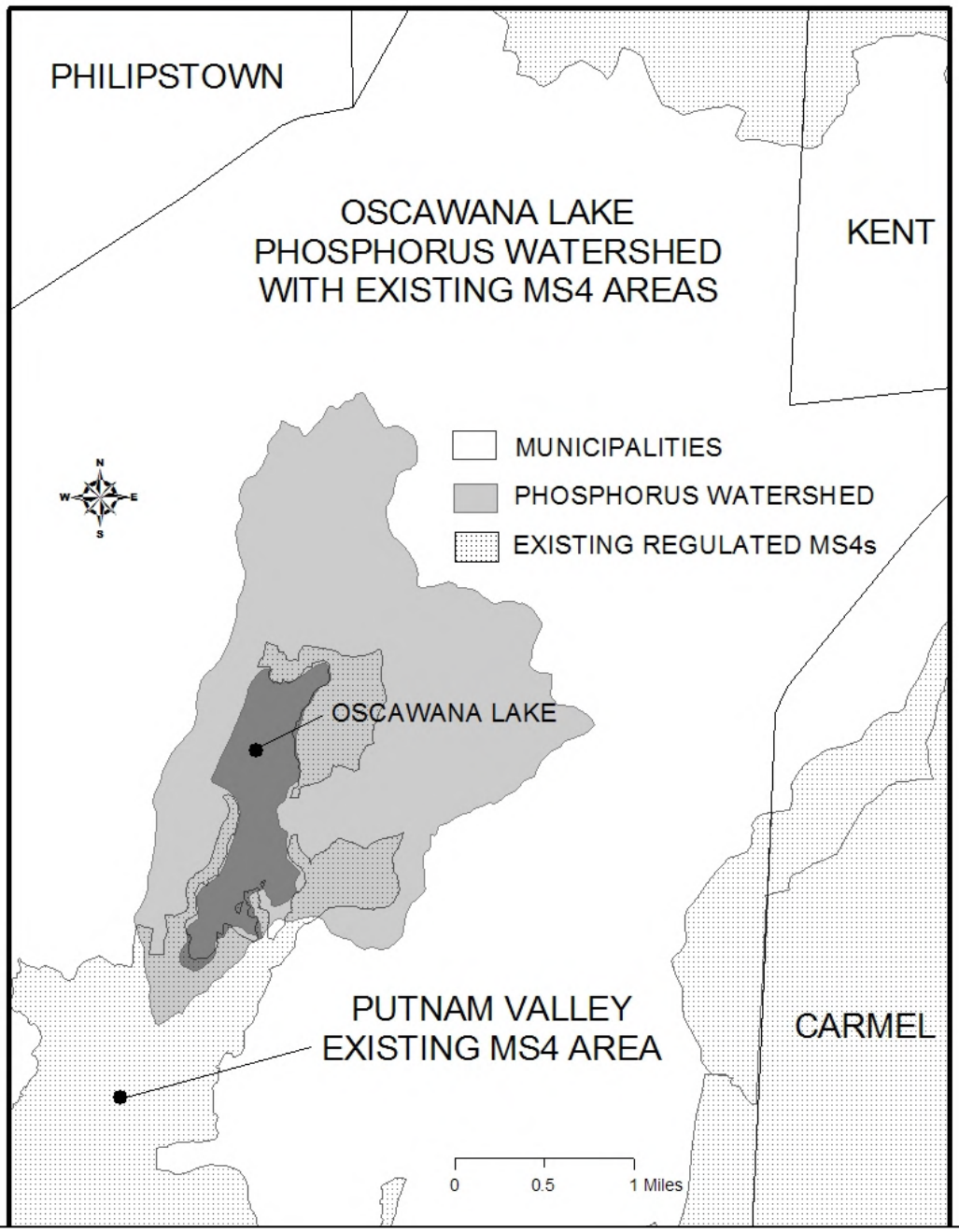


Figure 8. The requirements of watershed improvement strategies apply to the sewersheds within the shaded areas.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-15-002

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2015 Expiration Date: January 28, 2020

Modification Date:
July 14, 2015 – Correction of typographical error in definition of "New Development", Appendix A

November 23, 2016 – Updated to require the use of the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. The use of this standard will be required as of February 1, 2017.

John J. Ferguson
Chief Permit Administrator

Authorized Signature 11-14-16 Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System ("NPDES")* permit or by a state permit program. New York's *State Pollutant Discharge Elimination System ("SPDES")* is a NPDES-approved program with permits issued in accordance with the *Environmental Conservation Law ("ECL").*

This general permit ("permit") is issued pursuant to Article 17, Titles 7, 8 and Article 70 of the ECL. An *owner or operator* may obtain coverage under this permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this permit and the NOI for New York are available by calling (518) 402-8109 or at any New York State Department of Environmental Conservation ("the Department") regional office (see Appendix G).They are also available on the Department's website at:

http://www.dec.ny.gov/

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of "*construction activity*", as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a point source and therefore, pursuant to Article 17-0505 of the ECL, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. They cannot wait until there is an actual *discharge* from the construction site to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES
FROM CONSTRUCTION ACTIVITIES

Part I. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;

2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State.*

3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the Stormwater Pollution Prevention Plan ("SWPPP") the reason(s) for the deviation or alternative design and provide information

which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:

   (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s;

   (ii) Control stormwater *discharge*s to *minimize* channel and streambank erosion and scour in the immediate vicinity of the *discharge* points;

   (iii) *Minimize* the amount of soil exposed during *construction activity*;

   (iv) *Minimize* the disturbance of *steep slopes*;

   (v) *Minimize* sediment *discharge*s from the site;

   (vi) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharge*s, unless *infeasible*;

   (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and

   (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover.

b. **Soil Stabilization**. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

c. **Dewatering**. *Discharge*s from dewatering activities, including *discharge*s

from dewatering of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:

(i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;

(ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and

(iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Prohibited *Discharge*s.** The following *discharge*s are prohibited:

(i) Wastewater from washout of concrete;

(ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;

(iv) Soaps or solvents used in vehicle and equipment washing; and

(v) Toxic or hazardous substances from a spill or other release.

f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion

at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices ("SMPs") are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. ***Sizing Criteria* for *New Development***

(i) Runoff Reduction Volume ("RRv"): Reduce the total Water Quality Volume ("WQv") by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv

that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume ("Cpv"): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:

(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or

(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) Overbank Flood Control Criteria ("Qp"): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or

(2) A downstream analysis reveals that overbank control is not required.

(v) Extreme Flood Control Criteria ("Qf"): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or

(2) A downstream analysis reveals that overbank control is not required.

b. ***Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watershed**

(i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be calculated in accordance with the criteria in Section 10.3 of the Design Manual.

(ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or

standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

(iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:

(1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or

(2) The site *discharge*s directly to tidal waters, or fifth order or larger streams.

(iv) Overbank Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that overbank control is not required.

(v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

(1) the site *discharge*s directly to tidal waters or fifth order or larger streams, or
(2) A downstream analysis reveals that overbank control is not required.

c. ***Sizing Criteria* for *Redevelopment Activity***

(Part I.C.2.c.i)

(i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.

(1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
(2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or
(3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
(4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

(ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(iii) Overbank Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

(Part I.C.2.c.iv)

(iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.

d. ***Sizing Criteria*** **for Combination of** ***Redevelopment Activity*** **and** ***New Development***

Construction projects that include both *New Development* and *Redevelopment Activity* shall provide post-construction stormwater management controls that meet the *sizing criteria* calculated as an aggregate of the *Sizing Criteria* in Part I.C.2.a. or b. of this permit for the *New Development* portion of the project and Part I.C.2.c of this permit for *Redevelopment Activity* portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;

2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or

if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.

2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharge*s from *construction activities*.

3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater *discharges* may be authorized by this permit: *discharge*s from firefighting activities; fire hydrant flushings; waters to which cleansers or other components have not been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated *groundwater* or spring water; uncontaminated *discharge*s from construction site de-watering operations; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this permit, and who *discharge* as noted in this paragraph, and with the exception of flows from firefighting activities, these *discharges* must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.

4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

(Part I.F)

1. *Discharge*s after *construction activities* have been completed and the site has undergone *final stabilization*;

2. *Discharge*s that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;

3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;

4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an endangered or threatened species unless the *owner or operator* has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.C.2 of this permit.

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;

6. *Construction activities* for residential, commercial and institutional projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which disturb one or more acres of land with no existing *impervious cover*; and

   c. Which are undertaken on land with a Soil Slope Phase that is identified as an E or F, or the map unit name is inclusive of 25% or greater slope, on the United States Department of Agriculture (“USDA”) Soil Survey for the County where the disturbance will occur.

7. *Construction activities* for linear transportation projects and linear utility projects:

   a. Where the *discharge*s from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and

   b. Which disturb two or more acres of land with no existing *impervious cover*; and

   c. Which are undertaken on land with a Soil Slope Phase that is identified as an E or F, or the map unit name is inclusive of 25% or greater slope, on the USDA Soil Survey for the County where the disturbance will occur.

(Part I.F.8)

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.C.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:

   a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.

      - 1-5 acres of disturbance - 20 feet
      - 5-20 acres of disturbance - 50 feet
      - 20+ acres of disturbance - 100 feet, or

   b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
      (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
      (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
      (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
      (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or

   c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:
      (i) No Affect
      (ii) No Adverse Affect

(Part I.F.8.c.iii)

(iii) Executed Memorandum of Agreement, or

d. Documentation that:

(i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharge*s from *construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. OBTAINING PERMIT COVERAGE

A.Notice of Intent (NOI) Submittal

1. An *owner or operator* of a *construction activity* that is <u>not</u> subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed NOI form to the Department in order to be authorized to *discharge* under this permit. An *owner or operator* shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (http://www.dec.ny.gov/). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address.

NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505

2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department. An *owner or operator* shall use either the electronic (eNOI) or paper version of the NOI.

   The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the address in Part II.A.1.

(Part II.A.2)

The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.E. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4*.

3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.

4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

B. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.

2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:

   a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (http://www.dec.ny.gov/) for more information,

   b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621) have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators* of *construction activities* that are required to obtain *UPA* permits must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

   c. the final SWPPP has been prepared, and

   d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.

3. An *owner or operator* that has satisfied the requirements of Part II.B.2 above

(Part II.B.3)

will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:

a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or

(ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;

(iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:

(i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed "*MS4* SWPPP Acceptance" form, or

(ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed "MS4 SWPPP Acceptance" form.

4. The Department may suspend or deny an *owner's or operator's* coverage

(Part II.B.4)

under this permit if the Department determines that the SWPPP does not meet the permit requirements. In accordance with statute, regulation, and the terms and conditions of this permit, the Department may deny coverage under this permit and require submittal of an application for an individual SPDES permit based on a review of the NOI or other information pursuant to Part II.

5. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.B. of this permit.

C. General Requirements For Owners or Operators With Permit Coverage

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination ("NOT") has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.

2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-15-002), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, and all documentation necessary to demonstrate eligibility with this permit at the construction site until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.

3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*). At a minimum, the *owner or operator* must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

   a. The *owner or operator* shall

have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.

c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.

d. The *owner or operator* shall install any additional site specific practices needed to protect water quality.

e. The *owner or operator* shall include the requirements above in their SWPPP.

4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

5. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the *regulated, traditional land use control MS4* in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice

(Part II.D)

D. Permit Coverage for Discharges Authorized Under GP-0-10-001

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-10-001), an *owner or operator* of *a construction activity* with coverage under GP-0-10-001, as of the effective date of GP-0-15-002, shall be authorized to *discharge* in accordance with GP-0-15-002, unless otherwise notified by the Department.

   An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-15-002.

E. Change of *Owner or Operator*

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.A.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.

Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or operator* was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

(Part III)

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.

2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.

3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.

4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP:

   a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

   b. whenever there is a change in design, construction, or operation at the construction site that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* the Department or other regulatory authority.

5. The Department may notify the *owner or operator* at any time that the

(Part III.A.5)

SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.C.4. of this permit.

6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor.* The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

   The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

   > "I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharge*s from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

   In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the

trained contractor responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the construction site. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:

   a. Background information about the scope of the project, including the location, type and size of project;

   b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge*(s);

   c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);

   d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other

activity at the site that results in soil disturbance;

e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;

f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;

g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;

i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;

k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the construction site; and

l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design

and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

   Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

   The post-construction stormwater management practice component of the SWPPP shall include the following:

   a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

   b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;

   c. A Stormwater Modeling and Analysis Report that includes:

      (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;

      (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;

      (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;

      (iv) Summary table, with supporting calculations, which demonstrates

that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;

d. Soil testing results and locations (test pits, borings);

e. Infiltration test results, when required; and

f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria,* Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators* of *construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators* of the *construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

(Part IV)

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.

2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York, or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.

3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

(Part IV.C)

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
- Certified Professional in Erosion and Sediment Control (CPESC),
- Registered Landscape Architect, or
- someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].

1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:

   a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

   b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

   c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and

   d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:

   a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.

   b. For construction sites where soil disturbance activities are on-going and

the *owner or operator* has received authorization in accordance with Part II.C.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4,* the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization,* and all temporary, structural erosion and sediment control measures have been removed*;* and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.A.1 of this permit.

e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall

be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization,* all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of *discharge* from the construction site.

4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of *discharge* from the construction site. This shall include identification of any *discharges* of sediment from the construction site. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;

e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;

g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;

h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;

(Part IV.C.4.i)

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

l. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

6. All inspection reports shall be signed by the *qualified inspector.* Pursuant to Part II.C.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.A.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.

(Part V.A.2)

2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:

   a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

   b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;

   c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.E. of this permit.

   d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.

3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the "*Final Stabilization*" and "Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.

4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the "MS4 Acceptance" statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) required in Part V.A.3. of this permit.

(Part V.A.5)

5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:

   a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

   b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),

   c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,

   d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION OF RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.A.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

(Part VII)

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator,* its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to $37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

(Part VII.E)

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit , or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:

   a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

      (i) a president, secretary, treasurer, or vice-president of the

corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named

individual or any individual occupying a named position) and,

c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.

3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.

4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4,* or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any *owner or operator* authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any *discharge*r authorized by a general permit to apply for an individual SPDES permit, it shall notify the *discharge*r in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from *owner or operator* receipt of the notification letter, whereby the authorization to

discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge*(s), the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a construction site which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.

4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

(Part VII.N)

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with *construction activity* covered by this permit, the *owner or operator* of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A

Definitions

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

***Construction Activity*(ies) -** means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a construction site by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a construction site to a separate storm sewer system and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or point source.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied

on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State
or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters,

ditches, man-made
channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State*;*

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a *combined sewer*; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications.

Performance Criteria – means the design criteria listed under the "Required Elements" sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York..

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is required to gain coverage under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Stream bank restoration projects (does not include the placement of spoil material),
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that makes the transition between the road shoulder and the ditch or embankment,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or embankment,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), Overbank Flood (Qp), and Extreme Flood (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area with a Soil Slope Phase that is identified as an E or F, or

the map unit name is inclusive of 25% or greater slope, on the United States Department of Agriculture (“USDA”) Soil Survey for the County where the disturbance will occur.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part

621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B

Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single family home not located in one of the watersheds listed in Appendix C or not *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions with 25% or less impervious cover at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E
- Construction of a barn or other agricultural building, silo, stock yard or pen.

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
- Bike paths and trails
- Sidewalk construction projects that are not part of a road/ highway construction or reconstruction project
- Slope stabilization projects
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Land clearing and grading for the purposes of creating vegetated open space (i.e. recreational parks, lawns, meadows, fields), excluding projects that *alter hydrology from pre to post development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of less than five acres and construction activities that include the construction or reconstruction of impervious area

The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other agricultural building(e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional, includes hospitals, prisons, schools and colleges
- Industrial facilities, includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's and water treatment plants
- Office complexes
- Sports complexes
- Racetracks, includes racetracks with earthen (dirt) surface
- Road construction or reconstruction
- Parking lot construction or reconstruction
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover,* and constructed as part of an over-head electric transmission line project , wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C

Watersheds Where Enhanced Phosphorus Removal Standards Are Required

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual ("Design Manual").

- Entire New York City Watershed located east of the Hudson River **-** Figure 1
- Onondaga Lake Watershed **-** Figure 2
- Greenwood Lake Watershed **-**Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

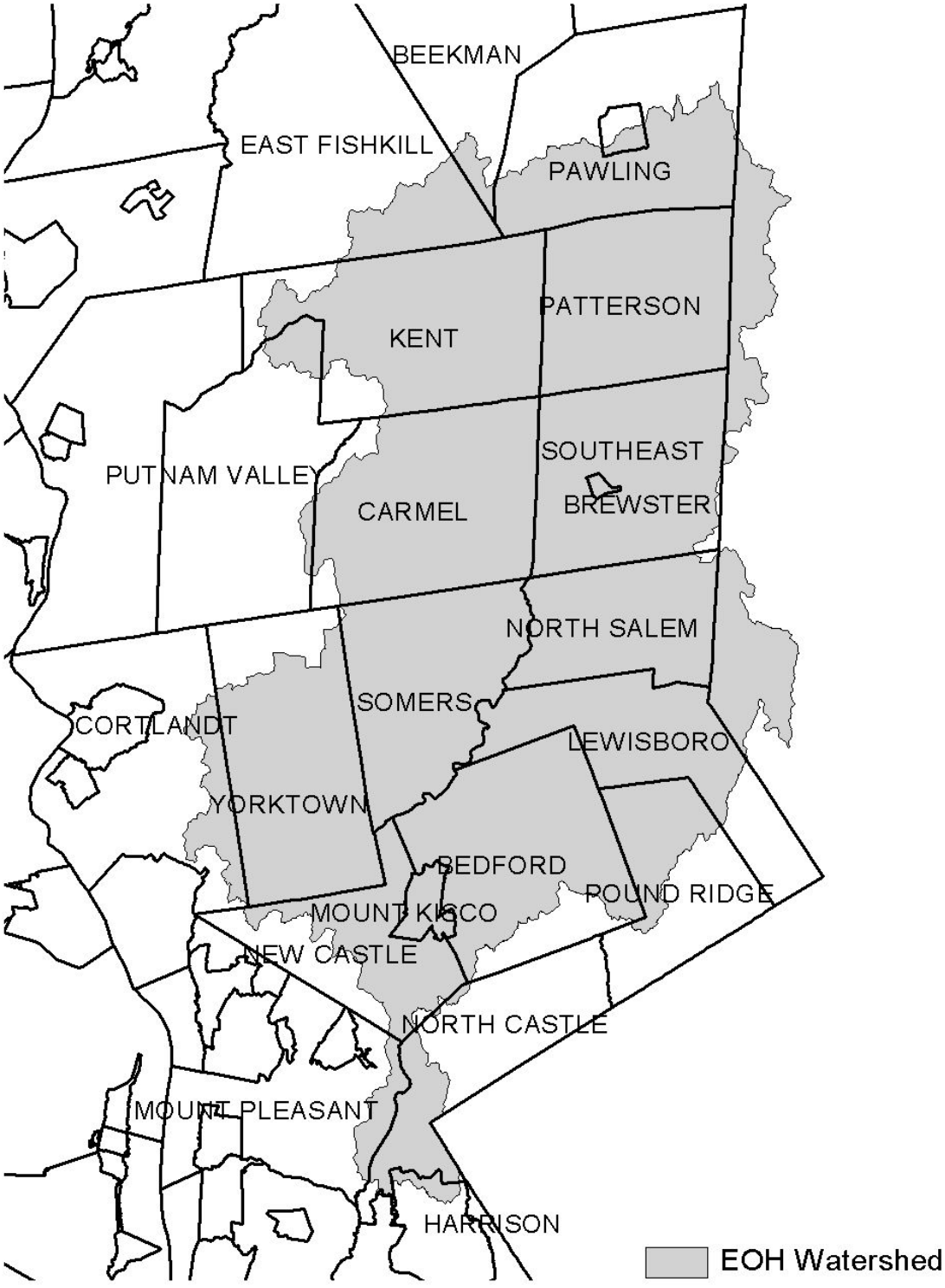


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

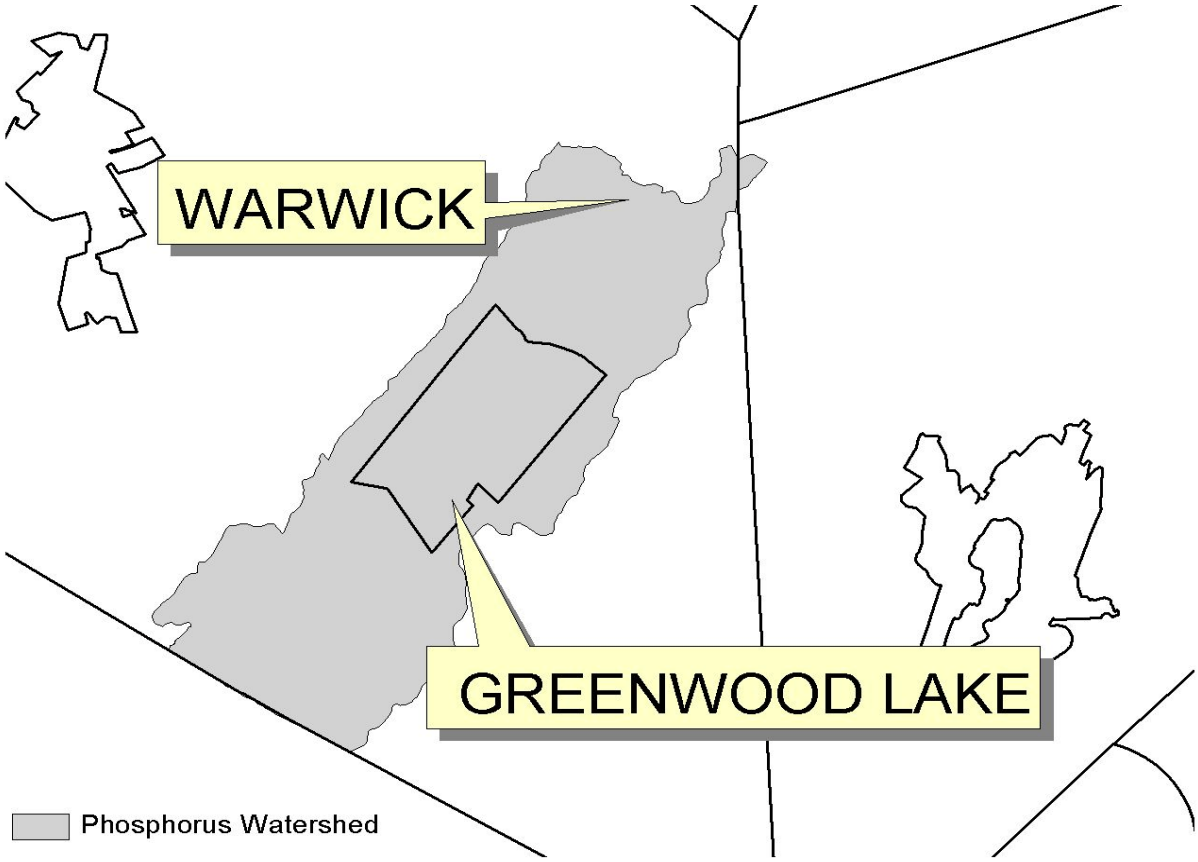


Figure 4 - Oscawana Lake Watershed

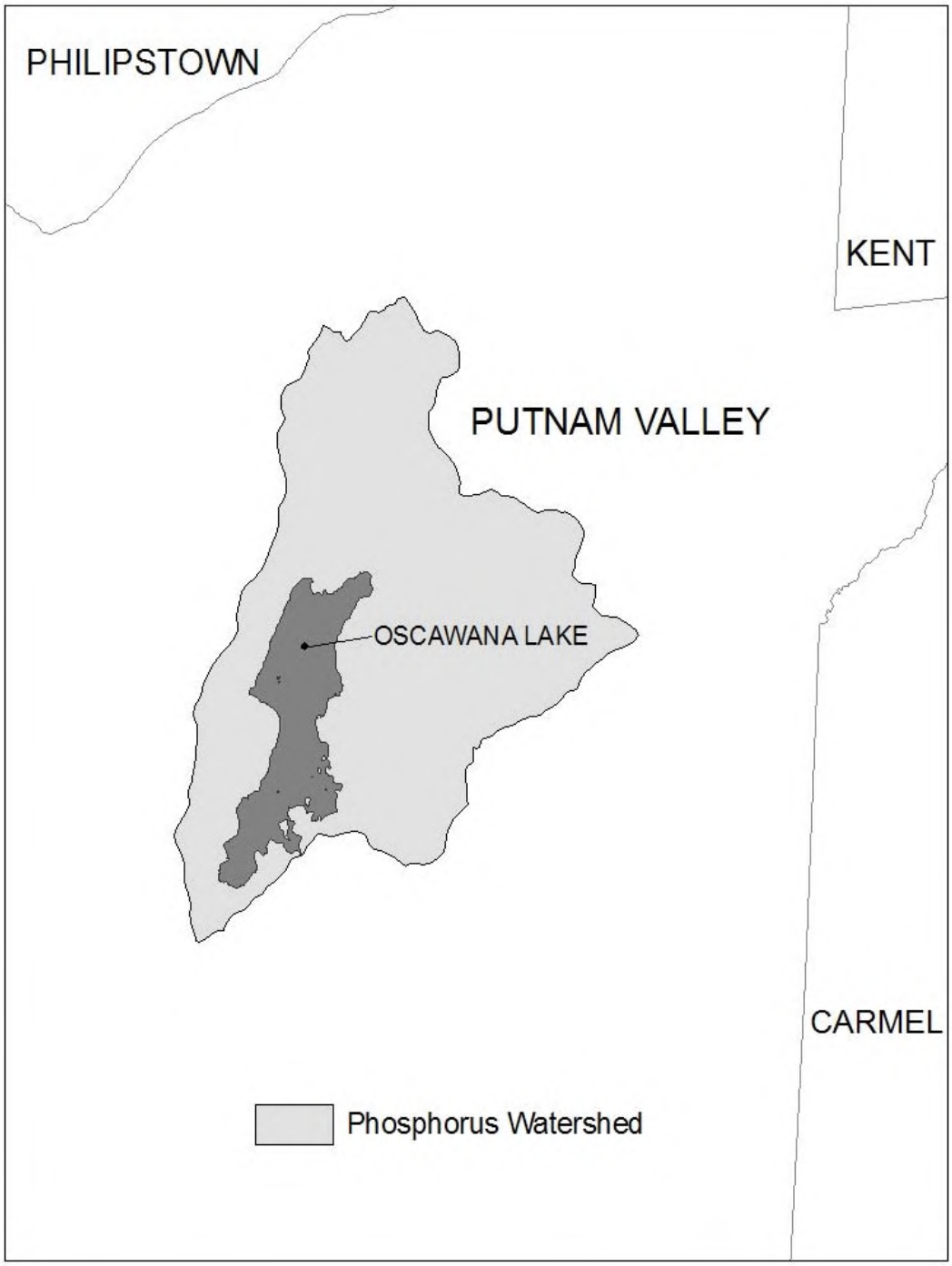
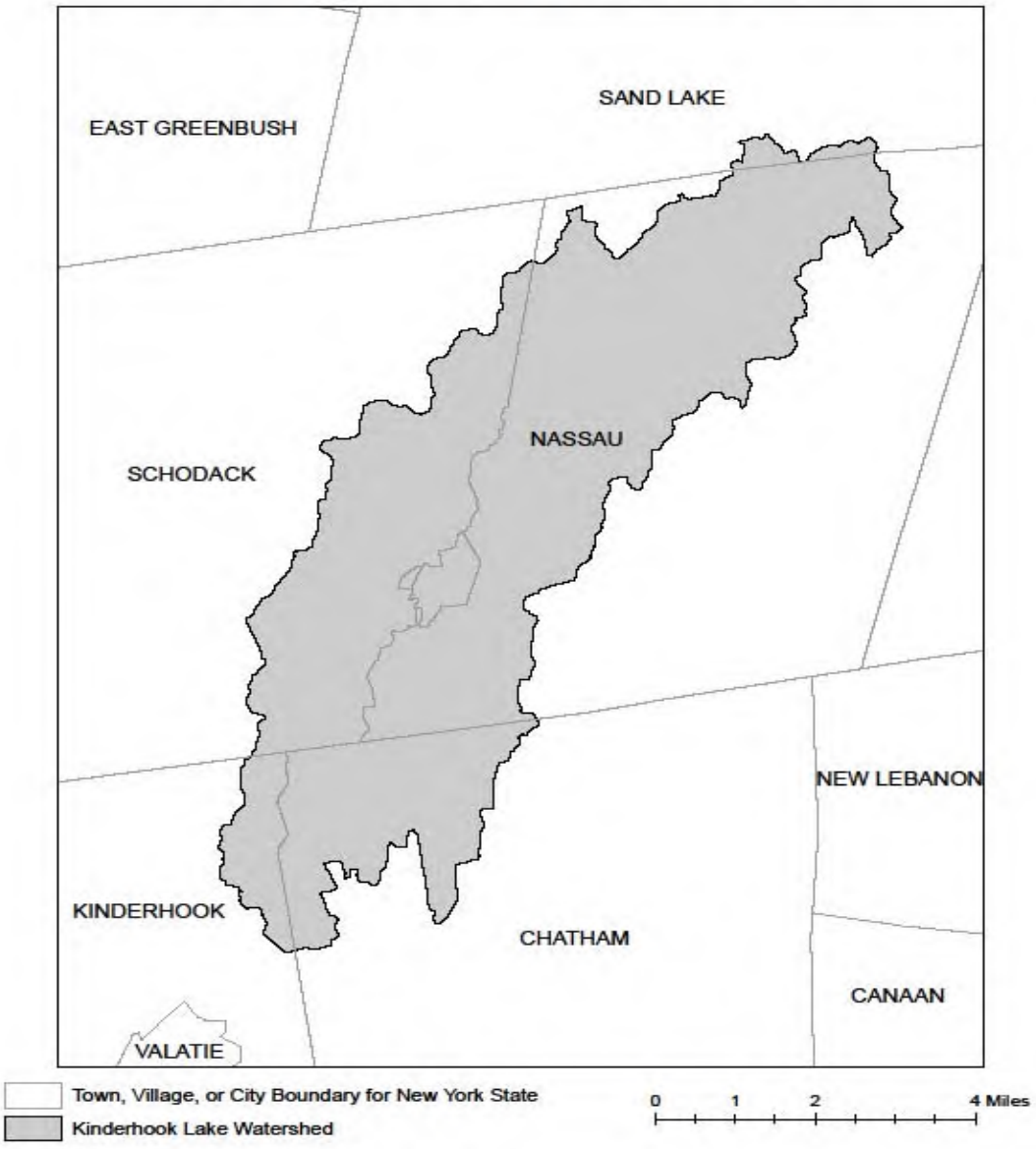


Figure 5: Kinderhook Lake Watershed



APPENDIX D

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River **-** See Figure 1 in Appendix C

APPENDIX E

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	COUNTY	WATERBODY
Albany	Ann Lee (Shakers) Pond, Stump Pond	Greene	Sleepy Hollow Lake
Albany	Basic Creek Reservoir	Herkimer	Steele Creek tribs
Allegheny	Amity Lake, Saunders Pond	Kings	Hendrix Creek
Bronx	Van Cortlandt Lake	Lewis	Mill Creek/South Branch and tribs
Broome	Whitney Point Lake/Reservoir	Livingston	Conesus Lake
Broome	Fly Pond, Deer Lake	Livingston	Jaycox Creek and tribs
Broome	Minor Tribs to Lower Susquehanna (north)	Livingston	Mill Creek and minor tribs
		Livingston	Bradner Creek and tribs
Cattaraugus	Allegheny River/Reservoir	Livingston	Christie Creek and tribs
Cattaraugus	Case Lake	Monroe	Lake Ontario Shoreline, Western
Cattaraugus	Linlyco/Club Pond	Monroe	Mill Creek/Blue Pond Outlet and tribs
Cayuga	Duck Lake	Monroe	Rochester Embayment - East
Chautauqua	Chautauqua Lake, North	Monroe	Rochester Embayment - West
Chautauqua	Chautauqua Lake, South	Monroe	Unnamed Trib to Honeoye Creek
Chautauqua	Bear Lake	Monroe	Genesee River, Lower, Main Stem
Chautauqua	Chadakoin River and tribs	Monroe	Genesee River, Middle, Main Stem
Chautauqua	Lower Cassadaga Lake	Monroe	Black Creek, Lower, and minor tribs
Chautauqua	Middle Cassadaga Lake	Monroe	Buck Pond
Chautauqua	Findley Lake	Monroe	Long Pond
Clinton	Great Chazy River, Lower, Main Stem	Monroe	Cranberry Pond
Columbia	Kinderhook Lake	Monroe	Mill Creek and tribs
Columbia	Robinson Pond	Monroe	Shipbuilders Creek and tribs
Dutchess	Hillside Lake	Monroe	Minor tribs to Irondequoit Bay
Dutchess	Wappinger Lakes	Monroe	Thomas Creek/White Brook and tribs
Dutchess	Fall Kill and tribs	Nassau	Glen Cove Creek, Lower, and tribs
Erie	Green Lake	Nassau	LI Tribs (fresh) to East Bay
Erie	Scajaquada Creek, Lower, and tribs	Nassau	East Meadow Brook, Upper, and tribs
Erie	Scajaquada Creek, Middle, and tribs	Nassau	Hempstead Bay
Erie	Scajaquada Creek, Upper, and tribs	Nassau	Hempstead Lake
Erie	Rush Creek and tribs	Nassau	Grant Park Pond
Erie	Ellicott Creek, Lower, and tribs	Nassau	Beaver Lake
Erie	Beeman Creek and tribs	Nassau	Camaans Pond
Erie	Murder Creek, Lower, and tribs	Nassau	Halls Pond
Erie	South Branch Smoke Cr, Lower, and tribs	Nassau	LI Tidal Tribs to Hempstead Bay
		Nassau	Massapequa Creek and tribs
Erie	Little Sister Creek, Lower, and tribs	Nassau	Reynolds Channel, east
Essex	Lake George (primary county: Warren)	Nassau	Reynolds Channel, west
Genesee	Black Creek, Upper, and minor tribs	Nassau	Silver Lake, Lofts Pond
Genesee	Tonawanda Creek, Middle, Main Stem	Nassau	Woodmere Channel
Genesee	Oak Orchard Creek, Upper, and tribs	Niagara	Hyde Park Lake
Genesee	Bowen Brook and tribs	Niagara	Lake Ontario Shoreline, Western
Genesee	Bigelow Creek and tribs	Niagara	Bergholtz Creek and tribs
Genesee	Black Creek, Middle, and minor tribs	Oneida	Ballou, Nail Creeks
Genesee	LeRoy Reservoir	Onondaga	Ley Creek and tribs
Greene	Schoharie Reservoir	Onondaga	Onondaga Creek, Lower and tribs

APPENDIX E

List of 303(d) segments impaired by pollutants related to construction activity, cont'd.

COUNTY	WATERBODY	COUNTY	WATERBODY
Onondaga	Onondaga Creek, Middle and tribs	Suffolk	Great South Bay, West
Onondaga	Onondaga Creek, Upp, and minor tribs	Suffolk	Mill and Seven Ponds
Onondaga	Harbor Brook, Lower, and tribs	Suffolk	Moriches Bay, East
Onondaga	Ninemile Creek, Lower, and tribs	Suffolk	Moriches Bay, West
Onondaga	Minor tribs to Onondaga Lake	Suffolk	Quantuck Bay
Onondaga	Onondaga Creek, Lower, and tribs	Suffolk	Shinnecock Bay (and Inlet)
Ontario	Honeoye Lake	Sullivan	Bodine, Montgomery Lakes
Ontario	Hemlock Lake Outlet and minor tribs	Sullivan	Davies Lake
Ontario	Great Brook and minor tribs	Sullivan	Pleasure Lake
Orange	Monhagen Brook and tribs	Sullivan	Swan Lake
Orange	Orange Lake	Tompkins	Cayuga Lake, Southern End
Orleans	Lake Ontario Shoreline, Western	Tompkins	Owasco Inlet, Upper, and tribs
Oswego	Pleasant Lake	Ulster	Ashokan Reservoir
Oswego	Lake Neatahwanta	Ulster	Esopus Creek, Upper, and minor tribs
Putnam	Oscawana Lake		
Putnam	Palmer Lake	Ulster	Esopus Creek, Lower, Main Stem
Putnam	Lake Carmel	Ulster	Esopus Creek, Middle, and minor tribs
Queens	Jamaica Bay, Eastern, and tribs (Queens)		
Queens	Bergen Basin	Warren	Lake George
Queens	Shellbank Basin	Warren	Tribs to L.George, Village of L George
Rensselaer	Nassau Lake		
Rensselaer	Snyders Lake	Warren	Huddle/Finkle Brooks and tribs
Richmond	Grasmere, Arbutus and Wolfes Lakes	Warren	Indian Brook and tribs
Rockland	Congers Lake, Swartout Lake	Warren	Hague Brook and tribs
Rockland	Rockland Lake	Washington	Tribs to L.George, East Shr Lk George
Saratoga	Ballston Lake		
Saratoga	Round Lake	Washington	Cossayuna Lake
Saratoga	Dwaas Kill and tribs	Washington	Wood Cr/Champlain Canal, minor tribs
Saratoga	Tribs to Lake Lonely		
Saratoga	Lake Lonely	Wayne	Port Bay
Schenectady	Collins Lake	Wayne	Marbletown Creek and tribs
Schenectady	Duane Lake	Westchester	Lake Katonah
Schenectady	Mariaville Lake	Westchester	Lake Mohegan
Schoharie	Engleville Pond	Westchester	Lake Shenorock
Schoharie	Summit Lake	Westchester	Reservoir No.1 (Lake Isle)
Schuyler	Cayuta Lake	Westchester	Saw Mill River, Middle, and tribs
St. Lawrence	Fish Creek and minor tribs	Westchester	Silver Lake
St. Lawrence	Black Lake Outlet/Black Lake	Westchester	Teatown Lake
Steuben	Lake Salubria	Westchester	Truesdale Lake
Steuben	Smith Pond	Westchester	Wallace Pond
Suffolk	Millers Pond	Westchester	Peach Lake
Suffolk	Mattituck (Marratooka) Pond	Westchester	Mamaroneck River, Lower
Suffolk	Tidal tribs to West Moriches Bay	Westchester	Mamaroneck River, Upp, and tribs
Suffolk	Canaan Lake	Westchester	Sheldrake River and tribs
Suffolk	Lake Ronkonkoma	Westchester	Blind Brook, Lower
Suffolk	Beaverdam Creek and tribs	Westchester	Blind Brook, Upper, and tribs
Suffolk	Big/Little Fresh Ponds	Westchester	Lake Lincolndale
Suffolk	Fresh Pond	Westchester	Lake Meahaugh
Suffolk	Great South Bay, East	Wyoming	Java Lake
Suffolk	Great South Bay, Middle	Wyoming	Silver Lake

Note: The list above identifies those waters from the final New York State "2014 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy", dated January 2015, that are impaired by silt, sediment or nutrients.

APPENDIX F

LIST OF NYS DEC REGIONAL OFFICES

Region	COVERING THE FOLLOWING COUNTIES:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS	DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, PO BOX 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROAD AVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVE. BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX B

MAILERS
POSTER
TEACHER EDUCATION PACKAGE

Proper Disposal of Paints

Unwanted **latex paint** is not a hazardous waste. Latex paints can be distinguished from oil-based paints by reading the label. Latex paint labels will state "Keep from Freezing" or "Soap and Water Cleanup".

Latex paint and stain can be safely disposed of in the trash once it is in hardened form. To get it in hardened form, just follow the instructions below:

1. Open the paint can and discard the lid
2. Add kitty litter directly into the container, stir it in, and allow paint to dry and harden (1-2 weeks).
3. Once hardened, place at the curb with your trash.

This procedure can only be used for latex paint !

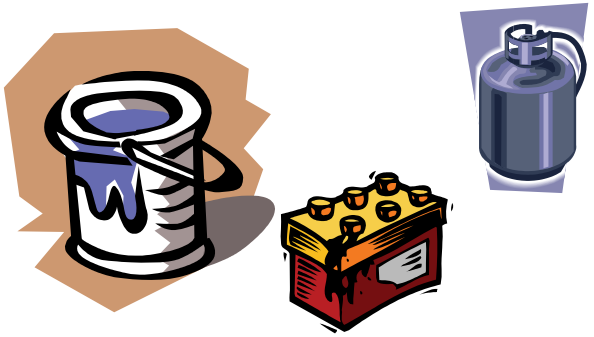
Oil-based paint labels will state:

- contains petroleum distillates
- Warning – Flammable or Combustible
- Clean up with mineral spirits

Oil based paints must be properly disposed of at an **Erie County Household Hazardous Waste** collection.

Tips when dealing with household products:

1. **Purchase only the amount you need or will use**
2. **Store it properly and in the original container**
3. **Use environmentally safe or biodegradable products**
4. **Dispose of your Household Hazardous Wastes at one of the free HHW collections!**



Erie County Department of Environment and Planning

95 Franklin Street, Room 1077

Buffalo, New York 14202

Phone: 716-858-6730

Fax: 716-858-7713

www.erie.gov/ environment

Erie County Department of Environment and Planning

Household Hazardous Waste (HHW) Program

www.erie.gov/environment

(716) 858-6800

What is Household Hazardous Waste?

Many common household products that we use for home, yard, and automobile maintenance/upkeep contain potentially hazardous ingredients. When these chemicals are no longer needed, or otherwise unusable, they are waste. These Household Hazardous Wastes (HHW) can be hazardous to human health, pets, and the environment.

HHW should not be thrown away with curbside trash or poured down the sink, sewer or storm drains!

Read product labels to identify hazardous ingredients and pay attention to product and container disposal information. Whenever possible, avoid using products labeled: "*poison*", "*toxic*", "*warning*", "*danger*", "*caution*", "*combustible*", "*corrosive*", "*flammable*", "*reactive*".

Why are HHW collections so important and why should you care?

Erie County's HHW collections prevent tons of these harmful chemicals from entering our environment and contaminating our natural resources, ourselves, our children and pets. If these products are not properly used, stored, or disposed of, they can present a hazard to your health and our environment. Non-point source pollution (NPS) is the nation's leading source of water quality problems. NPS is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, depositing them into creeks, rivers, lakes, wetlands, and even our underground sources of drinking water.

Did you know that:

- 1 quart of motor oil can contaminate up to 2 million gallons of drinking water
- Only 3% of the world's water is freshwater
- The **Great Lakes** hold about 20% of the world's freshwater supply
- 40% of our nation's rivers, lakes and estuaries are not clean enough to support fishing or swimming
- **Erie County holds several HHW collections each year**

Examples of materials that are considered hazardous and are accepted at HHW collections

Automotive products: antifreeze, gasoline, motor oil, transmission and brake fluid, lead-acid batteries, diesel fuel, wax, cleaners

Batteries: re-chargeable (NiCd, NiMH), button (watch), and lithium (photo)

Household products: adhesives & glues, oil-based paints/primers/thinners/strippers, rust remover, spray paint (aerosol cans), turpentine, varnish, waxes and polishes, kerosene, drain and oven cleaners, wood preservatives, mothballs, tars, driveway sealers, roof cement, degreasers.

Lawn, garden, and yard: fertilizers, pesticides, fungicides, weed killer, insecticides (bug killers), rodent poison, pool chemicals, propane

mercury products: thermometers, thermostats

Unacceptable items include:

asbestos, fire extinguishers, road flares, smoke detectors, alkaline batteries, medical waste (syringes), tires, cooking/fryer oil, computers/electronics/appliances, commercial waste, gas cylinders (oxygen, acetylene, etc.), fluorescent bulbs

WNY Stormwater Coalition

Goal: Utilize regional collaboration to identify existing resources and develop programs to reduce the negative impacts of stormwater pollution.

The following cities (C), towns (T), villages (V) and agencies participate in the Western New York Stormwater Coalition:

Erie County

Alden (V)
Alden (T)
Amherst (T)
Angola (V)
Aurora (T)
Blasdell (V)
Boston (T)
Buffalo Sewer Authority
Cheektowaga (T)
Clarence (T)
Depew (V)
East Aurora (V)
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Elma (T)
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Williamsville (V)

Niagara County

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Niagara Falls Water Board
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Porter (T)
Wheatfield (T)
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CRA Infrastructure & Engineering
Clark Patterson Lee
Hannon Engineering
Malcolm Pirnie
Marquis Engineering
Metzger Civil Engineering
Nussbaumer & Clarke, Inc.
Stearns & Wheler—GHD
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Wendel Duchscherer

Western New York Stormwater Coalition
c/o Erie County Department of Environment & Planning
Environmental Compliance Services
95 Franklin Street
Buffalo, New York 14202
(716) 858-6370
www.erie.gov/stormwater

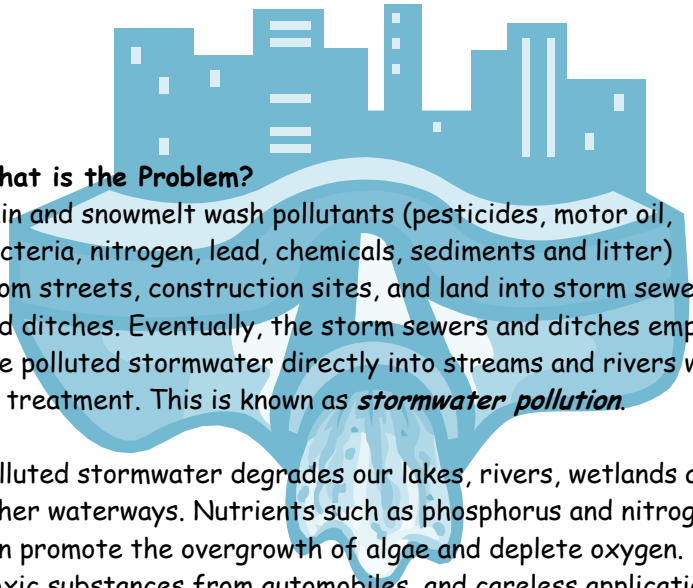
Household Guide to Preventing Stormwater Pollution

A practical guide to help you reduce stormwater pollution & protect our waterways.

WNY Stormwater Coalition

What is Stormwater?

Stormwater is water from rain or melting snow that doesn't soak into the ground and eventually runs off into waterways. It flows from rooftops, over paved areas and bare soil, and through sloped lawns while picking up a variety of materials on its way. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants.



What is the Problem?

Rain and snowmelt wash pollutants (pesticides, motor oil, bacteria, nitrogen, lead, chemicals, sediments and litter) from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as ***stormwater pollution***.

Polluted stormwater degrades our lakes, rivers, wetlands and other waterways. Nutrients such as phosphorus and nitrogen can promote the overgrowth of algae and deplete oxygen. Toxic substances from automobiles, and careless application of pesticides, herbicides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to sewerage systems can make lakes and waterways unsafe for wading, swimming and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

According to an inventory conducted by the United States Environmental Protection Agency (EPA), approximately half of U.S. waterways classified as impaired are affected by urban/suburban and construction related sources of stormwater runoff.

Things You Can Do To Prevent Stormwater Pollution

General Household

Some household products, such as cleaners, insect spray and weed killers, can cause pollution if allowed to drain into a storm sewer. Buy household products labeled "nontoxic" whenever possible.

Paint & Solvents

Clean water-based paints from rollers, pans and brushes in sinks that go into the sanitary sewer system. Use paint thinner to remove oil-based paint from brushes and rollers but do not rinse down sinks or drains.

Automotive

Keep your autos in good repair and watch for possible leaks. Take leftover or used fluids to a household hazardous waste collection. Clean up leaks and spills with an absorbent material such as kitty litter.

Swimming Pool and Spa

Water containing chlorine is harmful to aquatic life. Whenever possible, drain water into the sanitary sewer system. There are established guidelines on the amount of residual chlorine, acceptable pH range, coloration, filter media and acid cleaning wastes when draining into the storm sewer system, and some areas may require a permit. Check with your municipality.

Lawn and Garden

Follow directions carefully when using pesticides and fertilizers; don't over water or use before a rain. Pesticides and fertilizers adversely impact water quality and aquatic habitat. Pesticide application may require adherence with the Neighbor Notification Law, please call 858-7070 for guidance.

Pet Care

Pick-up pet waste as soon as possible and put it in the trash. Pet waste has harmful bacteria that can get into our waterways.

For information on disposal programs for Household Hazardous Waste, contact:

Erie County: (716) 858-6800
Niagara County: (716) 434-6568

Western New York Stormwater Coalition

A partnership to protect water quality

A number of communities, government agencies and consultants in Western New York have joined together to develop a stormwater management program to protect our waterways and enhance our quality of life. The goal of the Coalition is to utilize regional collaboration to identify existing resources and develop programs to reduce the negative impacts of stormwater pollution.

The Coalition meets monthly to work collectively on developing and implementing a stormwater management program that complies with New York State's Phase II Stormwater regulations.

WNY Stormwater Coalition

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Buffalo Niagara Riverkeeper
Erie & Niagara County Soil & Water Conservation Districts
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Hannon Engineering
Malcolm Pirnie
Marquis Engineering
Metzger Civil Engineering
Nussbaumer & Clarke, Inc.
Stearns & Wheler—GHD
Wendel Duchscherer
Wm. Schutt & Associates

WNY Stormwater Coalition

Western New York Stormwater Coalition
c/o Erie County DEP
Room 1077
95 Franklin Street
Buffalo, New York 14202

WNY Stormwater Coalition

Illicit Discharge Detection & Elimination:

A Citizen's Guide to Identifying & Preventing Stormwater Pollution

Western New York Stormwater Coalition
c/o Erie County DEP
Room 1077
95 Franklin Street
Buffalo, New York 14202
(716) 858-6370
www.erie.gov/stormwater

Stormwater and Illicit Discharge

Stormwater runoff is water from rain or melting snow that does not soak into the ground. It flows from rooftops, over paved areas, bare soil, and sloped lawns. Municipal storm sewer systems– storm drain inlets, pipes and ditches - collect stormwater runoff and convey it directly to local bodies of water.

Ideally, the stormwater runoff is contaminant free. In reality, it picks up pollutants such as soil, animal waste, salt, pesticides, fertilizers, oil and grease, and debris and transports them to waterways where they are discharged with no treatment. This is stormwater pollution.

During rainfall, storm drains convey water from impermeable surfaces such as city streets through a series of ditches and pipes to a natural outlet, such as a stream or river. The stormwater systems in place do not have the capability to clean or filter contaminants.

The "Illicit Discharge"

An illicit discharge is any discharge to a municipal storm sewer system that is not composed entirely of stormwater. Pollutants end up in storm sewer systems in a number of ways, many of which are easily preventable. In some instances, companies and individuals have waste pipes tapped into stormwater pipes. In other cases, individuals use the storm drain inlets to dispose of various types of waste. Disposal of anything other than stormwater in storm sewers is illegal.

It is important to remember that municipal storm sewer systems are not set up to treat or process anything and exist solely to transport rain water to surrounding rivers, streams, and other bodies of water.

Examples of Illicit Discharges

- Sewage
- Laundry Wastewater
- Improper Waste Oil Disposal
- Improper Disposal of Household / Commercial / Industrial Hazardous Waste
- Seepage from Septic Tanks
- Radiator Flushing Waste
- Spills from Roadway Accidents

Signs of Illicit Discharge

The point in a storm sewer system where flow is discharged into a body of water is a storm sewer **outfall**. It may be a pipe or ditch. If the outfall is flowing when there has been no recent rainfall, this may indicate an illicit discharge. Visible sewage waste, foul odor, suds or other evidence of contamination, are indicators that an illicit discharge is contaminating the storm sewer system.

Right you are sir, right you are.

Remember to keep an eye out for inappropriate amounts of discharge from stormwater pipes, especially during dry weather. This could be a sign that there is a problem, and should be reported to your local municipality.

Things You Can Do to Protect Water Quality

- Never dump anything down storm drains
- Use fertilizers sparingly; sweep up any excess from driveways, sidewalks and roads
- Avoid pesticides; learn about Integrated Pest Management (IPM)
- Pick up after your pet
- Direct downspouts onto grassy areas away from paved surfaces
- Check vehicles for leaks
- Wash vehicles on grass instead of on the driveway, or take your car to the car wash
- Dispose of household waste properly

WNY Stormwater Coalition

Goal: Utilize regional collaboration to identify existing resources and develop programs to reduce the negative impacts of stormwater pollution. This rain garden project is just one example in the effort to reduce stormwater pollution.

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Parsons
Stearns & Wheler
TVGA Consultants
Wm. Schutt & Associates
Wendel Duchscherer

Funding for the Rain Garden Demonstration Project was provided by:
New York State Soil & Water Conservation Committee
New York State Department of Environmental Conservation
Erie County Water Quality Committee
Western New York Stormwater Coalition

Rain Gardens

A How-To Guide

Western New York Stormwater Coalition

Erie County Water Quality Committee
Erie County Department of Environment & Planning

Stormwater Pollution Awareness

A growth in urbanization has caused an increase in impervious surfaces. The result of this is an increase in stormwater runoff. Stormwater runoff is defined as rain, melted snow and ice from a roof, driveway or any type of impervious surface. Stormwater collects in a storm sewer system and empties into our local waterways. Along the way, stormwater collects many pollutants such as road salt, heavy metals, and oils, which can harm water quality and aquatic life. One way to decrease stormwater pollution and encourage rainwater to infiltrate into the ground is a RAIN GARDEN!

What is a rain garden?

A rain garden is a shallow depression planted with native plants and flowers. A rain garden is designed to collect and absorb rain and snowmelt from roofs, sidewalks, driveways, and lawns allowing it to seep naturally into the ground. A rain garden allows up to 30% more water to soak into the ground than a typical patch of lawn. A rain garden is beneficial because it will:

- Recharge local groundwater
- Reduce mosquito breeding by removing standing water
- Create a habitat for birds and butterflies
- Reduce the potential of home flooding
- Protect rivers and streams

When you make a rain garden you can help improve local water quality while creating a beautiful natural area.

Plant Selection

Native plants and flowers are strongly recommended for your rain garden because these plants have the greatest chance of growth and survival in Western New York. A listing of native plants which require different amounts of sunlight is shown below along with native trees and shrubs:

Wildflowers - Full Sun

Swamp milkweed (Asclepias incarnate)
Little Blue Stem (Andropogon Scoparius)
Side Oats Grama (Bouteloua curtipendula)
Partridge Pea (Chamaecrista fasciculata)
Big Bluestem (Andropogon gerardii)
Black Eyed Susan (Rudbeckia hirta)
Wild Senna (Senna hebecarpa)
Wild Blue Lupine (Lupinus perennis)
Beard Tongue (Penstemon digitalis)
Smooth Blue Aster (aster laevis)

Wildflowers - Partial Shade

Joe-pye weed (Eupatorium maculatum)
Blue lobelia (Lobelia syphilitica)
Silky Wild Rye (Elymus villosus)
Indian Grass (Sorghastrum nutans)
Ox Eye Sunflower (Heliopsis helianthoides)
Wild Blue False Indigo (Baptisia australis)

Trees and Shrubs:

Buttonbush (Cephalanthus occidentalis)
Silky dogwood (Cornus amomum)
Winterberry holly (Ilex verticillata)
American elderberry (Sambucus Canadensis)
Arrowwood (Viburnum dentatum)

4. Construction

Start by laying string around the perimeter of the garden. Place stakes along the up-slope and down-slope sides, lining them up proportionally every 5 feet. Tie a string to the up-slope stake at ground level. Tie it to the stake down-slope so that the string is level. Start digging at the up-slope side of the garden. Dig until you reach the depth you want the rain garden to be. When digging the rain garden to the suggested depth, slope the sides and edges using the remaining soil to build a berm (a mound of earth). If the lawn is flat, dig the same depth throughout the garden and use the soil for the berm.

A berm is needed to trap the water in the rain garden. The berm should be along the downhill side of the garden. The berm should be well-compacted and have smoothly sloping sides. To prevent erosion of the berm, cover it with mulch or plant grass. If planting grass, use straw or an erosion control mat to protect the berm from erosion.

One to two inches of compost may be added to help the plants establish themselves. If compost is used, the rain garden can be one or two inches deeper than originally planned. The soil ideally should be a mixture of 50% sand, 20-30% organic matter (compost or fine mulch), and 20-30% top soil (original material).

5. Maintenance

The rain garden will need to be watered every other day for 2 weeks until the plants are established. After 2 weeks, watering is not required, except during extended periods of dry weather. Weeding will be necessary for the first two years. By the third year and beyond, the native grasses, sedges, rushes, and wildflowers will begin to mature and decrease the amount of weeds. As spring arrives and new growth reaches 4-6 inches tall, cut all tattered plants back.

Designing your Rain Garden

1. Location

The following factors should be considered when selecting a location for your rain garden:

- Locate an area at least 10 ft. from the house to prevent household flooding.
- Do not plant over gas or water/sewer services.
- Pick an area where the garden will be in full or partial sun.
- Do not pick a location where water ponds.
- Select a location where the slope is 3-4% (generally preferred). For a location which has a slope of 12% or higher, a rain garden should not be planted.
- A rain garden is typically 100 to 300 square feet. The garden should be twice as long as it is wide.
- Soil should have good drainage. To evaluate the drainage capability of your soil, perform a simple drainage test by doing the following:
    1. Dig a hole 8" deep and 8" wide.
    2. Pour a bucket of water into the hole and see how long it takes to infiltrate The water level should decrease 1 inch per hour.

2. Size & Depth

The following variables need to be determined when sizing your rain garden:

- Roof Area
- Drainage Area
- Size Factor
- Rain Garden Area
- Slope

How to Determine these Variables:

First, calculate the roof area by measuring the width and length of your roof and multiplying them. Next, count the number of downspouts on your house.

Determine drainage area by using the following equation:

Drainage Area = Roof Area ÷ # of Downspouts

To determine a size factor for your rain garden, the type of soil and distance from the downspout needs to be identified. The size factor is needed to calculate the total rain garden area (see Tables 1 & 2 to determine size factor).

Table 1: Size factors for rain gardens less than 30 feet from downspout

Soil Type	3-5 in. deep	6-7 in. deep	8 in deep
Sand	0.19	0.15	0.08
Silt	0.34	0.25	0.16
Clay	0.43	0.32	0.20

Table 2: Size factors for rain gardens more than 30 feet from downspout.

Soil Type	Size Factor
Sand	0.03
Silt	0.06
Clay	0.10

Once the drainage area and size factor are known, the total rain garden area of the garden can then be determined using the following equation:

Rain Garden Area = Drainage Area x Size Factor

For example, if a 200 ft^2 area was calculated, the dimensions of the rain garden would have a length of 10 ft. and width of 20 ft.

The last factor to identify is the slope. The slope of the area can be determined by putting a stake on the uphill and downhill side of the garden. The slope can then be found by using the following equation:

% slope = (Change in height ÷ Change in Width) x 100

Once the slope is obtained, the depth of the rain garden can be found using Table 3.

Table 3: Determining the Depth of the Garden

%Slope (in.)	Depth (in.)
≤4	3-5
5-7	6-7
8-12	8-12

A grass swale or PVC pipe can be installed to direct the flow from your downspout to your rain garden. The PVC pipe should be placed at least 6 inches underground inside the rain garden.

3. Design

Create a simple design on paper according to the rain garden area calculated. When selecting native plants, consider the height, bloom time, color, and texture of each plant. When placing the plants, make sure you have three seasons of bloom represented. By mixing the heights, shapes, and textures you will give the garden depth and dimension. This will make the rain garden look more appealing between bloom periods.

To provide a bolder statement of color to the garden, randomly bunch together individual species in groups of 3 to 7 plants. The number of plants needed can be found by multiplying the rain garden area (pg. 3) by 0.75. On average, there ought to be one plant for every one to two feet. A diverse mixture of sedges, rushes, and grasses in the garden will create necessary root competition. The plants will then follow their normal growth patterns and will not try to outgrow or out-compete other species. To enhance your rain garden, use local or existing stone, ornamental fences, trails, garden

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Erie County Health Dept.
Erie County Soil and Water Conservation District
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O'Brien and Gere
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R & D Engineering
URS Greiner
Malcolm Pirnie
Foit Albert

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Environmental Compliance Services
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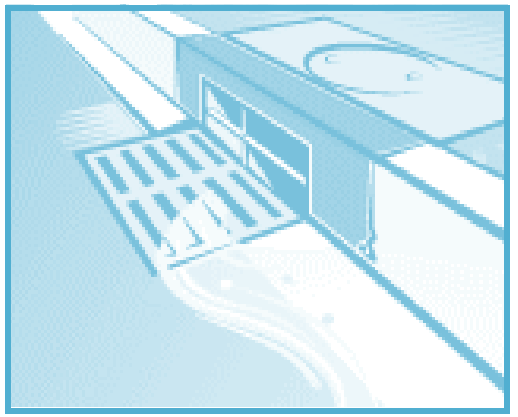
(716) 858-6370
www.erie.gov/environment/compliance/pollution_sw2
Joel A. Giambra, County Executive

Household Guide to Preventing Stormwater Pollution



A practical guide to help you reduce stormwater pollution and protect our waterways.

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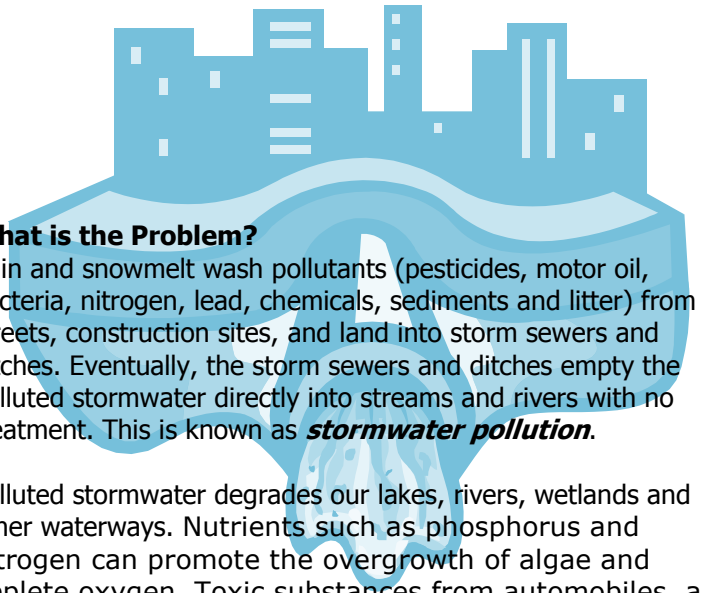
What is Stormwater?
Stormwater is water from rain or melting snow that doesn't soak into the ground and eventually runs off into waterways. It flows from rooftops, over paved areas and bare soil, and through sloped lawns while picking up a variety of materials on its way. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants.



What is the Problem?
Rain and snowmelt wash pollutants (pesticides, motor oil, bacteria, nitrogen, lead, chemicals, sediments and litter) from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as ***stormwater pollution***.

Polluted stormwater degrades our lakes, rivers, wetlands and other waterways. Nutrients such as phosphorus and nitrogen can promote the overgrowth of algae and deplete oxygen. Toxic substances from automobiles, and careless application of pesticides, herbicides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to sewerage systems can make lakes and waterways unsafe for wading, swimming and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

According to an inventory conducted by the United States Environmental Protection Agency (EPA), half of the impaired waterways are affected by urban/suburban and construction sources of stormwater runoff.

Things You Can Do To Prevent Stormwater Pollution

General Household
Some household products, such as cleaners, insect spray and weed killers, can cause pollution if allowed to drain into a storm sewer. Buy household products labeled "nontoxic" whenever possible.

Paint & Solvents
Clean water-based paints from rollers, pans and brushes in sinks that go into the sanitary sewer system. Use paint thinner to remove oil-based paint from brushes and rollers but do not rinse down sinks or drains.

Automotive
Keep your autos in good repair and watch for possible leaks. Take leftover or used fluids to a household hazardous waste collection. Clean up leaks and spills with an absorbent material such as kitty litter.

Swimming Pool and Spa
Water containing chlorine is harmful to aquatic life. Whenever possible, drain water into the sanitary sewer system. There are established guidelines on the amount of residual chlorine, acceptable pH range, coloration, filter media and acid cleaning wastes when draining into the storm sewer system, and some areas may require a permit. Check with your municipality.

Lawn and Garden
Follow directions carefully when using pesticides and fertilizers; don't over water or use before a rain. Pesticides and fertilizers may adversely impact our waterways.

Pet Care
Pick-up pet waste as soon as possible and put it in the trash. Pet waste has harmful bacteria that can get into our waterways.

Contact Erie County's Household Hazardous Waste program (858-6800) for disposal recommendations on the products listed above.

Pick Up Your Pet Waste…

It's <u>Your</u> Doodie!

Pet waste can contaminate our rivers, lakes and streams!

Western New York Stormwater Coalition
c/o Erie County Department of Environment & Planning
(716) 858-6370

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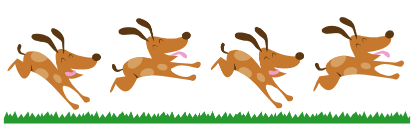
Pet Waste Affects Water Quality

Did you know pet waste is a health hazard and a stormwater pollutant? Stormwater runoff can wash bacteria from pet waste directly into local creeks and waterways.

Bacteria, parasites and viruses contained in pet waste are a health risk to other animals and people, especially children.

Pollution from Pet Waste is Easily Prevented

- Always clean up after your pet
- Use a scooper, bag or shovel to pick up pet waste
- Double bag pet waste before disposing in trash
- Do not dispose of pet waste in a storm drain, catch basin or sewer
- Do not use pet waste as a fertilizer or add to a compost pile



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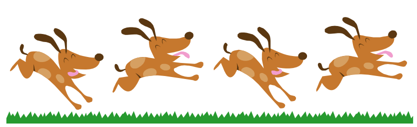

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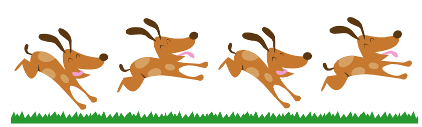

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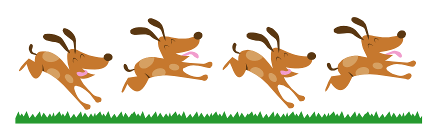


Septic System Do's & Don'ts -

Do's:

- Know the location and capacity of your septic tank system.
- Have a licensed contractor inspect the tank at least every three years.
- Have tank pumped when the combined depth of the sludge and scum equals 1/3 of the tank liquid volume.
- Install the system so that rainfall and surface water will flow away from the drainfield.
- Grow grass above the system.
- Install water conservation fixtures or devices to reduce the total volume of water entering the system.
- Keep plumbing fixtures such as toilets and faucets in good repair to prevent leakage and wasting of water.
- Keep a maintenance record and inspect the pump (if equipped) on a regular basis.

Don'ts:

- Never flush paper towels, newspapers, wrapping paper, rags or sticks into the system.
- Never allow large, irregular, intermittent or constant volumes of clear water into the system, as with a leaking toilet or faucet.
- Never over-use ordinary household cleaning chemicals that will be flushed into the system.
- Never pour out or empty hobby or home industry chemicals into the system.
- Never allow grease or other bulky waste to enter the system.
- Never flush toxic materials such as pesticides into the system.
- Never plant trees or shrubbery in or on the drainfield area.
- Never allow vehicles (cars, trucks, etc.) to drive across or park on the drainfield. (Protect it from being crushed.)
- Never waste water.
- Never use chemical solvents to clean plumbing lines or a septic tank system.

WNY Stormwater Coalition

A Partnership to Protect Water Quality

For more information on the activities of the Western New York Stormwater Coalition, contact Erie County at:
(716) 858-6370
www.erie.gov/environment/compliance/pollution_sw2

Your Septic System

How It Functions and How to Care for It

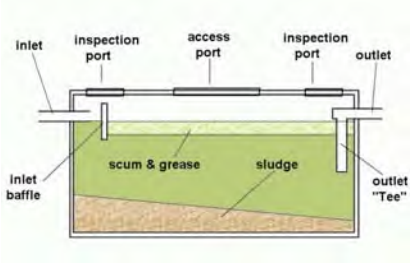
Western New York Stormwater Coalition

Erie County Department of Environment & Planning

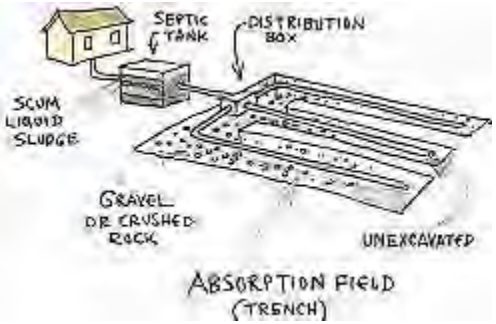
How Your Septic System Works -

If you are like most homeowners, you know very little about your septic system. This is understandable, because it is underground and often “out of sight, out of mind”. All household waste that goes down a drain is disposed of through your septic system.

Septic systems have two components - a SEPTIC TANK and a SOIL ABSORTION SYSTEM. The septic tank is a container, usually with two compartments, fabricated from concrete or plastic. Wastewater from your bathroom, kitchen and laundry room enters the septic tank through your sewer. Heavy solid particles settle to the bottom where bacterial action converts them to a digested sludge. Settling and breakdown of solids takes time and your tank must be large enough for complete digestion to occur.



The drainfield is the soil absorption system and consists of a distribution box, perforated distribution lines made of plastic or clay tile, and an area of soil. In the drainfield, disease causing microorganisms and some suspended solids and nutrients are removed as the liquid is absorbed by the soil. If the soil cannot absorb the liquid at the rate at which it enters the septic tank, the plumbing will "back up" or wastewater will bubble to the surface in the drainfield or at the distribution box.



A properly designed, installed and maintained septic system is an efficient method of wastewater treatment, adequately treating sewage before it mixes with ground waters.

Septic System Care & Maintenance -

Septic system care & maintenance is quite simple. The septic tank and drainfield are designed and installed to handle a maximum calculated daily sewage flow. Consistently exceeding the design flow will eventually overload the system and cause failure. The tank may receive new solids faster than it can treat them and the drainfield may become saturated from excessive water use.

Maintenance of a septic tank will depend largely on the daily sewage flow and individual household wastewater characteristics. With ordinary use and care, a septic tank should not require pumping out more than once every three to five years. It should, however, be inspected every one to two years to determine the depth of accumulated sludge and grease.

Waste from kitchen garbage disposal units puts an extra load on a septic tank system. If a disposal is used, the capacity of the tank should be increased to handle the increased solid wastes. The tank may also require more frequent pumping to remove accumulated solid waste buildup.

Failure to pump out a septic tank system in a timely manner will result in solids or greases overflowing into the drainfield, which in turn may become clogged and stop functioning. If this is happening, not only will the tank have to be pumped out, but the drainfield may also have to be replaced.

Drainfield Protection -

- Plant only grass over and near your septic system. Roots from nearby trees or shrubs might clog and damage the drainfield.
- Don’t drive or park vehicles on any part of your septic system. Doing so can compact the soil in your drainfield or damage the pipes, tank, or other septic system components.
- Keep roof drains, basement sump pump drains, and other rainwater or surface water drainage systems away from the drainfield. Flooding the drainfield with excessive water slows down or stops treatment processes and can cause plumbing fixtures to back up.

Western New York Stormwater Coalition

A partnership to protect water quality

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Western New York Stormwater Coalition
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Room 1077
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Buffalo, New York 14202

Automotive & Related Industries...

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Gas Stations
- Auto Repair Shops
- Mechanics
- Auto Detailers
- Auto Dealerships
- Collision & Paint Shops
- Car Rental Agencies
- Car Wash Shops
- Tire Shops
- Auto Salvage

WNY Stormwater Coalition

Stormwater Pollution

What is Stormwater?

Stormwater is water from rain or melting snow that does not soak into the ground. It flows from rooftops, over paved areas, bare soil, and sloped lawns. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants.

What is the Problem?

Rain and snowmelt wash pollutants from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as *stormwater pollution.*

Polluted stormwater degrades our lakes, rivers, wetlands and other waterways. Nutrients such as phosphorous and nitrogen can cause the overgrowth of algae resulting in oxygen depletion in waterways. Toxic substances from motor vehicles, and careless application of pesticides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to storm sewer systems can make lakes and waterways unsafe for wading, swimming and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

Fortunately, stormwater pollution can be prevented or minimized by implementing Best Management Practices which are procedures or activities that reduce or eliminate pollutants in stormwater.

County of Erie
Department of Environment & Planning
Environmental Compliance Services

How to Prevent Pollution from Automotive & Related Industries

Pollutants from automotive-related activities that enter municipal storm drain systems will harm aquatic life and impair our drinking water supplies. Floating materials, such as debris and automotive fluids, also pollute our lakes and streams and reduce the natural beauty of our waterways. This results in a negative impact on the aesthetics of our natural resources and on tourism/recreation opportunities.

Best Management Practices

- Employee training is essential to reinforce proper disposal practices.
- Minimize use of water to clean floors. A damp mop or wet vac should be used instead. Use kitty litter to clean up an oil spill and dispose of as hazardous waste.
- Tanks, pumps, fittings, pipes and containers should be inspected routinely for integrity and leaks.
- Never hose down bays into storm drains. Contain wash water and dispose of through sanitary sewer.
- Recycle grease and oil—DON'T pour into sinks, floor drains or parking lots.
- Identify the nearest storm drain and keep fluids away from it.
- Use high volume, low pressure spray paint equipment to achieve high transfer efficiency.
- Dispose of solvent only when it looses its effectiveness, not just because it looks dirty.
- Use mechanical stripping methods instead of paint removers. Give leftover paint to customers or donate to trade schools.

Best Management Practices (continued)

- Combine transmission and brake fluid. It is not cost effective to recycle these separately.
- Keep used oil separate from parts cleaning solvents, antifreeze and fuel.
- Recycle oil, antifreeze, tires and batteries.
- Fit all storage tanks with spill containment and overfill prevention system.
- Never pour liquids or dry materials down a storm drain.
- Use drip pans to capture fluids. Use absorbent cleaning agents instead of water to clean work areas.
- Collect bulk grease in containers and contact a firm to recycle waste into a useful by-product.
- Flush parts with dirty solvent first and then rinse clean with virgin solvent.
- Pour wash water into a janitorial sink—NOT outside in a parking lot, alley or sidewalk/street.
- To prevent storm water discharge, avoid working in outdoor areas. If this isn't possible, grade, pave or berm outdoor areas to collect discharge in a sanitary sewer drain.
- Eliminate the use of chlorinated solvents, which are highly toxic and hard to dispose of. Use detergents or water based parts cleaners.
- Capture crusher fluids to prevent spillage. Do not allows fluids to drain into the ground.

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Concrete & Mortar Operations…

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Masons & Bricklayers
- Home Builders
- General Contractors
- Developers
- Concrete Providers
- Sidewalk Construction Crews
- Patio
- Construction Crews

WNY Stormwater Coalition

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County of Erie
Department of Environment & Planning
Environmental Compliance Services

How to Prevent Pollution from Concrete & Mortar Work

Fresh concrete and mortar that washes into lakes and streams via stormwater are toxic to fish and the aquatic environment.

Best Management Practices

General Practices

- Identify concrete mixer washout areas in your yard , away from storm sewers, ditches and waterways. Allow washwater to flow into a temporary waste pit; dispose/recycle hardened concrete.
- Do not use diesel fuel as a lubricant on concrete forms, tools or trailers.
- Secure open bags of cement and keep cement powder away from streets, gutters, storm sewers, rainfall and runoff.
- Protect both dry and wet materials from rainfall and runoff by storing under cover. Avoid storing materials near storm sewers , ditches and waterways.

Best Management Practices

Operational Practices

- Mix only enough concrete or mortar for a two hour period.
- Use tarps or heavy plastic under mixers.
- Protect fresh applications from rainfall and runoff until material is dry.
- When cleaning, sweep or wash fines onto a dirt area, not a street, gutter or storm sewers.
- Never dispose or washout into the street, gutter, storm sewers, ditch or waterways.
- Wash chutes onto dirt areas to prevent contaminated water from flowing into streets, gutters, storm sewers or ditches.
- Block nearby storm sewers with sandbags if necessary.

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Construction Site Stormwater Runoff Control…

How to Prevent Water & Storm Sewer Pollution

A Summary of Best Management Practices for:

The Construction Industry

WNY Stormwater Coalition

BMPs for All Construction Sites

Basic pollution prevention practices can significantly reduce the amount of pollution leaving construction sites. When exposed to the elements, construction materials, debris, trash, fuel, paint and stockpiles become pollution sources when it rains. The following practices should be implemented on site:

- Keep potential sources of pollution out of the rain to the maximum extent possible (e.g. inside a building, under a tarp, sealed in containers).
- Clearly identify a protected, lined area for concrete truck washout. This area should be located away from streams, storm drain inlets or ditches and clean out periodically.
- Park, refuel and maintain vehicles and equipment in a designated area on the site to minimize the area exposed to possible spills and fuel storage. Keep spill kits close by and clean up spills and leaks immediately, including those on pavement and earth surfaces.
- Practice good housekeeping. Keep the construction site free of litter, construction debris and leaking containers.
- Never hose down paved surfaces to clean dust, debris or trash as the water could wash directly into storm drains or streams. Sweep up materials and dispose in the trash. Never bury trash or debris.
- Dispose of hazardous materials promptly and properly.

Stormwater and the Construction Industry

As stormwater flows over a construction site, it picks up pollutants such as sediment, debris and chemicals. High volumes of stormwater can also cause streambank erosion and have a negative impact on aquatic habitat. Preventing stormwater pollution is an important responsibility at all construction sites.

Best Management Practices

The following information provides a summary of guidance on a variety of BMPs typically used on construction sites.

Construction Phasing

- Sequence construction activities so that soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Immediately seed areas that will be exposed for 7 days or longer with annual rye
- Install sediment control practices before any soil disturbance begins.
- Schedule site stabilization activities immediately after the land has been graded to its final contours.

Storm Drain Inlet Protection

- Use appropriate methods to protect the storm drain to filter out trash and debris
- If inlet filters are used, maintain them regularly.

Silt Fence

- Inspect silt fences after each rainstorm and weekly
- Make sure the bottom of the silt fence is buried in the ground 6 inches.
- Make sure stormwater does not flow around the silt fence during storm events.
- Don't place silt fence in the middle of a waterway.
- Attach fence securely to stakes. Stakes should be on the downslope side of the fence.

Protect Natural Features

- Identify and protect areas where existing vegetation, such as trees, should not be disturbed by construction activities .
- Protect streams, stream buffers, wild woodlands, wetlands or other sensitive areas from any disturbance or construction activity with fencing or by clearly marking the

Vegetative Buffers

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by replanting periodically to ensure their effectiveness (mowing discourages growth of woody vegetation, which actually takes up more runoff).

Slopes

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers or under drain.
- Divert stormwater away from slopes.

Dirt Stockpiles

- Cover or seed all dirt stockpiles.

Construction Entrances

- Remove mud and dirt from the tires of construction vehicles before exiting the construction site onto paved roadways, but do not use water.
- Inspect construction entrance to ensure it does not become buried in soil (Entrance should be maintained with gravel to retain soil on-site).

Site Stabilization

- Vegetate, mulch or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Western New York Stormwater Coalition

A partnership to protect water quality

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Western New York Stormwater Coalition
c/o Erie County DEP
Room 1077
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Pesticide Application, Lawn Care and Landscaping…

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Landscapers
- Pesticide Applicators
- Lawn Maintenance Crews
- Developers
- Home Builders
- Patio & Deck Contractors
- Homeowners
- Construction Inspectors

WNY Stormwater Coalition

Stormwater Pollution

What is Stormwater?

Stormwater is water from rain or melting snow that does not soak into the ground. It flows from rooftops, over paved areas, bare soil, and sloped lawns. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants.

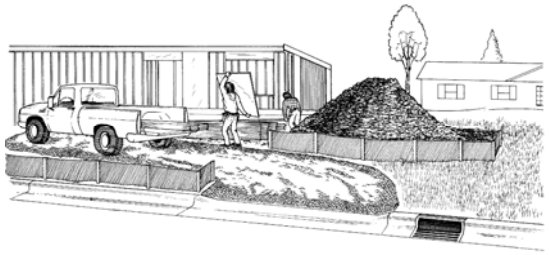
What is the Problem?

Rain and snowmelt wash pollutants from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as *stormwater pollution.*

Polluted stormwater degrades our lakes, rivers, wetlands and other waterways. Nutrients such as phosphorous and nitrogen can cause the overgrowth of algae resulting in oxygen depletion in waterways. Toxic substances from motor vehicles, and careless application of pesticides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to storm sewer systems can make lakes and waterways unsafe for wading, swimming and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

Fortunately, stormwater pollution can be prevented or minimized by implementing Best Management Practices which are procedures or activities that reduce or eliminate pollutants in stormwater.

County of Erie
Department of Environment & Planning
Environmental Compliance Services



How to Prevent Pollution from Landscaping and Lawn Care

Best Management Practices

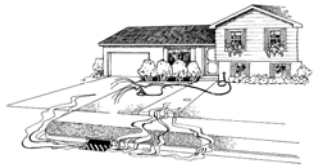
- Cover and contain topsoil and mulch during installation
- Plant rain gardens of native drought– and pest-resistant plants to collect and filter rainwater
- Plant vegetated filter areas or swales to trap pollutants along streets and driveways
- Install pervious pavement and gravel driveways to reduce stormwater runoff
- Do not drain swimming pools to storm drains or road ditches
- Install vegetative buffers along streams and drainage pathways
- Compost or mulch leaves and yard debris rather than hauling to dumps
- Direct downspouts away from driveways or storm drains, or install rain barrels to collect roof runoff
- Maintain septic systems to prevent failure and inspect every 3 years
- Sweep up litter and debris from driveways and parking lots rather than hosing debris into storm drains
- Install and maintain sediment and erosion control measures during soil disturbing activities

How to Prevent Pollution from Pesticide Applications

Everything you apply to the lawn can potentially contaminate surface and ground waters.

Best Management Practices

- Triple rinse and recycle empty pesticide and fertilizer containers
- Use proper spray notification signage and comply with neighbor notification regulations
- Comply with NYS Department of Environmental Conservation pesticide application regulations
- Use Integrated Pest Management (IPM) to avoid runoff or leaching from excess chemical applications
- Avoid using chemicals near waterways or storm drains
- Dispose of unused or excess pesticides in accordance with NYS DEC and US EPA regulations
- Clean up spills immediately and properly dispose of cleanup materials
- Fill tanks on a gravel surface, away from storm drains, sewers or ditches
- Avoid spraying in windy conditions or when rain is forecast
- Provide spill containment at storage facilities and store chemicals away from floor drains



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Hospitals, Medical Treatment Centers & Healthcare Facilities...

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Hospitals
- Satellite Medical Centers
- Blood Collection Labs
- Dentists & Dental Labs
- Clinical Laboratories
- Veterinarians

WNY Stormwater Coalition

Stormwater Pollution

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County of Erie
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Environmental Compliance Services

How to Prevent Pollution from Medical Waste

Medical and hospital waste, like household waste, is largely recyclable. Only 10-15% is regulated medical waste and less than 5% is hazardous waste.

Best Management Practices

Recommended Practices

- Whenever possible, use mercury-free medical products and cleaning agents, which don't contribute to increasing levels of mercury in streams and watersheds. Do not place mercury-containing products (thermometers) in medical waste containers. Products containing mercury should be collected in a single dedicated area and recycled or eliminated as hazardous waste.

- Sink and hopper traps should collect chemicals and other medical waste. They should be opened, cleaned and any combination of water and chemicals should be consolidated (depending on nature of compounds) and recycled.

Best Management Practices

Operational Practices

- Do not mix x-ray fixer with developer. Waste developer may normally be flushed down the drain; but if fixer and developer are mixed, the resulting solution cannot be flushed. Some x-ray film processing units automatically mix fixer and developer; the vendor can provide information on adapter kits that keep fixer separated from the developer.

- Support the development and use of environmentally safe materials, technology and products. Eliminate unnecessary "red bagging."

- Eliminate non-essential incineration of medical waste. Recycle mercury.

- Waste amalgam caught in plumbing traps must be shipped off to a permitted recycler. If amalgam must be sterilized before shipment to recycler, no method that utilizes heat should be used. The heat will cause the mercury to volatilize and be released to the environment.

- Phase out use of mercury, PVC plastics and persistent toxic chemicals in healthcare.

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Mobile Cleaners: Carpet, Upholstery Cleaners, Janitorial Service Providers...

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Carpet Cleaners
- Upholstery Cleaners
- Drapery Cleaners
- Window Washers
- Janitorial & Housekeeping Service Providers
- High Pressure, Steam Cleaners

WNY Stormwater Coalition

Stormwater Pollution

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County of Erie
Department of Environment & Planning
Environmental Compliance Services

How to Prevent Pollution from Commercial Cleaning Agents

Although mobile cleaners and pressure washers discharge waste water at various locations, the following practices are recommended to eliminate discharge into storm sewers.

Best Management Practices

General Practices

- Waste resulting from cleaning activities cannot be discharged into a storm drain.
- Mobile cleaners should have the equipment, materials and personnel to handle a spill. Take preventative action to act quickly to reduce illegal discharge.
- If a spill occurs, use environmentally-friendly products (e.g. kitty litter) to contain the spilled materials. Protect storm drains. Report all spills and discharges that cannot be contained to local authorities for their help.

Best Management Practices

Operational Practices

- All water and detergents, even those that are labeled “nontoxic” or “biodegradable,” should be filtered first to remove any solids before discharging into a sanitary sewer. Solids may clog pipes. The solids may be thrown into the garbage, unless they have been contaminated with hazardous materials.
- Washwater from carpet, drapery or furniture cleaning must be discharged into a sink, toilet or other drain connected to a sanitary sewer.
- Never throw washwater into a street, gutter, parking lot or storm drain.
- Dry cleanup first, then wash without soap and then with soap to reduce contaminated runoff.
- Avoid power washing surfaces that may contain lead paint.

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Pools, Fountains and Spas …

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Homeowners
- Condominium & Apartment Complexes
- Hotels, Motels and Inns
- Schools
- Fitness Clubs

WNY Stormwater Coalition

Stormwater Pollution

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County of Erie
Department of Environment & Planning
Environmental Compliance Services

How to Prevent Pollution from Pools, Spas & Fountains

Although we enjoy the fun and relaxing times in them, the water used in swimming pools, spas and fountains can cause problems for our creeks and lakes if not disposed of properly. Draining your pool, spa or fountain improperly can result in chlorine, suspended solids and nutrients entering surface water (streams and lakes).

Best Management Practices

Best Management Practices or BMPs are procedures that help to prevent pollutants like chlorine and sediment from entering storm drains.

Draining Pools, Spas and Fountains:

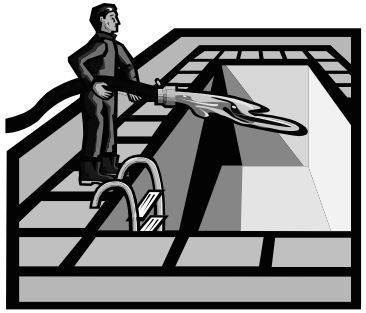
- Never discharge pool, spa, or fountain to a street or storm drain; discharge to a sanitary sewer cleanout.
- If possible, when emptying a pool, spa or fountain, let chlorine dissipate for a few days and then recycle/reuse water by draining it gradually onto a landscaped area.
- Drain pools, spas and fountains slowly, using a low volume pump or siphon.

Best Management Practices (continued)

- Make sure water used to acid wash pool, spa or fountain is neutralized prior to discharge. Soda ash can be used to keep the pH between 6.0 and 7.0 before discharging.
- Do not use copper-based algaecides. Control algae with alternatives such as sodium bromide.

Filter Cleaning:

- Never clean a filter in the street or near a storm drain. Rinse cartridge and diatomaceous earth filters onto a dirt area and spade filter residue into soil. Dispose of spend diatomaceous earth in the garbage.
- If there is no suitable lawn area, call your local wastewater treatment plant for instructions on discharging filter backwash or rinse water to the sanitary sewer.



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Food & Restaurant Industries...

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Restaurants
- Delis and Bakeries
- Grocery Stores
- Convenience Stores
- Food Stands
- Institutional & Workplace Cafeterias

WNY Stormwater Coalition

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County of Erie
Department of Environment & Planning
Environmental Compliance Services

How to Prevent Pollution from Food & Restaurant Industries

Fats, oil, grease, floor solvents, cleaning agents, cigarette butts, food waste, paper napkins and styrofoam all contribute to the pollution of our creeks and waterways. By implementing proper cleaning and waste management practices the introduction of these pollutants to our waterways can be avoided.

Food and restaurant-related pollutants invade storm drain systems and increase bacteria levels, which harm aquatic life, cause beach closures and impair our drinking water supplies. Floating materials also pollute our lakes and streams and reduce the natural beauty of our waterways. This results in a negative impact on aesthetics of our natural resources and tourism/recreation opportunities.

Best Management Practices

General Cleaning Operations

- Clean floor mats, filters and garbage cans in a slop sink, floor drain or proper outside area—NOT the parking lot, alley or sidewalk/street.
- Pour wash water into a janitorial sink—NOT outside in a parking lot, alley or sidewalk/street.
- Use the least toxic cleaning products available, and use cleaning products sparingly.
- Dispose of cleaners (solvents, floor cleaners and detergents) and cleaning rags properly
- Use dry methods for spill clean-up—SWEEP instead of hosing. Use cat litter to absorb spills.

Best Management Practices (continued)

Solid Waste Handling & Storage

- Keep dumpster lids closed and the areas around them clean. Do not fill them with liquid waste or hose them out.
- Use plastic bags, tied off, to keep dumpsters free of food debris. Never place liquid waste or leaky garbage bags into a dumpster.
- Have clean-up materials readily accessible near the dumpster and loading dock areas in case of an accidental spill.
- Keep dumpster and dumpster enclosures locked to prevent illegal dumping.
- Keep outdoor litter from accumulating by providing trash receptacles and encourage employees and patrons to use them.
- Sweep outside areas regularly and put the debris into the garbage instead of sweeping/hosing into the parking lot or street.

Grease Management

- Install pretreatment equipment, such as a grease interceptor.
- Clean grease traps regularly.
- Collect bulk grease in containers and contact a firm to recycle waste into a useful by-product.
- Don't pour grease into sinks, floor drains, trash bins, street gutters, or parking lots.
- Inform employees about these Best Management Practices and include this information in training programs.

Western New York Stormwater Coalition

A partnership to protect water quality

A number of communities, government agencies and consultants in Western New York have joined together to develop a stormwater management program to protect our waterways and enhance our quality of life. The goal of the Coalition is to utilize regional collaboration to identify existing resources and develop programs to reduce the negative impacts of stormwater pollution.

The Coalition meets every month to work collectively on developing and implementing a stormwater management program that complies with New York State's Phase II Stormwater regulations.

WNY Stormwater Coalition Members

Erie County
Alden (V)
Alden (T)
Amherst (T)
Angola (V)
Aurora (T)
Blasdell (V)
Boston (T)
Buffalo Sewer Authority
Cheektowaga (T)
Clarence (T)
Depew (V)
East Aurora (V)
Eden (T)
Elma (T)
Evans (T)
Grand Island (T)
Hamburg (V)
Hamburg (T)
Kenmore (V)
Lackawanna (C)
Lancaster (V)
Lancaster (T)
Orchard Park (V)
Orchard Park (T)
Sloan (V)
Tonawanda (C)
Tonawanda (T)
West Seneca (T)
Williamsville (V)

Niagara County
Cambria (T)
Lewiston (V)
Lewiston (T)
Niagara (T)
Niagara Falls Water Board
North Tonawanda (C)
Pendleton (T)
Porter (T)
Wheatfield (T)
Youngstown (V)

Agencies and Consultants
Erie County DEP/DPW/DSM
Niagara County DPW
Peace Bridge Authority
SUNY at Buffalo
Buffalo Niagara Riverkeeper
Erie County Soil & Water Conservation District
Niagara County Soil & Water Conservation District
Connie D. Miner & Co., Grant Consultant
CRA Infrastructure & Engineering
Environmental Design & Research, PC
Foit Albert
Malcolm Pirnie
Marquis Engineering
Metzger Civil Engineering
Nussbaumer & Clarke, Inc.
Parsons
Stearns & Wheler
TVGA Consultants
Wm. Schutt & Associates
Wendel Duchscherer

For information on the Coalition and how it is working to address the requirements of the Phase II Stormwater Rule, contact the Erie County Department of Environment and Planning at (716) 858-6370.

Western New York Stormwater Coalition
c/o Erie County DEP
Room 1077
95 Franklin Street
Buffalo, New York 14202

Roadwork and Paving…

How to Prevent Water & Storm Sewer Pollution

Best Management Practices for:

- Asphalt Paving Providers
- General Contractors
- Developers

WNY Stormwater Coalition

Stormwater Pollution

What is Stormwater?

Stormwater is water from rain or melting snow that does not soak into the ground. It flows from rooftops, over paved areas, bare soil, and sloped lawns. As it flows, stormwater runoff collects and transports soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants.

What is the Problem?

Rain and snowmelt wash pollutants from streets, construction sites, and land into storm sewers and ditches. Eventually, the storm sewers and ditches empty the polluted stormwater directly into streams and rivers with no treatment. This is known as *stormwater pollution.*

Polluted stormwater degrades our lakes, rivers, wetlands and other waterways. Nutrients such as phosphorous and nitrogen can cause the overgrowth of algae resulting in oxygen depletion in waterways. Toxic substances from motor vehicles, and careless application of pesticides and fertilizers threaten water quality and can kill fish and other aquatic life. Bacteria from animal wastes and improper connections to storm sewer systems can make lakes and waterways unsafe for wading, swimming and fish consumption. Eroded soil is a pollutant as well. It clouds the waterway and interferes with the habitat of fish and plant life.

Fortunately, stormwater pollution can be prevented or minimized by implementing Best Management Practices which are procedures or activities that reduce or eliminate pollutants in stormwater.

County of Erie
Department of Environment & Planning
Environmental Compliance Services

How to Prevent Pollution from Roadwork and Paving

Road paving, surfacing and pavement removal activities contribute to stormwater pollution because they take place on roads where stormwater runoff can be contaminated with asphalt, saw-cut slurry or excavated material.

Best Management Practices

General Practices

- Protect both dry and wet materials from rainfall and runoff by storing under cover. Avoid storing materials near storm sewers, ditches and waterways.
- Schedule excavation and grading work for dry weather.
- Implement NYSDEC approved erosion and sediment control BMPs for embankments.
- Recycle used oil, concrete and waste asphalt.

Equipment Maintenance

- Maintain all vehicles and heavy equipment regularly; Inspect frequently for leaks.
- Conduct all vehicle and equipment maintenance and refueling at one location, away from storm drains.
- Perform major vehicle and equipment repairs and washing off site.
- Do not use diesel oil to lubricate equipment or parts.

Best Management Practices

Asphalt and Concrete Removal

- After breaking up paving, be sure to remove all chunks and pieces. Recycle them at a crushing company.
- Shovel or vacuum saw-cut slurry and remove from site.
- Cover or barricade storm drain inlets during saw-cutting.

During Construction

- Cover catch basins and maintenance access points when applying seal coat, slurry seal and fog seal.
- Use check dams, ditches or berms to divert runoff around excavations.
- Never wash excess materials into a street, gutter or storm drain.
- Avoid over-application by water trucks for dust control.

WNY Stormwater Coalition

What is Stormwater?

Stormwater is water from rain or melting snow that does not soak into the ground and eventually runs off into waterways.

What's the Problem?

Stormwater runoff can collect pollutants such as animal waste, salt, pesticides, fertilizers, oil or grease, and debris from streets, sewer drains, rooftops, and sloped lawns.

Things YOU Can Do To Prevent Stormwater Pollution

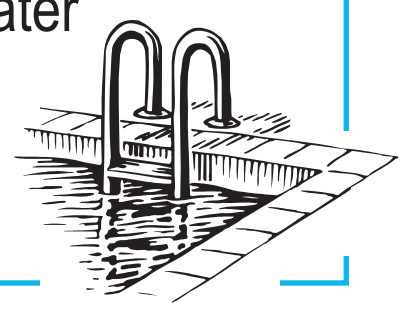
General Household: Whenever possible, use nontoxic products.

Do **not** dispose of chemicals in household drains or stormdrains.

Paint and Solvent: Water based paint is best, but when using oil based paint, dispose of properly, not down the sink drain or at the curb.

Automotive: Keep an eye on any possible leaks your automobile may have. Take any extra fluids to the household hazardous waste collection.

Swimming Pool and Spa: Check with the municipality before draining water with chlorine into a storm sewer or ditch.



Lawn and Garden: Use the proper amount of water listed in the directions when using pesticides or fertilizers. Dispose of the chemicals properly.

Pet Care: Pet waste can contaminate the water supply if not picked up as soon as possible.

Contact Erie County's Household Hazardous Waste Program for disposal recommendations on the products listed above.

858-6800

www.erie.gov/environment/compliance/pollution_sw2

Joel A. Giambra, Erie County Executive

Science Content Standards* Grades 5-8

■ Completely meets Standards
□ Partially meets Standards

		Unifying Concepts and Processes					Science as Inquiry		Physical Science			Life Science					Earth and Space Science			Science and Technology		Science in Personal and Social Perspectives					History and Nature of Science		
		Systems, order and organization	Evidence, models, and explanation	Change, constancy, and measurement	Evolution and equilibrium	Form and function	Abilities necessary to do scientific inquiry	Understandings about scientific inquiry	Properties and changes of properties in matter	Motions and forces	Transfer of energy	Structure and function in living systems	Reproduction and heredity	Regulation and behavior	Populations and ecosystems	Diversity and adaptations of organisms	Structure of the earth system	Earth's history	Earth in the solar system	Abilities of technological design	Understandings about science and technology	Personal health	Populations, resources, and environments	Natural hazards	Risks and benefits	Science and technology in society	Science as a human endeavor	Nature of science	History of science
Page	**Activity**																													
25	Adventures in Density						□	□	□																					
289	AfterMath	□	□																					□	□					
219	A-maze-ing Water		□														□					□		□	□					
63	Aqua Bodies	□				□						□																		
66	Aqua Notes	□										□					□													
293	Back to the Future	□	□	□			□	□																□	■			□		
129	Branching Out!	□	□				□	□																						
133	Capture, Store & Release	□	□				□					□					□							□						
3	Check it Out!		Depends on Activity																											
367	Choices and Preferences, Water Index																							□						
373	Cold Cash in the Icebox		□	□			□	□			□									■	□					□		□	□	
232	Common Water	□	□	□													□			□	□	□		□	□					
377	Dilemma Derby	□										□			□								□	□	□					
238	A Drop in the Bucket	□	□				□										□						□	□	□					
382	Easy Street						□										□				□					□				
242	Energetic Water		□				□			□	□									■	□					□	□	□	□	
307	Every Drop Counts		□				□													□	□		□		□	□				
136	Get the Ground Water Picture	■	□	□			□										□				□			□	□					
144	Geyser Guts	□	□	□	□	□			□		□						□				□			□						
311	A Grave Mistake		□	□			□	□	□								□				□	□	□	□	□		□	□	□	
150	The Great Stony Brook	□	□	□			□	□									□	□									□	□	□	
246	Great Water Journeys	□										□			□	□	□							□			□		□	
30	H2Olympics	□	□				□	□	□								□													
35	Hangin' Together	□	■		□	□	□	□	□								□			□							□	□		
316	Humpty Dumpty	■	□	□	■	□						□			□					■	■		□	□	□		□	□		
7	Idea Pools		Depends on Activity																											
157	Imagine!	□		□		□						□			□		□		□											
161	Incredible Journey	□	□	□					□		□	□					□		□											
254	Irrigation Interpretation		■	□			□	□							□					□	■					□	□	□	■	
43	Is There Water on Zork?		□	□			■	■	□								□										□	■		
166	Just Passing Through	□	□	□		□						□					□			□	□			□		□				
72	Let's Even Things Out	□	□		□							□																		
9	Let's Work Together		Depends on Activity																											
76	The Life Box	□	□				■	■			□	□			□													□		
79	Life in the Fast Lane	■	□	■		□	□	□				□	□	■	■													□	□	
260	The Long Haul				□		□														□					□				
322	Macroinvertebrate Mayhem	■	■	□	□	■	□	□				□	□	■	□									□				□	□	
47	Molecules in Motion	□	□	□							□																			
328	Money Down the Drain			□																						□				
262	Nature Rules!																□							□	□					□
85	No Bellyachers											□										□								

*National Academy of Sciences. *National Science Education Standards*. 1996. Washington, D.C.: National Academy Press.

Science Content Standards* Grades 5-8

■ Completely meets Standards
□ Partially meets Standards

		Unifying Concepts and Processes					Science as Inquiry		Physical Science			Life Science					Earth and Space Science			Science and Technology		Science in Personal and Social Perspectives					History and Nature of Science		
		Systems, order and organization	Evidence, models, and explanation	Change, constancy, and measurement	Evolution and equilibrium	Form and function	Abilities necessary to do scientific inquiry	Understandings about scientific inquiry	Properties and changes of properties in matter	Motions and forces	Transfer of energy	Structure and function in living systems	Reproduction and heredity	Regulation and behavior	Populations and ecosystems	Diversity and adaptations of organisms	Structure of the earth system	Earth's history	Earth in the solar system	Abilities of technological design	Understandings about science and technology	Personal health	Populations, resources, and environments	Natural hazards	Risks and benefits	Science and technology in society	Science as a human endeavor	Nature of science	History of science
Page	**Activity**																												
171	Old Water	□	□									□				□	□	□											
392	Pass the Jug		□												□					□	□					□			□
89	People of the Bog	□	■	□	□	■	□	□				□		□	□		□										□	□	□
397	Perspectives																							□	■				
174	Piece it Together	□	□				□				□						□		□										
182	Poetic Precipitation			□													□												
93	Poison Pump		■				□	□				□									□	□				□	□	□	■
338	The Pucker Effect	□	□	□			■	□									□				□			□		□	□	□	
435	Raining Cats and Dogs	□															□												
442	The Rainstick						□										□												
186	Rainy-Day Hike	□	□				□	□									□						□	□			□		
344	Reaching Your Limits		□	□																	□		□	□	□	□			
99	Salt Marsh Players	■	□	□	□	■						□	□	■	□				□										
348	Sparkling Water	□	□	□			□	□	□								□			□	□		□	□	□				
191	Stream Sense	□		□			□	□						□		□	□												
267	Sum of the Parts	□	□																		□			□	□	□			
353	Super Bowl Surge	□	□																		□			□	□	□			
107	Super Sleuths						□					□										□			□				
116	Thirsty Plants	□	□	□		□	□	□				□		□			□												
196	The Thunderstorm			□			□										□							□					
400	Water: Read All About it!		Depends on Activity																										
12	Water Actions		Depends on Activity																										
122	Water Address				□	□								□		□													
403	Water Bill of Rights																				□		□						
446	Water Celebration		Depends on Activity																										
407	Water Concentration	□																			□					□			□
421	Water Crossings																			■	□								□
450	wAteR in moTion		□			□				□										□									
19	Water Log		Depends on Activity																										
454	Water Messages in Stone																												
271	Water Meter																												
201	Water Models	□	□				□	□			□	□			□		□		□									□	
274	Water Works	□																						□	□				
457	Water Write	□															□			□				□		□			
206	Wet Vacation	□	□														□		□					□					
360	Wet-Work Shuffle	□										□					□				□					□	■		
212	Wetland Soils in Living Color	□	□				□										□												
425	What's Happening?		Depends on Activity																										
54	What's the Solution?		□				□	□	□								□											□	
279	Where Are the Frogs?	□	■	□			■	□	□			□		□	□		□						□	□	□			□	
429	Whose Problem is it?		Depends on Activity																										
																					□				□				

*National Academy of Sciences. *National Science Education Standards.* 1996. Washington, D.C.: National Academy Press.

Science Content Standards* Grades 9-12

■ Completely meets Standards
□ Partially meets Standards

		Unifying Concepts and Processes					Science as Inquiry		Physical Science						Life Science						Earth and Space Science				Science and Technology		Science in Personal and Social Perspectives						History & Nature of Science		
		Systems, order and organization	Evidence, models, and explanation	Change, contancy, and measurement	Evolution and equilibrium	Form and function	Abilities necessary to do scientific inquiry	Understandings about scientific inquiry	Structure of atoms	Structure and properties of matter	Chemical reactions	Motions and forces	Conservation of energy and increase in disorder	Interactions of energy and matter	The cell	Molecular basis of heredity	Biological evolution	Interdependence of organisms	Matter, energy, and organization in living systems	Behavior of organisms	Energy in the earth system	Geochemical cycles	Origin and evolution of the earth system	Origin and evolution of the universe	Abilities of technological design	Understandings about science and technology	Personal and community health	Population growth	Natural resources	Environmental quality	Natural and human-induced hazards	Science & technology in local, national, & global challenges	Science as a human endeavor	Nature of scientific knowledge	Historical perspectives
Page	**Activity**																																		
293	Back to the Future		□	□			□																						□	□	□			
300	The CEO	□																							□	□				□					
3	Check it Out!		Depends on Activity																																
367	Choices and Preferences, Water Index																												□		□				
223	Color Me a Watershed	□	□	□	□																				□				□	□	□	□			
377	Dilemma Derby	□																□									□		□	□	□				
303	Dust Bowls & Failed Levees	□																												□	□				
136	Get the Ground Water Picture	□	□	□			□																			□				□	□			□	
311	A Grave Mistake		□	□			□	□		□												□					□		□	□	□		□	□	□
246	Great Water Journeys	□				□											□	□		□		□								□	□		□		□
388	Hot Water		Depends on Activity																																
7	Idea Pools		Depends on Activity																																
9	Let's Work Together		Depends on Activity																																
260	The Long Haul			□																						□					□				
262	Nature Rules!																													□					
89	People of the Bog	□	■	□	□	■	□	□									□															□	□		
397	Perspectives																												□	□	□				
333	The Price is Right	□	□																						■	□			□	□	□	□			
338	The Pucker Effect	□	□	□			□	□																						□	□	□	□		
442	The Rainstick						□																												
348	Sparkling Water	□	□	□			□	□																	□	□			□	□	□	□		□	
353	Super Bowl Surge	□	□																						□	□				□	□	□	□	□	
107	Super Sleuths						□																				□								
400	Water: Read All About it!		Depends on Activity																																
12	Water Actions		Depends on Activity																																
403	Water Bill of Rights																												□	□	□	□	□		
421	Water Court	□																											□	□	□				□
421	Water Crossings																								□	□									
450	wAteR in moTion																																		
19	Water Log		Depends on Activity																																
457	Water Write	□																							□						□	□			
206	Wet Vacation	□	□																□												□				
360	Wet-Work Shuffle	□															□		□						□										
425	What's Happening?		Depends on Activity																																
429	Whose Problem is it?																																		
460	Wish Book																																		

*National Academy of Sciences. *National Science Education Standards.* 1996. Washington, D.C.: National Academy Press.

Science Content Standards* Grades K-4

■ Completely meets Standards
□ Partially meets Standards

		Unifying Concepts and Processes					Science as Inquiry		Physical Science			Life Science			Earth and Space Science			Science and Technology			Science in Personal and Social Perspectives					History and Nature of Science
		Systems, order and organization	Evidence, models, and explanation	Change, constancy, and measurement	Evolution and equilibrium	Form and function	Abilities necessary to do scientific inquiry	Understandings about scientific inquiry	Properties of objects and materials	Position and motion of objects	Light, heat, electricity, and magnetism	The characteristics of organisms	Life cycles of organisms	Organisms and their environments	Properties of earth materials	Objects in the sky	Changes in earth and sky	Abilities of technological design	Understandings about science and technology	Abilities to distinguish between natural objects and objecs made by humans	Personal health	Characteristics and changes in populations	Types of resources	Changes in environments	Science and technology in local challenges	Science as a human endeavor
Page	**Activity**																									
219	A-maze-ing Water													□	□								□	□		
63	Aqua Bodies											□														
66	Aqua Notes	□										□									□		□			
129	Branching Out!	□	□				□	□																		
133	Capture, Store & Release	□	□																							
3	Check it Out!	Depends on Activity																								
367	Choices and Preferences, Water Index																						□			
373	Cold Cash in the Icebox		□	□			■	□	□									■	□						□	□
232	Common Water	□	□	□										□										□		
238	A Drop in the Bucket	□	□				□					□			□								□			
242	Energetic Water		□				□											■	□	□					□	□
307	Every Drop Counts		□				□											□	□				□		□	
144	Geyser Guts	□	□	□	□	□			□		□				□			□								
30	H2Olympics	□	□				■	■	□						□											□
155	A House of Seasons	□							□								□									
316	Humpty Dumpty	■	□	□	■	□						□		□				■	■				□	■	□	□
7	Idea Pools	Depends on Activity																								
157	Imagine!	□		□		□						□					□						□			
161	Incredible Journey	□	□	□					□			□					□									
254	Irrigation Interpretation		■	□			■	■				□		□			□	■	■				■		□	
166	Just Passing Through	□	□	□		□						□			□			□	□				□	□	□	□
72	Let's Even Things Out	□	□		□							□									□					
9	Let's Work Together	Depends on Activity																								
76	The Life Box	□	□			■	■				□		□										□			
79	Life in the Fast Lane	■	□	■		□	□	□				■	□	■				□							□	
260	The Long Haul			□		□																				
322	Macroinvertebrate Mayhem	■	■	□	□	■	□	□				■	■	□										□		□
47	Molecules in Motion	□	□	□					□																	
328	Money Down the Drain			□			□												□							
85	No Bellyachers											□									□	□				

*National Academy of Sciences. *National Science Education Standards.* 1996. Washington, D.C.: National Academy Press.

Science Content Standards* Grades K-4

■ Completely meets Standards
□ Partially meets Standards

		Unifying Concepts and Processes					Science as Inquiry		Physical Science			Life Science			Earth and Space Science			Science and Technology			Science in Personal and Social Perspectives					History and Nature of Science
		Systems, order and organization	Evidence, models, and explanation	Change, constancy, and measurement	Evolution and equilibrium	Form and function	Abilities necessary to do scientific inquiry	Understandings about scientific inquiry	Properties of objects and materials	Position and motion of objects	Light, heat, electricity, and magnetism	The characteristics of organisms	Life cycles of organisms	Organisms and their environments	Properties of earth materials	Objects in the sky	Changes in earth and sky	Abilities of technological design	Understandings about science and technology	Abilities to distinguish between natural objects and objecs made by humans	Personal health	Characteristics and changes in populations	Types of resources	Changes in environments	Science and technology in local challenges	Science as a human endeavor
Page	**Activity**																									
171	Old Water	□	□												□											
392	Pass the Jug		□									□						□	□				□		□	
174	Piece it Together	□	□				□									□	□								□	
182	Poetic Precipitation			□													□									
435	Raining Cats and Dogs	□															□									
442	The Rainstick						□										□									
186	Rainy-Day Hike	□	□				■	□									□	□								
344	Reaching Your Limits		□	□															□					□	□	□
99	Salt Marsh Players	■	□	□	□	■						■	□	□		□								□	□	
191	Stream Sense	□		□			□	□	□					□	□						□					
267	Sum of the Parts	□	□											□					□					□	□	
353	Super Bowl Surge	□	□																□					□	□	
196	The Thunderstorm			□			□										□									
122	Water Address				□	□						□		□												
446	Water Celebration	Depends on Activity																								
407	Water Concentration	□																□	□				□		□	
421	Water Crossings																	■	□						□	
450	wAteR in moTion		□	□			□		□									□								
19	Water Log	Depends on Activity																								
50	Water March			□					□															□		
454	Water Messages in Stone																									
271	Water Meter																						□			
201	Water Models	□	□				□	□	□			□			□		□									
274	Water Works	□																					□			
457	Water Write	□							□			□					□	■						□	□	
206	Wet Vacation																									
360	Wet-Work Shuffle	□										□			□				□							□
425	What's Happening?	Depends on Activity																								
54	What's the Solution?		□				■	□	□						□							□				
460	Wish Book																								□	

*National Academy of Sciences. *National Science Education Standards.* 1996. Washington, D.C.: National Academy Press.

APPENDIX C

STORMWATER LOCAL LAW GOVERNING ILLICIT DISCHARGES AND ENFORCEMENT OF STORMWATER MANAGEMENT

LOCAL LAW NO. _____- 2007

TOWN OF AMHERST
COUNTY OF ERIE, STATE OF NEW YORK

A Local Law To Prohibit Illicit Discharge, Activities and Connections To The Storm Water Sewer System, To Control Erosion and Sediment Discharges, And To Conserve and Protect Streams In The Town Of Amherst, Repealer

Be it enacted by the Town Board of the Town of Amherst as follows:

Section 1.

The Town Code of the Town of Amherst is hereby amended by adding thereto a new Chapter 172 as follows:

Section 172. Title

The title of this Local Law should be "The Storm Water and Erosion Control Law."

ARTICLE 1 – PROHIBITION OF ILLICIT DISCHARGES, ACTIVITIES AND CONNECTIONS TO SEPARATE STORM SEWER SYSTEM

172-1.0 PURPOSE/INTENT

The purpose of this Article is to provide for the health, safety, and general welfare of the citizens of the Town of Amherst through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This law establishes methods for controlling the introduction of pollutants into the MS4 in order to comply with requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems. The objectives of this Article are:

1.1 To meet the requirements of the SPDES General Permit for Stormwater Discharges from MS4s, Permit no. GP-02-02 or as amended or revised;

1.2 To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process or discharge non-stormwater wastes;

1.3 To prohibit Illicit Connections, Activities and Discharges to the MS4;

1.4 To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this law; and

1.5 To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment and other pollutants into the MS4.

172-2.0 DEFINITIONS

Whenever used in this law, unless a different meaning is stated in a definition applicable to only a portion of this law, the following terms will have meanings set forth below:

Agricultural Activity - the activity of an active farm including grazing and watering livestock, irrigating crops, harvesting crops, using land for growing agricultural products, and cutting timber for sale, but shall not include the operation of a dude ranch or similar operation, or the construction of new structures associated with agricultural activities.

Applicant - a property owner or agent of a property owner who has filed an application for a land development activity.

Best Management Practices (BMPs) - Schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Building - any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than 100 square feet of area.

Channel - a natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Clean Water Act - The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

Clearing - any activity that removes the vegetative surface cover.

Construction Activity - Activities requiring authorization under the SPDES permit for stormwater discharges from construction activity, GP-02-01, as amended or revised. These activities include construction projects resulting in land disturbance of one or more acres. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Dedication - the deliberate appropriation of property by its owner for general public use.

Department - the New York State Department of Environmental Conservation

Design Manual - the *New York State Stormwater Management Design Manual*, most recent version including applicable updates, that serves as the official guide for stormwater management principles, methods and practices.

Design professional - New York State licensed Professional Engineer, Licensed Architect, or Certified Professional in Erosion and Sediment Control (CPESC).

Developer - a person who undertakes land development activities.

Erosion Control Manual - the most recent version of the "New York Standards and Specifications for Erosion and Sediment Control" manual, commonly known as the "Blue Book".

Grading - excavation or fill of material, including the resulting conditions thereof.

Hazardous Materials - Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illicit Connections - Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the MS4, including but not limited to:

1. Any conveyances which allow any non-stormwater discharge including treated or untreated sewage, process wastewater, and wash water to enter the MS4 and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency; or

2. Any drain or conveyance connected from a commercial or industrial land use to the MS4 which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Illicit Discharge - Any direct or indirect non-stormwater discharge to the MS4, except as exempted in Section 6 of this law.

Impervious Cover - those surfaces, improvements and structures that cannot effectively infiltrate rainfall, snow melt and water (e.g., building rooftops, pavement, sidewalks, driveways, etc).

Individual Sewage Treatment System - A facility serving one or more parcels of land or residential households, or a private, commercial or institutional facility, that treats sewage or other liquid wastes for discharge into the groundwaters of New York State, except where a permit for such a facility is required under the applicable provisions of Article 17 of the Environmental Conservation Law.

Industrial Activity - Activities requiring the SPDES permit for discharges from industrial activities except construction, GP-98-03, as amended or revised.

Industrial Stormwater Permit - a State Pollutant Discharge Elimination System permit issued to a commercial industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Infiltration - the process of percolating stormwater into the subsoil.

Jurisdictional Wetland - an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Land Development Activity - construction activity including clearing, grading, excavating, soil disturbance or placement of fill that results in land disturbance of equal to or greater than one acre, or activities disturbing less than one acre of total land area that is part of a larger common plan of development or sale, even though multiple separate and distinct land development activities may take place at different times on different schedules.

Landowner - the legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights in the land.

Maintenance Agreement - a legally recorded document that acts as a property deed restriction, and which provides for long-term maintenance of stormwater management practices.

MS4 - Municipal Separate Storm Sewer System

Municipal Separate Storm Sewer System - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. Owned or operated by the Town of Amherst;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40CFR 122.2

Municipality - The Town of Amherst

Nonpoint Source Pollution - pollution from any source other than from any discernible, confined, and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

Non-Stormwater Discharge - Any discharge to the MS4 that is not composed entirely of stormwater.

Person - Any individual, association, organization, partnership, firm, corporation or other entity recognized by law.

Phasing - clearing a parcel of land in distinct pieces or parts, with the stabilization of each piece completed before the clearing of the next.

Pollutant - Dredged spoil, filter backwash, solid waste, incinerator residue, treated or untreated sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards.

Pollutant of Concern - sediment or a water quality measurement that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the land development activity.

Premises - Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Project - land development activity

Recharge - the replenishment of underground water reserves.

Sediment Control - measures that prevent eroded sediment from leaving the site.

Sensitive Areas - cold water fisheries, shellfish beds, swimming beaches, groundwater recharge areas, water supply reservoirs, and habitats for threatened, endangered or special concern species.

SPDES General Permit for Construction Activities GP-02-01 - A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to developers of construction activities to regulate disturbance of one or more acres of land.

SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems GP-02-02 - A permit under the New York State Pollutant Discharge Elimination

System (SPDES) issued to municipalities to regulate discharges from municipal separate storm sewers for compliance with EPA established water quality standards and/or to specify stormwater control standards.

Special Conditions

1. Discharge Compliance with Water Quality Standards. The condition that applies where a municipality has been notified that the discharge of stormwater authorized under their MS4 permit may have caused or has the reasonable potential to cause or contribute to the violation of an applicable water quality standard. Under this condition the municipality must take all necessary actions to ensure future discharges do not cause or contribute to a violation of water quality standards.

2. 303(d) Listed Waters. The condition in the municipality's MS4 permit that applies where the MS4 discharges to a 303(d) listed water. Under this condition the stormwater management program must ensure no increase of the listed pollutant of concern to the 303(d) listed water.

3. Total Maximum Daily Load (TMDL) Strategy. The condition in the municipality's MS4 permit where a TMDL including requirements for control of stormwater discharges has been approved by EPA for a waterbody or watershed into which the MS4 discharges. If the discharge from the MS4 did not meet the TMDL stormwater allocations prior to September 10, 2003, the municipality was required to modify its stormwater management program to ensure that reduction of the pollutant of concern specified in the TMDL is achieved.

4. The condition in the municipality's MS4 permit that applies if a TMDL is approved in the future by EPA for any waterbody or watershed into which an MS4 discharges. Under this condition the municipality must review the applicable TMDL to see if it includes requirements for control of stormwater discharges. If an MS4 is not meeting the TMDL stormwater allocations, the municipality must, within six (6) months of the TMDL's approval, modify its stormwater management program to ensure that reduction of the pollutant of concern specified in the TMDL is achieved.

Stabilization - the use of practices that prevent exposed soil from eroding.

State Pollutant Discharge Elimination System (SPDES) Stormwater Discharge Permit - A permit issued by the Department that authorizes the discharge of pollutants to waters of the state.

Stop Work Order - an order issued which requires that all construction activity on a site be stopped.

Stormwater - rainwater, surface runoff, snowmelt and drainage

Stormwater Hotspot - a land use or activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies.

Stormwater Management - the use of structural or non-structural practices that are designed to reduce stormwater runoff and mitigate its adverse impacts on property, natural resources and the environment.

Stormwater Management Facility - one or a series of stormwater management practices installed, stabilized and operating for the purpose of controlling stormwater runoff.

Stormwater Management Officer - The employee duly licensed in New York State as a Professional Engineer (PE), Licensed Architect, or Certified Professional in Erosion and Sediment

Control (CPESC) designated by the Town of Amherst to enforce this local law. The SMO may also be designated by the municipality to accept and review stormwater pollution prevention plans, forward the plans to the applicable municipal board and inspect stormwater management practices.

Stormwater Management Practices (SMPs) - measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing flood damage and preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.

Stormwater Pollution Prevention Plan (SWPPP) - a plan for controlling stormwater runoff and pollutants from a site during and after construction activities.

Stormwater Runoff - flow on the surface of the ground, resulting from precipitation

Stream - includes 1) rivers, 2) creeks, 3) perennial streams or ditches, 4) intermittent streams or ditches, 5) lakes and ponds that have an outlet that discharge to any of the foregoing streams, 6) culverts and other man-made or artificial conveyances that carry stream flow from any of the forgoing and 7) channelized streams.

Surface Waters of the State of New York - lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

Storm sewers and waste treatment systems, including treatment ponds or lagoons which also meet the criteria of this definition are not waters of the state. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the state (such as a disposal area in wetlands) nor resulted from impoundment of waters of the state.

303(d) List - A list of all surface waters in the state for which beneficial uses of the water (drinking, recreation, aquatic habitat, and industrial use) are impaired by pollutants, prepared periodically by the Department as required by Section 303(d) of the Clean Water Act. 303(d) listed waters are estuaries, lakes and streams that fall short of state surface water quality standards and are not expected to improve within the next two years.

TMDL - Total Maximum Daily Load

Total Maximum Daily Load - The maximum amount of a pollutant to be allowed to be released into a waterbody so as not to impair uses of the water, allocated among the sources of that pollutant.

Wastewater - Water that is not stormwater is contaminated with pollutants and is or will be discarded.

Watercourse - a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

Waterway - a channel that directs surface runoff to a watercourse or to the public storm drain

172-3.0 APPLICABILITY

This Article shall apply to all water entering the MS4 generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

172-4.0 RESPONSIBILITY FOR ADMINISTRATION

The Stormwater Management Officer(s) (SMO(s)) shall administer, implement, and enforce the provisions of this law. Such powers granted or duties imposed upon the authorized enforcement official may be delegated in writing by the SMO as may be authorized by the municipality.

172-5.0 DISCHARGE PROHIBITIONS

5.1 Prohibition of Illegal Discharges

No person shall discharge or cause to be discharged into the MS4 any materials other than stormwater except as provided in Section 6.1.1. The commencement, conduct or continuance of any illegal discharge to the MS4 is prohibited except as described as follows:

5.1.1 The following discharges are exempt from discharge prohibitions established by this local law, unless the Department or the municipality has determined them to be substantial contributors of pollutants: water line flushing or other potable water sources, landscape irrigation or lawn watering, existing diverted stream flows, rising ground water, uncontaminated ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains, crawl space or basement sump pumps, irrigation water, springs, water from individual residential car washing, natural riparian habitat or wetland flows, dechlorinated swimming pool discharges, residential street wash water, water from fire fighting activities, and any other water source not containing pollutants. Such exempt discharges shall be made in accordance with an appropriate plan for reducing pollutants.

5.1.2 Discharges approved in writing by the SMO to protect life or property from imminent harm or damage, provided that, such approval shall not be construed to constitute compliance with other applicable laws and requirements, and further provided that such discharges may be permitted for a specified time period and under such conditions as the SMO may deem appropriate to protect such life and property while reasonably maintaining the purpose and intent of this local law.

5.1.3 Dye testing in compliance with applicable state and local laws is an allowable discharge, but requires a verbal notification to the SMO prior to the time of the test.

5.1.4 The prohibition shall not apply to any discharge permitted under an SPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Department, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the MS4.

5.2 Prohibition of Illicit Connections

5.2.1 The construction, use, maintenance or continued existence of illicit connections to the MS4 is prohibited.

5.2.2 This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

5.2.3 A person is considered to be in violation of this local law if the person connects a line conveying sewage to the municipality's MS4, or allows such a connection to continue.

172-6.0 PROHIBITION AGAINST FAILING INDIVIDUAL SEWAGE TREATMENT SYSTEMS

No persons shall operate a failing individual sewage treatment system in areas tributary to the municipality's MS4. A failing individual sewage treatment system is one which has one or more of the following conditions:

6.1 The backup of sewage into a structure

6.2 Discharges of treated or untreated sewage onto the ground surface

6.3 A connection or connections to a separate stormwater sewer system

6.4 Liquid level in the septic tank above the outlet invert

6.5 Structural failure of any component of the individual sewage treatment system that could lead to any of the other failure conditions as noted in this section

6.6 Contamination of off-site groundwater

172-7.0 PROHIBITION AGAINST ACTIVITIES CONTAMINATING STORMWATER

7.1 Activities that are subject to the requirements of this section are those types of activities that:

7.1.1 Cause or contribute to a violation of the municipality's MS4 SPDES permit.

7.1.2 Cause or contribute to the municipality being subject to the Special Conditions as defined in Section 2 (Definitions) of this local law.

7.2 Such activities include failing individual sewage treatment systems as defined in Section 7, improper management of pet waste or any other activity that causes or contributes to violations of the municipality's MS4 SPDES permit authorization.

7.3 Upon notification to a person that he or she is engaged in activities that cause or contribute to violations of the municipality's MS4 SPDES permit authorization, that person shall take all reasonable actions to correct such activities such that he or she no

longer causes or contributes to violations of the municipality's MS4 SPDES permit authorization.

172-8.0 REQUIREMENT TO PREVENT, CONTROL, AND REDUCE STORMWATER POLLUTANTS BY THE USE OF BEST MANAGEMENT PRACTICES

8.1 Best Management Practices

Where the SMO has identified illicit discharges as defined in Section 2 of this Local Law, or activities contaminating stormwater as defined in Section 8 of this local law, the municipality may require implementation of Best Management Practices (BMPs) to control those illicit discharges and activities.

8.1.1 The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the MS4 through the use of structural and non-structural BMPs.

8.1.2 Any person responsible for a property or premise, which is, or may be, the source of an illicit discharge as defined in Section 2 of this local law, or an activity contaminating stormwater as defined in Section 8 of this local law, may be required to implement, at said person's expense, additional structural and non-structural BMPs to reduce or eliminate the source of pollutant(s) to the MS4.

8.1.3 Compliance with all terms and conditions of a valid SPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section.

8.2 Individual Sewage Treatment Systems

Response to special conditions requiring no increase of pollutants or requiring a reduction of pollutants where individual sewage treatment systems are contributing to the municipality's being subject to the Special Conditions as defined in Section 2 of this local law, the owner or operator of such individual sewage treatment systems shall be required to:

8.2.1 Maintain and operate individual sewage treatment systems as follows:

1. Inspect the septic tank annually to determine scum and sludge accumulation. Septic tanks must be pumped out whenever the bottom of the scum layer is within three inches of the bottom of the outlet baffle or sanitary tee or the top of the sludge is within ten inches of the bottom of the outlet baffle or sanitary tee.

2. Avoid the use of septic tank additives.

3. Avoid the disposal of excessive quantities of detergents, kitchen wastes, laundry wastes, and household chemicals; and

4. Avoid the disposal of cigarette butts, disposable diapers, sanitary napkins, trash and other such items.

5. Inspection of the tank for cracks, leaks and blockages should be done by the septage hauler at the time of pumping of the tank contents.

8.2.2 Repair or replace individual sewage treatment systems as follows:

1. In accordance with 10NYCRR Appendix 75A to the maximum extent practicable.

2. A design professional licensed to practice in New York State shall prepare design plans for any type of absorption field that involves:

   A. Relocating or extending an absorption area to a location not previously approved for such.

   B. Installation of a new subsurface treatment system at the same location.

   C. Use of alternate system or innovative system design or technology.

3. A written certificate of compliance shall be submitted by the design professional to the municipality at the completion of construction of the repair or replacement system.

172-9.0 SUSPENSION OF ACCESS TO MS4
(Illicit Discharges in Emergency Situations)

9.1 The SMO may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, to the health or welfare of persons, or to the MS4. The SMO shall notify the person of such suspension within a reasonable time thereafter in writing of the reasons for the suspension. If the violator fails to comply with a suspension order issued in an emergency, the SMO may take such steps as deemed necessary to prevent or minimize damage to the MS4 or to minimize danger to persons.

9.2 Suspension due to the detection of illicit discharge. Any person discharging to the municipality's MS4 in violation of this law may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The SMO will notify a violator in writing of the proposed termination of its MS4 access and the reasons therefore. The violator may petition the SMO for a reconsideration and hearing. Access may be granted by the SMO if he/she finds that the illicit discharge has ceased and the discharger has taken steps to prevent its recurrence. Access may be denied if the SMO determines in writing that the illicit discharge has not ceased or is likely to recur. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the SMO.

172-10.0 INDUSTRIAL OR CONSTRUCTION ACTIVITY DISCHARGES

Any person subject to an industrial or construction activity SPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the municipality prior to the allowing of discharges to the MS4.

172-11.0 ACCESS AND MONITORING OF DISCHARGES

11.1 Applicability

This section applies to all facilities that the SMO must inspect to enforce any provision of this Law, or whenever the authorized enforcement agency has cause to believe that there exists, or potentially exists, in or upon any premises any condition which constitutes a violation of this Article.

11.2 Access to Facilities

11.2.1 The SMO shall be permitted to enter and inspect facilities subject to regulation under this law as often as may be necessary to determine compliance with this Article If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to the SMO.

11.2.2 Facility operators shall allow the SMO ready and safe access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records as may be required to implement this Article.

11.2.3 The municipality shall have the right to set up on any facility subject to this Article such devices as are necessary in the opinion of the SMO to conduct monitoring and/or sampling of the facility's stormwater discharge.

11.2.4 The municipality has the right to require the facilities subject to this Article to install monitoring equipment as is reasonably necessary to determine compliance with this law. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

11.2.5 Unreasonable delays in allowing the municipality access to a facility subject to this Article is a violation of this law. A person who is the operator of a facility subject to this law commits an offense if the person denies the municipality reasonable access to the facility for the purpose of conducting any activity authorized or required by this law.

11.2.6 If the SMO has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this law, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this Article or any order issued hereunder, then the SMO may seek issuance of a search warrant from any court of competent jurisdiction.

172-12.0 NOTIFICATION OF SPILLS

Notwithstanding other requirements of Article, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into the MS4, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous

materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the municipality in person or by telephone or facsimile no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the municipality within three business days of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

172-13.0 ENFORCEMENT

13.1 Notice of Violation

When the municipality's SMO finds that a person has violated a prohibition or failed to meet a requirement of this law, he/she may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

13.1.1 The elimination of illicit connections or discharges;

13.1.2 That violating discharges, practices, or operations shall cease and desist;

13.1.3 The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;

13.1.4 The performance of monitoring, analyses, and reporting;

13.1.5 That the Town will seek civil remedies or criminal penalties, including the imposition of a criminal fine, as provided in Section 13.2 of this chapter; and

13.1.6 The implementation of source control or treatment BMPs. If abatement of a violation and/or restoration of affected property are required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

13.2 Penalties

In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this local law shall be guilty of a violation punishable by a fine not exceeding three hundred fifty dollars ($350) or imprisonment for a period not to exceed six months, or both for conviction of a first offense; for conviction of a second offense both of which were committed within a period of five years, punishable by a fine not less than three hundred fifty dollars nor more than seven hundred dollars ($700) or imprisonment for a period not to exceed six months, or both; and upon conviction for a third or subsequent offense all of which were committed within a period of five years, punishable by a fine not less than seven hundred dollars nor more than one thousand dollars ($1000) or imprisonment for a period not to exceed six months, or both. However, for the purposes of conferring jurisdiction upon courts and judicial officers generally, violations of this local law shall be deemed violations and for such purpose only all provisions of law relating to violations shall apply to such violations. Each week's continued violation shall constitute a separate additional violation.

172-14.0 CHALLENGE TO NOTICE OF VIOLATION

Any person receiving a Notice of Violation may challenge the notice in a special proceeding commenced pursuant to Article 78 of the Civil Practice Law and Rules of the State of New York.

172-15.0 CORRECTIVE MEASURES AFTER APPEAL

15.1 If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of a judicial challenge, within five (5) business days of receipt by the violation of the Court's Order, then the SMO shall request the owner's permission for access to the subject private property to take any and all measures reasonably necessary to abate the violation and/or restore the property.

15.2 If refused access to the subject private property, the SMO may seek a warrant in a court of competent jurisdiction to be authorized to enter upon the property to determine whether a violation has occurred. Upon determination that a violation has occurred, the SMO may seek a court order to take any and all measures reasonably necessary to abate the violation and/or restore the property. The cost of implementing and maintaining such measures shall be the sole responsibility of the discharger.

172-16.0 INJUNCTIVE RELIEF

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this law. If a person has violated or continues to violate the provisions of this law, the SMO may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

172-17.0 ALTERNATIVE REMEDIES

17.1 Where a person has violated a provision of this Article, he/she may be eligible for alternative remedies in lieu of a civil penalty, upon recommendation of Stormwater Management Officer and concurrence of the Municipal Code Enforcement Officer, where:

17.1.1 The violation was unintentional

17.1.2 The violator has no history of pervious violations of this Law

17.1.3 Environmental damage was minimal

17.1.4 Violator acted quickly to remedy violation

17.1.5 Violator cooperated in investigation and resolution

17.2 Alternative remedies may consist of one or more of the following:

17.2.1 Attendance at compliance workshops

17.2.2 Storm drain stenciling or storm drain marking

17.2.3 River, stream or creek cleanup activities

172-18.0 VIOLATIONS DEEMED A PUBLIC NUISANCE

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Article is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

172-19.0 REMEDIES NOT EXCLUSIVE

The remedies listed in this Article are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

ARTICLE 2 -STORMWATER MANAGEMENT AND EROSION & SEDIMENT CONTROL

GENERAL PROVISIONS

172-20.1 FINDINGS OF FACT

It is hereby determined that:

20.1.1 Land development activities and associated increases in site impervious cover often alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, or sediment transport and deposition;

20.2 This stormwater runoff contributes to increased quantities of water-borne pollutants, including siltation of aquatic habitat for fish and other desirable species;

20.3 Clearing and grading during construction tends to increase soil erosion and add to the loss of native vegetation necessary for terrestrial and aquatic habitat;

20.4 Improper design and construction of stormwater management practices can increase the velocity of stormwater runoff thereby increasing stream bank erosion and sedimentation;

20.5 Impervious surfaces allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream baseflow;

20.6 Substantial economic losses can result from these adverse impacts on the waters of the municipality;

20.7 Stormwater runoff, soil erosion and non-point source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activities;

20.8 The regulation of stormwater runoff discharges from land development activities in order to control and minimize increases in stormwater runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution associated with stormwater runoff is in the public interest and will minimize threats to public health and safety.

20.9 Regulation of land development activities by means of performance standards governing stormwater management and site design will produce development compatible with the natural functions of a particular site or an entire watershed and thereby mitigate the adverse effects of erosion and sedimentation from development.

172-21.0 PURPOSE

The purpose of this local law is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction and to address the findings of fact in Section 172-20 hereof. This Article seeks to meet those purposes by achieving the following objectives:

21.1 Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit no. GP-02-02 or as amended or revised;

21.2 Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01 or as amended or revised;

21.3 Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;

21.4 Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;

21.5 Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and

21.6 Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

172-22.0 STATUTORY AUTHORITY

In accordance with Section 10 of the Municipal Home Rule Law of the State of New York, the Town Board has the authority to enact local laws and amend local laws to promote the health, safety or general welfare of the Town of Amherst and for the protection and enhancement of its physical environment. The Amherst Town Board may include in any such local law provisions for the appointment of any municipal officer, employees, or independent contractor to effectuate, administer and enforce such local law.

172-23.0 APPLICABILITY

23.1 This Article shall be applicable to all land development activities as identified in §172-21.

23.2 The municipality shall designate a Stormwater Management Officer who shall accept and review all stormwater pollution prevention plans and forward such plans to the applicable municipal board. The Stormwater Management Officer may (1) review the plans, (2)

engage the services of a registered professional engineer to review the plans, specifications and related documents at a cost not to exceed a fee schedule established by said governing board, or (3) accept the certification of a licensed professional that the plans conform to the requirements of this law.

23.3 All land development activities subject to review and approval by the Planning Board of the Town of Amherst under site plan regulations shall be reviewed subject to the standards contained in this Article.

23.4 All land development activities not subject to review as stated in section 172-23.4.3 shall be required to submit a Stormwater Pollution Prevention Plan (SWPPP) to the Stormwater Management Officer who shall approve the SWPPP if it complies with the requirements of this Article.

172-24.0 EXEMPTIONS

The following activities are exempt from review under this Article.

24.1 Agricultural activity as defined in this local law.

24.2 Silvicultural activity except that landing areas and log haul roads are subject to this Article.

24.3 Routine maintenance activities that disturb less than five acres and are performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility.

24.4 Repairs to any stormwater management practice or facility deemed necessary by the Stormwater Management Officer.

24.5 Any part of a subdivision if a plat for the subdivision has been approved by the Town of Amherst on or before the effective date of this Article.

24.6 Land development activities for which a building permit has been approved on or before the effective date of this Article.

24.7 Cemetery graves.

24.8 Installation of fence, sign, telephone, and electric poles and other kinds of posts or poles.

24.9 Emergency activity immediately necessary to protect life, property or natural resources.

24.10 Activities of an individual engaging in home gardening by growing flowers, vegetable and other plants primarily for use by that person and his or her family, or installing or maintaining private use sheds and ornamental ponds.

24.11 Landscaping and horticultural activities in connection with an existing structure.

172-25.0 STORMWATER POLLUTION PREVENTION PLANS

25.1 **Stormwater Pollution Prevention Plan Requirements**

No application for approval of a land development activity shall be approved until the appropriate board has received an acceptable Stormwater Pollution Prevention Plan (SWPPP) prepared in accordance with the specifications in this Article.

25.2 **Contents of Stormwater Pollution Prevention Plans**

25.2.1 All SWPPPs shall provide the following background information and erosion and sediment controls:

1. Background information about the scope of the project, including location, type and size of project.

2. Site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharges(s);

3. Description of the soil(s) present at the site;

4. Construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with the New York Standards and Specifications for Erosion and Sediment Control (Erosion Control Manual), not more than five (5) acres shall be disturbed at any one time unless pursuant to an approved SWPPP.

5. Description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in stormwater runoff;

6. Description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;

7. Temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land clearing and grubbing to project close-out;

8. A site map/construction drawing(s) specifying the location(s), size(s) and length(s) of each erosion and sediment control practice;

9. Dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;

10. Temporary practices that will be converted to permanent control measures;

11. Implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and duration that each practice should remain in place;

12. Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practice;

13. Name(s) of the receiving water(s);

14. Delineation of SWPPP implementation responsibilities for each part of the site;

15. Description of structural practices designed to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and

16. Any existing data that describes the stormwater runoff at the site.

25.2.2 Land development activities as defined in Article I Section 172-2.0 and meeting Condition "A", "B" or "C" below shall also include water quantity and water quality controls (post-construction stormwater runoff controls) as set forth in Section 25.2.3 below as applicable:

Condition A - Stormwater runoff from land development activities discharging a pollutant of concern to either an impaired water identified on the Department's 303(d) list of impaired waters or a Total Maximum Daily Load (TMDL) designated watershed for which pollutants in stormwater have been identified as a source of the impairment.

Condition B - Stormwater runoff from land development activities disturbing five (5) or more acres.

Condition C - Stormwater runoff from land development activity disturbing between one (1) and five (5) acres of land during the course of the project, exclusive of the construction of single family residences and construction activities at agricultural properties.

25.2.3 SWPPP Requirements for Condition A, B and C:

1. All information in Section 172.25.2.1 of this Article;

2. Description of each post-construction stormwater management practice;

3. Site map/construction drawing(s) showing the specific location(s) and size(s) of each post-construction stormwater management practice;

4. Hydrologic and hydraulic analysis for all structural components of the stormwater management system for the applicable design storms;

5. Comparison of post-development stormwater runoff conditions with pre-development conditions;

6. Dimensions, material specifications and installation details for each post-construction stormwater management practice;

7. Maintenance schedule to ensure continuous and effective operation of each post-construction stormwater management practice.

8. Maintenance easements to ensure access to all stormwater management practices at the site for the purpose of inspection and repair. Easements shall be recorded on the plan and shall remain in effect with transfer of title to the property.

9. Inspection and maintenance agreement binding on all subsequent landowners served by the on-site stormwater management measures in accordance with **Article 2, Section 4** of this local law.

10. For Condition A, the SWPPP shall be prepared by a landscape architect, certified professional or professional engineer and must be signed by the professional preparing the plan, who shall certify that the design of all stormwater management practices meet the requirements in this local law.

25.4 **Other Environmental Permits**

The applicant shall assure that all other applicable environmental permits have been or will be acquired for the land development activity prior to approval of the final stormwater design plan.

25.5 **Contractor Certification**

25.5.1 Each contractor and subcontractor identified in the SWPPP who will be involved in soil disturbance and/or stormwater management practice installation shall sign and date a copy of the following certification statement before undertaking any land development activity: "I certify under penalty of law that I understand and agree to comply with the terms and conditions of the Stormwater Pollution Prevention Plan. I also understand that it is unlawful for any person to cause or contribute to a violation of water quality standards."

25.5.2 The certification must include the name and title of the person providing the signature, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

25.5.3 The certification statement(s) shall become part of the SWPPP for the land development activity.

25.6 **Plan-In-Hand**

A copy of the SWPPP shall be retained at the site of the land development activity during construction from the date of initiation of construction activities to the date of final stabilization.

172-26.0 PERFORMANCE AND DESIGN CRITERIA FOR STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL

All land development activities shall be subject to the following performance and design criteria:

26.1 **Technical Standards**

For the purpose of this local law, the following documents shall serve as the official guides and specifications for stormwater management. Stormwater management practices that are designed and constructed in accordance with these technical documents shall be presumed to meet the standards imposed by this law:

26.1.1 The New York State Stormwater Management Design Manual (New York State Department of Environmental Conservation, most current version or its successor, hereafter referred to as the Design Manual).

26.1.2 New York Standards and Specifications for Erosion and Sediment Control, (Empire State Chapter of the Soil and Water Conservation Society, 2004, most current version or its successor, hereafter referred to as the Erosion Control Manual).

26.2 **Equivalence to Technical Standards**

Where stormwater management practices are not in accordance with technical standards, the applicant or developer must demonstrate equivalence to the technical standards set forth in Section 172-26.1 and the SWPPP shall be prepared by a licensed professional.

26.3 **Water Quality Standards**

Any land development activity shall not cause an increase in turbidity that will result in substantial visible contrast to natural conditions in surface waters of the state of New York.

172-27.0 MAINTENANCE AND REPAIR OF STORMWATER FACILITIES

27.1 **Maintenance During Construction**

27.1.1 The applicant or developer of the land development activity shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the applicant or developer to achieve compliance with the conditions of this Article. Sediment shall be removed from sediment traps or sediment ponds whenever their design capacity has been reduced by fifty (50) percent.

27.1.2 For land development activities as defined in Section 172-2.0 and meeting Condition A, B or C in Section 172-25.2.2, the applicant shall have a qualified professional conduct site inspections and document the effectiveness of all erosion and sediment control practices every 7 days and within 24 hours of any storm event producing 0.5 inches or precipitation or more. Inspection reports shall be maintained in a site log book.

27.2 **Maintenance Easement(s)**

Prior to the issuance of any approval that has a stormwater management facility as one of the requirements, the applicant or developer must execute a maintenance easement agreement that shall be binding on all subsequent landowners served by the stormwater management facility. The easement shall provide for access to the facility at reasonable times for periodic inspection by the Town of Amherst to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this Article. The easement shall be recorded by the grantor in the office of the County Clerk after approval by the counsel for the Town of Amherst.

27.3 **Maintenance after Construction**

The owner or operator of permanent stormwater management appurtenances installed in accordance with this Article shall be operated and maintained to achieve the goals of this Article. Proper operation and maintenance also includes as a minimum, the following:

27.3.1 A preventive/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the owner or operator to achieve the goals of this law.

27.3.2 Written procedures for operation and maintenance and training new maintenance personnel.

27.3.3 Discharges from the SMPs shall not exceed design criteria or cause or contribute to water quality standard violations

27.4 **Maintenance Agreements**

The Town of Amherst shall approve a formal maintenance agreement for stormwater management facilities binding on all subsequent landowners and recorded in the office of the County Clerk as a deed restriction on the property prior to final plan approval. The maintenance agreement shall be consistent with the terms and conditions of Schedule B of this local law entitled Sample Stormwater Control Facility Maintenance Agreement. The Town of Amherst, in lieu of a maintenance agreement, at its sole discretion may accept dedication of any existing or future stormwater management facility, provided such facility meets all the requirements of this local law and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

172-29.0 CONSTRUCTION INSPECTION

29.1 **Erosion and Sediment Control Inspection**

The Town of Amherst Stormwater Management Officer may require such inspections as necessary to determine compliance with this Article and may either approve that portion of the work completed or notify the applicant wherein the work fails to comply with the requirements of this Article and the stormwater pollution prevention plan (SWPPP) as approved. To obtain inspections, the applicant shall notify the Town of Amherst enforcement official at least 48 hours before any of the following as required by the Stormwater Management Officer:

29.1.1 Start of construction

29.1.2 Installation of sediment and erosion control measures

29.1.3 Completion of site clearing

29.1.4 Completion of rough grading

29.1.5 Completion of final grading

29.1.6 Close of the construction season

29.1.7 Completion of final landscaping

29.1.8 Successful establishment of landscaping in public areas.

If any violations are found, the applicant and developer shall be notified in writing of the nature of the violation and the required corrective actions. No further work shall be conducted except for site stabilization until any violations are corrected and all work previously completed has received approval by the Stormwater Management Officer.

29.2 **Stormwater Management Practice Inspections**

The Town of Amherst Stormwater Management Officer is responsible for conducting inspections of stormwater management practices (SMPs). All applicants are required to submit "as built" plans for any stormwater management practices located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be certified by a professional engineer.

29.3 **Inspection of Stormwater Facilities After Project Completion**

Inspection programs shall be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of state or federal water or sediment quality standards or the SPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other stormwater management practices.

29.4 **Submission of Reports**

The Town of Amherst Stormwater Management Officer may require monitoring and reporting from entities subject to this Article as are necessary to determine compliance with this Article.

29.5 **Right-of-Entry for Inspection**

When any new stormwater management facility is installed on private property

or when any new connection is made between private property and the public storm water system, the landowner shall grant to the Town of Amherst the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection.

172-30.0 PERFORMANCE GUARANTEE

30.1 **Construction Completion Guarantee**

In order to ensure the full and faithful completion of all land development activities related to compliance with all conditions set forth by the Town of Amherst in its approval of the Stormwater Pollution Prevention Plan, the Town of may require the applicant or developer to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the Town of Amherst as the beneficiary. The security shall be in an amount to be determined by the Town of Amherst based on submission of final design plans, with reference to actual construction and landscaping costs. The performance guarantee shall remain in force until the surety is released from liability by the Town of Amherst, provided that such period shall not be less than one year from the date of final acceptance or such other certification that the facility(ies) have been constructed in accordance with the approved plans and specifications and that a one year inspection has been conducted and the facilities have been found to be acceptable to the Town of Amherst**.** Per annum interest on cash escrow deposits shall be reinvested in the account until the surety is released from liability.

30.2 **Maintenance Guarantee**

Where stormwater management and erosion and sediment control facilities are to be operated and maintained by the developer or by a corporation that owns or manages a commercial or industrial facility, the developer, prior to construction, may be required to provide the Town of Amherst with an irrevocable letter of credit from an approved financial institution or surety to ensure proper operation and maintenance of all stormwater management and erosion control facilities both during and after construction, and until the facilities are removed from operation. If the developer or landowner fails to properly operate and maintain stormwater management and erosion and sediment control facilities, the Town of Amherst may draw upon the account to cover the costs of proper operation and maintenance, including engineering and inspection costs.

30.3 **Record Keeping**

The Town of Amherst may require entities subject to this Article to maintain records demonstrating compliance with this Article.

31.0 ENFORCEMENT AND PENALTIES

31.1 **Notice of Violation**

When the Town of Amherst determines that a land development activity is not being carried out in accordance with the requirements of this Article, the Stormwater Management Officer may issue a written notice of violation to the landowner. The notice of violation shall contain:

31.1.1 The name and address of the landowner, developer or applicant;

31.1.2 The address when available or a description of the building, structure or

land upon which the violation is occurring;

31.1.3 A statement specifying the nature of the violation;

31.1.4 A description of the remedial measures necessary to bring the land development activity into compliance with this local law and a time schedule for the completion of such remedial action;

31.1.5 A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

31.1.6 A statement that the determination of violation may be appealed to the municipality by filing a written notice of appeal to the SMO within fifteen (15) days of service of notice of violation.

31.2 **Stop Work Orders**

The Town of Amherst may issue a stop work order for violations of this Article. Persons receiving a stop work order shall be required to halt all land development activities, except those activities that address the violations leading to the stop work order. The stop work order shall be in effect until the Town of Amherst confirms that the land development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a stop work order in a timely manner may result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized in this Article.

31.3 **Violations**

Any land development activity that is commenced or is conducted contrary to this Article, may be restrained by injunction or otherwise abated in a manner provided by law.

31.4 **Penalties**

In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this local law shall be guilty of a violation punishable by a fine not exceeding three hundred fifty dollars ($350) or imprisonment for a period not to exceed six months, or both for conviction of a first offense; for conviction of a second offense both of which were committed within a period of five years, punishable by a fine not less than three hundred fifty dollars nor more than seven hundred dollars ($700) or imprisonment for a period not to exceed six months, or both; and upon conviction for a third or subsequent offense all of which were committed within a period of five years, punishable by a fine not less than seven hundred dollars nor more than one thousand dollars ($1000) or imprisonment for a period not to exceed six months, or both. However, for the purposes of conferring jurisdiction upon courts and judicial officers generally, violations of this local law shall be deemed violations and for such purpose only all provisions of law relating to violations shall apply to such violations. Each week's continued violation shall constitute a separate additional violation.

31.5 **Withholding of Certificate of Occupancy**

If any building or land development activity is installed or conducted in violation of this Article the Stormwater Management Officer may prevent the occupancy of said building or land. The Stormwater Management Officer shall notify the Commissioner of Buildings that there has been a violation of this Article and that no certificate of occupancy shall issue until the violation is

satisfactorily remediated.

31.6 **Restoration of lands**

Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the Town of Amherst may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

32.0 FEES FOR SERVICES

The Town of Amherst may require any person undertaking land development activities regulated by this law to pay reasonable costs at prevailing rates for review of SWPPPs, inspections, or SMP maintenance performed by the Town of Amherst or performed by a third party for the Town of Amherst. Fees shall be set and paid as required by Chapter 108 of the Code of the Town of Amherst.

33.0 SEVERABILITY

The provisions of this law are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this law or the application thereof to any personm establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this law.

Section 2. Repealer**.**

Chapter 194 of the Code of the Town of Amherst, Watercourses, is repealed in its entirety.

Section 3. Effective Date.

This Local Law shall be filed in the Office of the Secretary of State in accordance with Section 27 of the Municipal Home Rule Law and published pursuant to Section 130 of the Town Law and Chapter 28 of the Code of the Town of Amherst and shall take effect January 8, 2008.

Schedule A

Stormwater Management Practices Acceptable for Water Quality (From: New York State Stormwater Management Design Manual, Table 5.1)		
GROUP	**PRACTICE**	**DESCRIPTION**
Pond	Micropool Extended Detention Pond (P-1)	Pond that treats the majority of the water quality volume through extended detention, and incorporates a micropool at the outlet of the pond to prevent sediment resuspension.
	Wet Pond (P-2)	Pond that provides storage for the entire water quality volume in the permanent pool.
	Wet Extended Detention Pond (P-3)	Pond that treats a portion of the water quality volume by detaining storm flows above a permanent pool for a specified minimum detention time.
	Multiple Pond System (P-4)	A group of ponds that collectively treat the water quality volume.
	Pocket Pond (P-5)	A stormwater wetland design adapted for the treatment of runoff from small drainage areas that has little or no baseflow available to maintain water elevations and relies on groundwater to maintain a permanent pool.
Wetland	Shallow Wetland (W-1)	A wetland that provides water quality treatment entirely in a shallow marsh.
	Extended Detention Wetland (W-2)	A wetland system that provides some fraction of the water quality volume by detaining storm flows above the marsh surface.
	Pond/Wetland System (W-3)	A wetland system that provides a portion of the water quality volume in the permanent pool of a wet pond that precedes the marsh for a specified minimum detention time.
	Pocket Wetland (W-4)	A shallow wetland design adapted for the treatment of runoff from small drainage areas that has variable water levels and relies on groundwater for its permanent pool.
Infiltration	Infiltration Trench (I-1)	An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.
	Infiltration Basin (I-2)	An infiltration practice that stores the water quality volume in a shallow depression before it is infiltrated into the ground.
	Dry Well (I-3)	An infiltration practice similar in design to the infiltration trench, and best suited for treatment of rooftop runoff.
Filtering Practices	Surface Sand Filter (F-1)	A filtering practice that treats stormwater by settling out larger particles in a sediment chamber, and then filtering stormwater through a sand matrix.
	Underground Sand Filter (F-2)	A filtering practice that treats stormwater as it flows through underground settling and filtering chambers.
	Perimeter Sand Filter (F-3)	A filter that incorporates a sediment chamber and filter bed as parallel vaults adjacent to a parking lot.
	Organic Filter (F-4)	A filtering practice that uses an organic medium such as compost in the filter in place of sand.
	Bioretention (F-5)	A shallow depression that treats stormwater as it flows through a soil matrix, and is returned to the storm drain system.
Open Channels	Dry Swale (O-1)	An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.
	Wet Swale (O-2)	An open drainage channel or depression designed to retain water or intercept groundwater for water quality treatment.

Schedule B

SAMPLE STORMWATER CONTROL FACILITY MAINTENANCE AGREEMENT

Whereas, the Municipality of _____("Municipality") and the _____ ("facility owner") want to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Municipality for the below named project, and

Whereas, the Municipality and the facility owner desire that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, the Municipality and the facility owner agree as follows:

1. This agreement binds the Municipality and the facility owner, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this agreement.

2. The facility owner shall maintain, clean, repair, replace and continue the stormwater control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage ditches, swales, dry wells, infiltrators, drop inlets, pipes, culverts, soil absorption devices and retention ponds.

3. The facility owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.

4. The facility owner shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a Professional Engineer licensed by the State of New York. The inspecting engineer shall prepare and submit to the Municipality within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater control measures.

5. The facility owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the Municipality.

6. The facility owner shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Municipality or in accordance with the recommendations of the inspecting engineer.

7. The facility owner shall provide to the Municipality within 30 days of the date of this agreement, a security for the maintenance and continuation of the stormwater control measures in the form of a Bond, letter of credit or escrow account.

8. This agreement shall be recorded in the Office of the County Clerk, County of _____together with the deed for the common property and shall be included in the offering plan and/or prospectus approved pursuant to _____.

9. If ever the Municipality determines that the facility owner has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Municipality or by the inspecting engineer, the Municipality is authorized to undertake such steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property.

10. This agreement is effective _____.

APPENDIX D

ILLICIT DISCHARGE FIELD SHEET
ILLICIT DISCHARGE INCIDENT LOG
CATCH BASIN INSPECTION SHEET
MANHOLE INSPECTION SHEET
TRACER TESTING SHEET
OUTFALL SAMPLING & LAB ANALYSIS PROCEDURE
EXAMPLE OF NOTICE OF VIOLATION
TRACKING OF IDDE
OUTFALL & STORM SEWERSHED MAPS
OUTFALL MONITORING OBSERVATION SHEET

TOWN OF AMHERST
PHASE II STORM WATER MANAGEMENT PROGRAM
MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

ILLICIT DISCHARGE FIELD SHEET

SECTION A: General Information

Structure ID:	Date:	Time:
Outfall:	Inspected by:	
Location:	GPS Location:	
Outside Air Temperature (°F):	Rainfall (inches) Last 24 hours:	Last 48 hours:
Land Use in Drainage Area: ☐ Residential ☐ Industrial/Commercial ☐ Mixed Use ☐ Other: _____		
Reason for Inspection:	☐ Citizen Notification ☐ Routine/Scheduled Survey ☐ Referral from Agency/Department: _____ ☐ County/State Notification ☐ Observed during Routine Work ☐ Other: _____	

SECTION B: Description of Structure

Type	☐ Outfall ☐ Manhole ☐ Ditch/Swale ☐ Spillway ☐ Catch Basin ☐ Other: _____
Material	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____
Shape	☐ Circular ☐ Elliptical ☐ Box ☐ Other: _____
Size	*If circular,* Diameter:_____inches *If square or rectangular,* Height: _____inches Width: _____inches
Structure Bottom	Submerged: ☐ No ☐ Yes, Partially ☐ Yes, Fully Blocked: ☐ No ☐ Yes, Partially ☐ Yes, Fully

SECTION C: Location Sketch

Draw diagram and indicate closest streets (including address), nearby landmarks, etc.

SECTION D: Discharge Characteristics

Flow Present? ☐ Yes ☐ No *If No, skip the rest of this section.*		**Description**	Check one: ☐ Trickle ☐ Moderate ☐ Substantial Check one: ☐ Steady ☐ Intermittent ☐ Single Occurrence
Flow Rate (*If possible, measure time it takes to fill a 5-gallon container*)			**Temperature** _____°F
Volume of Container Used	_____ Gallons	Gallons ô Minutes = _____ gpm	**pH** _____pH Units
Time to fill Container	_____ Minutes		**Ammonia** (*If measured in field*) _____mg/L

Indicator	Description	Severity		
Odor	☐ None ☐ Rancid/sour ☐ Petroleum/gas ☐ Sweet ☐ Sewage ☐ Other: _____	☐ Faint	☐ Easily detected	☐ Noticeable from a distance
Color	☐ Clear ☐ Gray ☐ Red ☐ Orange ☐ Yellow ☐ Green ☐ Blue ☐ Brown ☐ Black ☐ Other: _____	☐ Faint colors in sample bottle	☐ Clearly visible in sample bottle	☐ Clearly visible in outfall flow
Floatables	☐ None ☐ Sewage (toilet paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other: _____	☐ Few/slight; origin not obvious	☐ Some; indications of origin (e.g., possible suds or oil sheen)	☐ Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Turbidity	See severity	☐ Clear	☐ Slight cloudiness	☐ Cloudy ☐ Opaque
Viscosity	Similar to:	☐ Water	☐ Oil (Vegetable/Motor)	☐ Molasses ☐ Other: _____

Structure ID:	Outfall:	Date:	Time:

SECTION E: Physical Condition

Condition	Present	If Present, Nature:	Comments
Structure Damage	☐ Yes ☐ No	☐ Peeling Paint ☐ Spalling, Cracking or Chipping ☐ Corrosion	
Deposits/Stains	☐ Yes ☐ No	☐ Oily ☐ Flow Line ☐ Paint ☐ Other: _____	
Abnormal Vegetation	☐ Yes ☐ No	☐ Excessive ☐ Inhibited	
Poor pool quality	☐ Yes ☐ No	☐ Odor ☐ Color ☐ Floatables ☐ Excessive Algae ☐ Suds ☐ Oil Sheen ☐ Other: _____	
Pipe growth	☐ Yes ☐ No	☐ Brown ☐ Orange ☐ Green ☐ Other: _____	

SECTION F: Sample Collection

Sample Collected: ☐ Yes ☐ No *If No, skip the rest of this section.*	Sample Submitted to Laboratory: ☐ Yes ☐ No
Date of Collection:	Laboratory Sample ID:
Time of Collection:	Sample Bottle IDs:
Laboratory Information — Name: Address: Phone:	
Analyses Requested: ☐ Fecal Coliform MPN ☐ Color ☐ Conductance ☐ Turbidity ☐ Dissolved Oxygen ☐ Fluoride ☐ Methylene Blue Activated Substances ☐ Other: _____	
Collected from: ☐ Flow ☐ Pool	Method of Collection: ☐ Direct collection ☐ Sampling Equipment Used Specify type: _____
Gloves used: ☐ Yes ☐ No	Laboratory Sample Forms Completed: ☐ Yes ☐ No *(attach copy)*
Samples Placed on Ice: ☐ Yes ☐ No	Chain of Custody Initiated: ☐ Yes ☐ No *(attach copy)*

SECTION G: Comments/Notes

Form Completed By:

Name (print):	Date:
Signature:	

TOWN OF AMHERST
PHASE II STORM WATER MANAGEMENT PROGRAM
MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

ILLICIT DISCHARGE INCIDENT LOG

SECTION A: General Information

Incident ID:			
Information taken by:	Rainfall (inches)	Last 24 hours:	Last 48 hours:
Notification date/time:	Incident date/time:		
Notification made by:	Department:		
Contact information:			

SECTION B: Location

Location/address:		Structure ID:	
		Outfall:	
Nearby landmark:		GPS Location:	

Primary Location	Secondary Location		
☐ Upland area (*Land not adjacent to stream*)	☐ Near Storm Drain	☐ Near other water source (storm water pond, wetland, etc.)	
☐ Stream Corridor (*In or adjacent to stream*)	☐ Outfall	☐ In-stream flow	☐ Along banks
Comments/Notes:			

SECTION C: Description

Upland Area						
☐ Dumping	☐ Oils/solvents/chemicals	☐ Sewage	☐ Wash water, suds, etc.	☐ Other: _____		
Stream Corridor						
Odor	☐ None	☐ Rancid/sour	☐ Petroleum/gas	☐ Sulfide (rotten eggs)	☐ Sewage	☐ Other: _____
Color	☐ Clear	☐ Brown	☐ Gray	☐ Yellow	☐ Green ☐ Orange	☐ Red ☐ Other: _____
Turbidity	☐ Slight cloudiness	☐ Cloudy	☐ Opaque			
Floatables	☐ None	☐ Sewage (toilet paper, etc.)	☐ Suds	☐ Petroleum (oil sheen)	☐ Algae	☐ Dead fish ☐ Other: _____

Possible/Suspected Source: (Name, description of person or vehicle, license plate #, address, etc.)

SECTION D: Investigation

Performed by:	Date began:	Date completed:
Results		
☐ No investigation made.	Reason:	
☐ Referred.	Department/Agency:	
☐ Investigated; no further action necessary.		
☐ Investigated; requires further action.	Description:	
Comments/Notes:		

Form Completed By:

Name (print):	Date:
Signature:	

TOWN OF AMHERST
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MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

CATCH BASIN INSPECTION

Inspected By:	Date:	Time:
Structure ID:	Location Sketch (*Indicate address, streets, nearest intersections, etc.*)	
Address:		
Nearest Intersection:		
GPS Location:		
Location: ☐ Roadway ☐ Curb ☐ Private Property ☐ Easement ☐ Gutter ☐ Other: _____		
Material: ☐ Brick ☐ Concrete	Bottom Depth: _____in.	
Size: *If circular,* Diameter:_____in. *If square or rectangular,* Length: _____in., Width: _____in.		

Structure

	Satisfactory	Unsatisfactory	Not Applicable	Not Visible	If Unsatisfactory or Not Visible, Describe:
Cover	☐	☐	☐	☐	
Ring/Frame	☐	☐	☐	☐	
Rungs	☐	☐	☐	☐	
Walls	☐	☐	☐	☐	
Bottom	☐	☐	☐	☐	

Channels/Connections

A	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		Draw channels/connections (A, B, C, D) in catch basin and indicate direction of flow.
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	
B	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	
C	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	
D	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	

Condition	☐ Clean/Dry ☐ Standing Water ☐ Flowing Water ☐ Sediment ☐ Organic Matter ☐ Trash/Debris ☐ Not Visible ☐ Other:_____				
Flow	☐ Trickle	☐ Moderate	☐ Substantial	☐ None-Standing Water	☐ None-Dry
Rate	☐ Steady	☐ Intermittent	☐ Not Applicable	**Sump Present**	☐ Yes ☐ No
Illicit Discharge Indications Present? (dry weather flow, odor, color, floatables, turbidity, viscosity)	☐ Yes	☐ No	***If Yes, Complete Illicit Discharge Field Sheet (Form A).***		
Comments/Notes:					

Form Completed By:

Name (print):	Date:
Signature:	

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MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

MANHOLE INSPECTION

Inspected By:		Date:	Time:
Structure ID:		Location Sketch (*Indicate address, streets, nearest intersections, etc.*)	
Address:			
Nearest Intersection:			
GPS Location:			
Location: ☐ Roadway ☐ Gutter ☐ Private Property ☐ Easement ☐ Other: _____			
Sewer Type: ☐ Sanitary ☐ Storm			
Material: ☐ Brick ☐ Concrete			
Cover Size: ☐ 24-in. ☐ 30-in.	Invert Depth: _____in.		

Structure					
	Satisfactory	**Unsatisfactory**	**Not Applicable**	**Not Visible**	**If Unsatisfactory or Not Visible, Describe:**
Cover	☐	☐	☐	☐	
Ring/Frame	☐	☐	☐	☐	
Rungs	☐	☐	☐	☐	
Cone	☐	☐	☐	☐	
Riser	☐	☐	☐	☐	
Shelf	☐	☐	☐	☐	
Channel	☐	☐	☐	☐	

Channels/Connections				
A	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		Draw channels/connections (A, B, C, D) in manhole and indicate direction of flow.
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	
B	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	
C	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	
D	☐ Inlet ☐ Outlet	Material: ☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Other: _____		
	Pipe Diameter:_____in.	Connects To/From: _____(Structure ID)	Invert Depth:_____in.	

Inflow/Surcharge Indications	Debris/Grease on: ☐ Sides ☐ Rungs ☐ Shelf ☐ Not Applicable ☐ Not Visible		
Flow	☐ Trickle ☐ Moderate ☐ Substantial ☐ None	**Appearance/Clarity**	☐ Clear Water ☐ Turbid Sewage ☐ Not Applicable
Rate	☐ Steady ☐ Intermittent ☐ Not Applicable	**Flow Depth Compared to Adjacent Manholes**	☐ Same ☐ Lower ☐ Higher
Comments/Notes:			

Form Completed By:

Name (print):	Date:
Signature:	

TOWN OF AMHERST

PHASE II STORM WATER MANAGEMENT PROGRAM

MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

TRACER TESTING SHEET

Test Performed By:	Date:
Type of Test: ☐ Dye ☐ Smoke ☐ Other: _____	
Address:	
Property Type: ☐ Residential ☐ Industrial/Commercial ☐ Municipal ☐ School ☐ Other: _____	
Location of Structure Tested on Property:	
Structure Type: ☐ Catch Basin ☐ Manhole ☐ Sink ☐ Sump ☐ Toilet ☐ Other: _____	
Time of Initial Application:	Sewer System Type: ☐ Sanitary ☐ Storm ☐ Septic

Inspection Point A	**Diagram**
Location:	Draw diagram and indicate address, location of initial application, inspection points, etc.
Type: ☐ Catch Basin ☐ Outfall ☐ Sanitary Sewer Manhole ☐ Storm Sewer Manhole ☐ Other: _____	
Tracer Observed: ☐ Yes ☐ No ***If Yes, Date/Time observed:*** _____	
Inspection Point B	
Location:	
Type: ☐ Catch Basin ☐ Outfall ☐ Sanitary Sewer Manhole ☐ Storm Sewer Manhole ☐ Other: _____	
Tracer Observed: ☐ Yes ☐ No ***If Yes, Date/Time observed:*** _____	

Results
☐ Connection okay; no further action necessary.
☐ Illicit connection detected. Description:
☐ Inconclusive; requires further action. Description:
Comments/Notes:

Form Completed By:

Name (print):	Date:
Signature:	

APPENDIX G

SAMPLING PROTOCOL CONSIDERATIONS

Developing a Consistent Sample Collection Protocol

A good field sampling protocol incorporates eight basic elements:

1. Where to collect samples
2. When to collect samples
3. Sample bottle preparation
4. Sample collection technique
5. Storage and preservation of samples
6. Sample labeling and chain of custody plan
7. Quality assurance/control samples
8. Safety considerations

1. Where to Collect Samples

Indicator sampling normally occurs at three principle locations in the storm drain system to detect illicit discharges - at the outfall, in the stream, and within the storm drain pipe network.

Monitoring of dry weather flows from outfalls is the most common location in most IDDE programs, and the majority of this chapter focuses on these techniques.

In-stream monitoring involves sample collection at perennial stream channels during dry weather flow conditions. Stream monitoring is less precise than outfall monitoring at detecting individual discharges. It can, however, screen stream reaches for those with the greatest illicit discharge potential, detect the most severe or high volume discharges, and measure progress over time in terms changes in stream water quality.

In-pipe sampling is often needed to track down and isolate individual discharges once a potential discharge problem is encountered at an outfall. Many of the sample collection protocols discussed in this section can be applied for in-pipe sampling, although additional testing methods to track down sources are described in Chapter 13.

2. When to Collect Samples

Indicator samples should be collected during dry weather periods to avoid flowing outfalls caused by storm water or groundwater infiltration. While the traditional definition of dry weather has been 72 hours without rainfall, some communities have shortened this window to 48 hours to make sampling more practical. An exception to this rule is sampling to respond to hotline complaints, which should be conducted immediately. Time of day that sampling is conducted is particularly important when the suspected source is residential sewage. Peak water usage occurs in the morning and evening, therefore sampling in the early morning (i.e., beginning of the work day) is recommended in these situations. In some regions of the country, sampling should be scheduled to coincide with the seasons where shallow groundwater influence is minimal.

3. Sample Bottle Preparation

Most indicator samples are stored in a polyethylene plastic sample bottle that is opaque or clear. Sample bottles can be reused, but only if they are acid-washed between field visits. If bacteria samples are collected, a new 120 ml sealed sample bottle is needed for each sample. Samples requiring a preservative are addressed in element 5.

4. Protocols for Sample Collection

Sample collection should reduce the potential for contamination, and prevent the field crew from being exposed to harmful

pollutants. Some considerations for sample collection include:

- Wear surgical gloves (unpowdered nytrile gloves are recommended to limit chances of contamination) when collecting the sample, and wash hands with sanitary wipes after the sample(s) is collected.
- Dry weather flows can be shallow, have low flow volumes, and be hard to reach. In some cases, alternative sample collectors may be used. A "dipper," consisting of a measuring cup at the end of a long pole, can be used to catch flows from the outfall. A pre-measured, cut-off plastic milk jug can be used to capture shallow flows from the pipe (see Figure G.1). In either case, make sure not to disturb any sediments or benthic growth in the pipe as a sample is taken. Also, be sure to rinse these alternative sample collectors three times with sample water before collecting the sample.
- Fill the bottle completely to the top (i.e., with the meniscus at the rim).
- Do not touch the inside of the lid or bottle.
- Add any needed preservative at the time of sample collection. (See Step 5).
- Label the bottle immediately. Ensure that samples stay at 4°C (40°F). On a hot day, put samples in an ice-filled cooler immediately, or carry "blue ice" in a backpack.

5. Sample Storage and Preservation

If the field crew cannot get the samples back for analysis within the same day, they will need to preserve the samples using the techniques outlined in Table G.1. Some suppliers and contract labs provide pre-packaged sample bottles that contain required preservatives. Each indicator parameter has a unique sample preservation technique and a maximum hold time for laboratory analysis.

Tip

When analyzing multiple parameters and preserving samples, the field crew may need to collect up to four samples at a site: one preserved with H_2SO_4, one preserved with HNO_3, one sealed new bottle preserved with Na_2SO_3 for bacteria, and one unpreserved.

Figure G.1: A dipper (a) is helpful when the outfall is hard to reach. A milk jug (b) can be used to collect samples from shallow flow.

Table G.1: Sample Preservation and Storage Requirements for Typical Outfall Monitoring Parameters
(Primary Source: APHA, 1998)

Parameter	Preservation[3]	Maximum Hold Time[4]
Ammonia	H_2SO_4 to pH<2 Refrigerate to 4°C	7 to 28 days
Boron	HNO_3 to pH<2	28 days to 6 months
Chlorine[1]	Not Applicable	15 minutes
Color	Refrigerate to 4°C	48 hours
Conductivity	Refrigerate to 4°C	28 days
Detergents – Surfactants[2]	None Required	48 hours
Bacteria (*E. coli*, Enterococci, Total Coliform)[2]	$Na_2S_2O_3$ in chlorinated waters Refrigerate to 4°C	6 to 24 hours
Fluoride	None Required	28 days
Hardness	HNO_3 or H_2SO_4 to pH<2	6 months
pH[1]	Not Applicable	15 minutes
Potassium[2]	HNO_3 to pH<2	28 days
Turbidity	Refrigerate to 4°C Store in the dark	24-48 hours

1. Indicates parameters that should be analyzed in the field.
2. Data for these parameters taken from the National Environmental Methods Index (www.nemi.gov)
3. Many contract labs will provide sample bottles with preservative already added.
4. For parameters with a range, the lower number is recommended by the reference, and the higher number is the regulatory requirement for sample storage.

6. Sample Labeling and Chain of Custody

The labeling and integrity of each sample are important parts of the sampling protocol. Program managers should develop a process to track the "chain of custody" from the time the sample is initially collected until it is analyzed and reported as data. The process limits errors resulting from mis-labeling, lost samples, and improper laboratory analysis. Table G.2 outlines the nine minimum elements of a chain of custody, recommended by APHA (1998).

Table G.2: Nine Elements of a Chain of Custody	
Element of Chain of Custody	**Description**
1. Sample Labels	Labels should include a unique ID, type of sample, name of collector, date and time of collection, date and time of preservation, and preservative used (if applicable).
2. Sample Seals	Seals the lid on the label to ensure they are not tampered with.
3. Field Log Book	Includes basic information about sample collection, usually the Outfall Reconnaissance Inventory (ORI) field form can be used for this purpose.
4. Chain-of-Custody Record	A sheet that tracks the transfer of samples between individuals.
5. Sample Analysis Request Sheet	A sheet that requests specific analysis types from the laboratory.
6. Sample Delivery to the Laboratory	Ensure that sample delivery is timely. Include chain of custody records with the sample.
7. Receipt and Logging of Sample	The lab needs to document time of receipt of the sample
8. Assignment of Sample for Analysis	The lab supervisor assigns an analyst to the sample. The lab supervisor or analyst is responsible at this point.
9. Disposal	Save samples until results are confirmed and finalized. Dispose of according to US EPA approved methods.

7. Quality Assurance Measures During Sample Collection

To ensure sampling results are accurate, it is important to institute quality assurance measures as part of the sampling protocol. Quality assurance samples serve as a check against biases introduced during sample collection, or within the laboratory. Quality assurance samples also assess the accuracy of the analysis method and its consistency for samples collected at the same site. The sampling protocol should define a minimum fraction of samples that will be used for quality assurance purposes (typically about 5% - 10% of all samples collected). Examples of quality assurance samples include field blanks, duplicate samples, split samples and spiked samples, which are described below:

Field Blanks – Field blanks are deionized water samples prepared in the field at the time of sample collection. If the lab results for field blanks have non-zero values, it indicates that impurities were introduced to the sample during collection or lab analysis. The distilled deionized water should be placed in whatever is used to collect samples (e.g., sample scoop, dipper, plastic milk bottle) and then poured in the sample bottle, just as if it had been scooped or dipped as a real sample.

Duplicate (Replicate) Samples – This quality assurance technique relies on the collection of two or more samples from the same location and flow source during the same field visit. A discrepancy between the two sample measurements indicates a lack of precision or repeatability introduced during sample collection or lab analysis.

Field Spikes – A field spike is a sample to which a known concentration of an indicator parameter is added (e.g., an ammonia concentration of 1.0 mg/L). Any difference between the known concentration and the final laboratory measurement reveals errors introduced during sampling and laboratory analysis.

Split Samples – Splits consist of a single field sample that is divided into two separate sub-samples for subsequent laboratory analysis. Typically, split samples are submitted to different laboratories, or analyzed by different analysts to determine the precision of laboratory results. Alternatively, split samples can be analyzed at a single laboratory without knowledge of the sample origin (referred to as a "blind sample"). Any discrepancy between the two sub-samples suggests a lack of precision or repeatability introduced during sample collection or lab analysis.

8. Safety Considerations

Whenever sampling is done there are safety considerations that require planning. This is even more important when sampling is being conducted in urban stream environments where there is potential for contact with contaminated water, sharp debris and objects, and threatening individuals (both animals and humans). Field crews should be comprised of at least two individuals, each equipped with proper foot (e.g., sturdy boots or waders) and hand wear (latex gloves). Key equipment for crews to carry include cell phones, a list of contact and emergency numbers, a gps unit, and a first aid kit. Private properties should not be accessed unless proper notification has been provided, preferably in advance. Lastly, program managers may want to consider requiring/recommending field crews to be vaccinated against Hepatitis B, particularly if the crews will be accessing waters known to be contaminated with illicit sewage discharges.

References

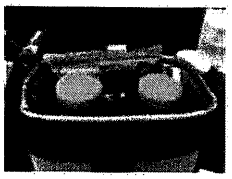
American Public Health Association (APHA).1998. *Standard Methods for the Examination of Water and Wastewater – 20th Edition*. Washington, D.C.

Sample Collection & Lab Analysis Guidance

This document was prepared to serve as quick reference for sample collection and analysis. For more detailed sampling methodology see the WNYSC's *Illicit Discharge Track Down Protocol and Sampling Procedure* guidance document. For more detailed information on the Hanna Photometer, Hanna pH, Temperature, Conductivity and Dissolved Solids meter, Hanna Turbidity meter or the Coliscan Easygel procedure, please see manufacturer's Instruction Manual or product use directions.

There are two samples collected in the field:

1. Field analyses (can be collected in the sampler cup or plastic beaker);
2. Lab analyses (this sample is collected in a clean, conditioned amber bottle; chilled on ice while in the field). Conditioning a bottle entails rinsing it twice with sample water at the outfall. Discarded rinse water should be dumped downstream of your sample point.



FIELD ANALYSES

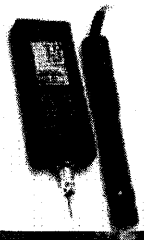
E-coli: Coliscan® Easygel®

In the field:

1. Analysis process begins in the field where 1 ml of sample extracted with the plastic pipette; placed into E.coli growth media and transported on ice for lab analysis.
2. Record the volume of sample collected on the Trackdown Field Report.

pH, Temperature and Conductivity

1. Turn on the Hanna Instruments pH /Temperature/Conductivity meter.
2. Remove cap on probe and rinse the probe end with distilled water.
3. In the field, place the probe in the sample collected for on-site analyses.
4. Record the results on the Trackdown Field Report.
5. Rinse the probe with distilled water and replace the cap. **For extended time of storage, probe cap must be filled with pH Electrode Storage Solution or pH 4 Buffer solution.** Detailed instructions provided see **insert entitled: *Care and Storage of pH Electrode***.



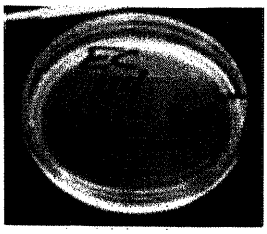
Note: This meter must be calibrated periodically as per instruction manual.

LAB ANALYSES

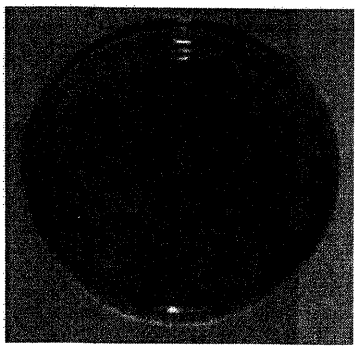
E-coli: Coliscan® Easygel®

In the lab:

1. Label petri dishes with sample id, date and time.
2. Swirl the bottles to distribute the inoculum and then pour the medium/inoculum mixture into the petri dish. Place the lids back on to the petri dishes.
3. Gently swirl the poured dish until liquid distributes (be careful not to splash over the side or on the lid).
4. Place petri dishes on a warm, level surface for 48 hours.
5. Coliform and *E.coli* colonies, if present in the sample, will emerge and grow during this incubation period.



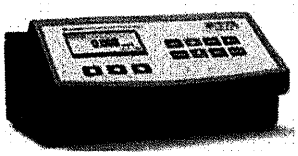
6. Inspect the dishes
    a. Count all the purple colonies on the petri dish – disregard pink, light blue, blue-green or white colonies. The image to the right depicts 5 *E.coli* colonies. For slides with numerous colonies to count, it is helpful to invert the petri dish and use a fine point permanent marker to mark off as you count. For counts that are so numerous as to be difficult to count, quarter the dish, count one quarter and multiply by four, or re-sample with .5ml of sample.



    b. The results are *E.coli* per ml of sample. To report as *E.coli* per 100 ml, divide 100 by the number of ml of sample used. Then multiply that number by the number of colonies counted. For the purpose of illicit discharge identification, a 1 ml sample is recommended and therefore, the E.coli colonies counted are multiplied by 100 to obtain E.coli per 100 ml.
7. **Prior to disposal in normal trash, add 1 Tablespoon of bleach to petri dish and allow it to sit for at least 5 minutes.** Place in a watertight bag and discard in trash.
8. Record the results on the Lab Analysis Report.

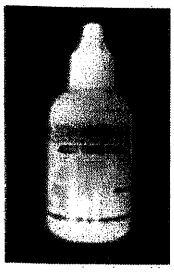
Hanna Photometer (HI 83200)

1. Turn on Hanna Photometer
    a. Meter will perform an LCD self diagnostic test; when the meter displays " - - - - " and "P1", it is ready.
2. Press the METHOD keys (orange arrows) to select the parameter to be analyzed.
3. Fill a beaker with 6-8 oz. of sample. The temperature of the sample should be approximately 68° F for analysis.



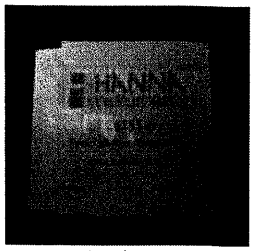
4. The Hanna Photometer HI83200 is capable of measuring 45 different parameters. Procedures for all parameters are detailed in the Instruction Manual.
5. Procedures specific to the parameters recommended to be analyzed for illicit discharge trackdown are summarized in this document. For more detailed information, see the Hanna Photometer Instruction Manual.

Ammonia LR



1. Program the photometer for the Ammonia LR parameter.
2. Fill cuvet with 10ml of unreacted sample, up to the mark, and cap with stopper and photometer cap.
3. Place the cuvet in the photometer; line up the notch in the cap with groove in the photometer.
4. Press ZERO; when the display shows " -0.0- ", the meter is ready.
5. Remove the cuvet from the meter.
6. Add 4 drops of First Reagent; replace stopper and mix.
7. Add 4 drops Second Reagent; replace stopper and mix.
8. Put photometer cap on the cuvet and place in the meter.
9. Press "TIMER" and the display will show the countdown for measurement.
10. Multiply the reading by 1.216 for mg/L Ammonia concentration, or press the "Down Arrow" and then the "CHEM FRM" button to convert to Ammonia (NH_3) mg/L concentration.
11. Record Ammonia LR concentration on the Lab Analysis Report.
12. If the Ammonia concentration exceeds the Low Range (LR) parameters, set the meter for Ammonia HR (High Range) and repeat analysis.

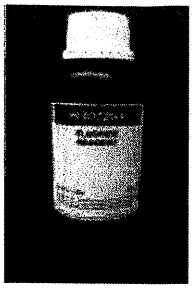
Total Chlorine



1. Program the photometer for the Total Chlorine parameter.
2. Fill cuvet with 10 ml of sample, up to the mark, cap with stopper and photometer cap.
3. Place the cuvet in the photometer; line up the notch in the cap with groove in the photometer.
4. Press ZERO; when the display shows " -0.0- ", the meter is ready.
5. Remove the cuvet from the meter; add Reagent packet; cap with stopper and photometer cap.
6. Shake gently for 20 seconds.
7. Place the cuvet in the meter; line up the notch in the cap with groove in the photometer.
8. Press "TIMER" and the display will show the countdown for measurement.
9. Record the Total Chlorine concentration on the Lab Analysis Report.

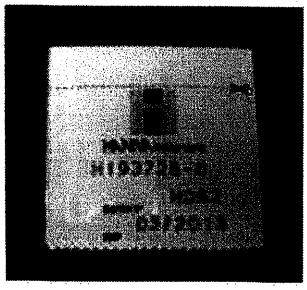
Fluoride

1. Program the photometer for the Fluoride parameter.
2. Add 2ml of Reagent to two cuvets.
3. Fill one cuvet with distilled water and the second cuvet with sample, both up to the mark. It is important to do this simultaneously.
4. Replace the stoppers on cuvets and invert both several times to mix.
5. Put photometer cap on the distilled water cuvet; place in the meter and line up the notch in the cap with groove in the photometer; press "TIMER". The display will show " -0.0- ". Remove cuvet.
6. Immediately put photometer cap on the second cuvet; place in meter and line up the notch in the cap with groove in the photometer. Press "READ".
7. Record the Fluoride concentration on the Lab Analysis Report.



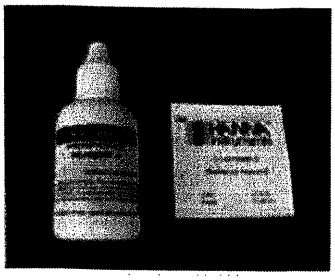
Nitrate

1. Program the photometer for the Nitrate parameter.
2. Fill cuvet with **6 ml** of sample; cap with stopper and photometer cap.
3. Place the cuvet in the photometer; line up the notch in the cap with groove in the photometer.
4. Press ZERO; when the display shows " -0.0- ", the meter is ready.
5. Remove the cuvet from the meter; add Reagent packet; cap with stopper and photometer cap.
6. Shake the cuvet vigorously in an up and down motion for EXACTLY 10 seconds; continue mixing by inverting the cuvet gently for 50 seconds, taking care to not to induce air bubbles. Please note: not all of the reagent powder will dissolve.
7. Place the cuvet in the meter; line up the notch in the cap with groove in the photometer.
8. Press "TIMER" and the display will show the countdown for measurement.
9. Multiply the reading by 4.43 for mg/L Nitrate concentration, or press the "Down Arrow" and then the "CHEM FRM" button to convert to Nitrate (NO^-_3) mg/L concentration.
10. Record the Nitrate concentration on the Lab Analysis Report.



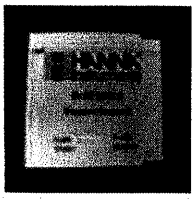
Phosphorous

1. Program the photometer for the Phosphorous parameter.
2. Fill cuvet with 10 ml of sample, up to the mark, cap with stopper and photometer cap.
3. Place the cuvet in the photometer; line up the notch in the cap with groove in the photometer.
4. Press ZERO; when the display shows " -0.0- ", the meter is ready.
5. Remove the cuvet from the meter; add 10 drops of Reagent A and one packet of Reagent B; replace stopper and photometer cap.
6. Shake gently until dissolution is complete.
7. Place the cuvet in the meter; line up the notch in the cap with groove in the photometer.
8. Press "TIMER" and the display will show the countdown for measurement.
9. Record the Phosphorous concentration on the Lab Analysis Report.



Potassium HR

1. Program the photometer for the Potassium HR parameter.
2. Fill cuvet with 10 ml of sample, up to the mark.
3. Add 6 drops of Reagent A. Replace stopper and photometer cap and swirl gently.
4. Place the cuvet in the photometer; line up the notch in the cap with groove in the photometer.
5. Press ZERO; when the display shows " -0.0- ", the meter is ready.
6. Remove the cuvet from the meter; add one packet of Reagent B; replace stopper and photometer cap.
7. Gently mix for 60 seconds by slowly moving the cuvet upside down.
8. Place the cuvet in the meter; line up the notch in the cap with groove in the photometer.
9. Press "TIMER" and the display will show the countdown for measurement.
10. Record the Potassium concentration on the Lab Analysis Report.



Ammonia / Potassium Ratio

1. Divide the Ammonia concentration by the Potassium concentration.
2. Record the results on the Lab Analysis Report under Other Analyses.

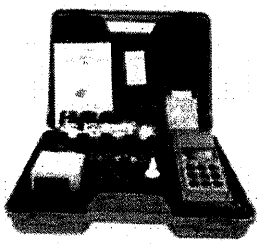
Detergents – Black Light/Cotton Pad

1. Soak cotton pad with sample.
2. Place under black light. If it fluoresces, detergents are present.
3. Under bright light conditions, you may have to move to a dark area or devise a box to block light.
4. Record the detection or absence of detergents on the Lab Analysis Report.

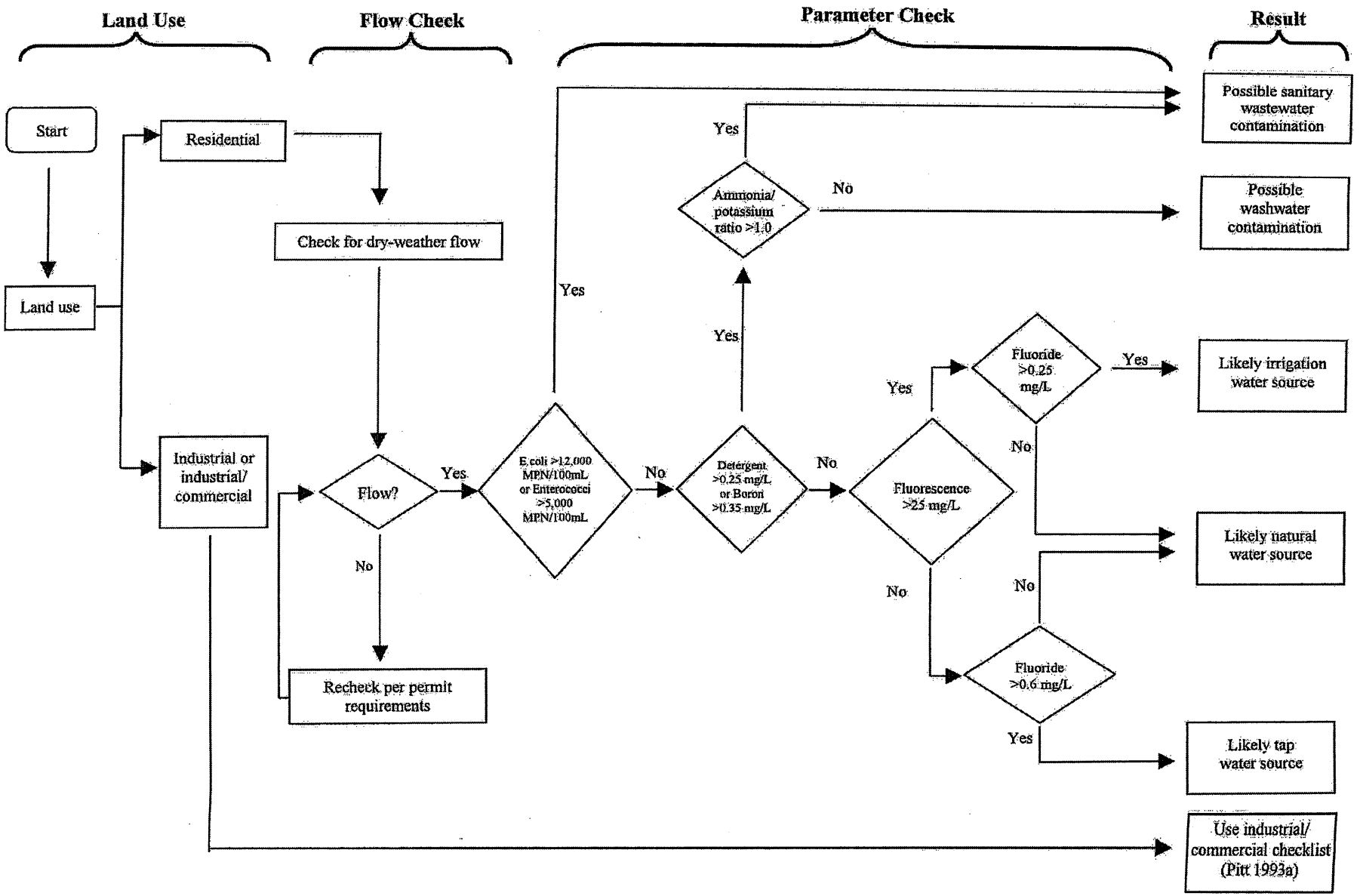
Note: If an intermittent discharge is suspected, the cotton pad can be secured at the outfall or an upstream point for a given length of time and collected accordingly for black light exposure (dry weather of course) .

Turbidity Meter (Hanna 93414)

1. Rinse the sample vial 3 times with sample. Do not touch the sides of the sample vial. Hold by the top only.
2. Fill rinsed vial with 10 ml of sample and replace cap.
3. Wipe sides of vial with lint-free cloth (supplied with meter).
4. Apply thin coat of silicone oil (supplied with meter).
5. Wipe with cloth to obtain to obtain even distribution.
6. Place the vial in the meter lining up index arrows on vial with same on meter.
7. Cover vial with light shield
8. Turn on the Turbidity meter.
9. Press "READ/TIMER" key and release immediately.
10. Display will blink and then display the turbidity measured.
11. Record the results on the Lab Analysis Report.



Note: this meter must be calibrated periodically as per instruction manual.


Land Use
Flow Check
Parameter Check
Result
Start
Residential
Land use
Industrial or industrial/ commercial
Check for dry-weather flow
Flow?
Yes
No
Recheck per permit requirements
E.coli >12,000 MPN/100mL or Enterococci >5,000 MPN/100mL
Yes
No
Ammonia/ potassium ratio >1.0
Yes
No
Detergent >0.25 mg/L or Boron >0.35 mg/L
Yes
No
Fluoride >0.25 mg/L
Yes
No
Fluorescence >25 mg/L
Yes
No
Fluoride >0.6 mg/L
Yes
No
Possible sanitary wastewater contamination
Possible washwater contamination
Likely irrigation water source
Likely natural water source
Likely tap water source
Use industrial/ commercial checklist (Pitt 1993a)

NYSDEC Part 703: Surface Water & Groundwater Quality Standards				
IDDE Guidance Manual Benchmarks (Pitt, 2004)				
Contaminant		***NYS Standard***	***Pitt Benchmark***	***Possible Source***
Ammonia	mg/L	2 mg/L	Fingerprint Value	Sewage
Detergents	ppm		> 0.25 mg/L	Sewage; washwater; industrial/commercial
E. coli	per 100 mL	200*	> 12,000 CFU/100 ml	Sewage
Conductivity	µS/cm		Fingerprint Value	Industrial
Fluoride	mg/L	1.5 mg/L	Fingerprint Value	Tap/irrigation water
Nitrate	mg/L	10 mg/L		Sewage; fertilizer
pH		6.5-8.5		Industrial
Potassium	ppm		Fingerprint Value	Sewage; industrial
Turbidity	NTU	5 NTU		Industrial
Ammonia Potassium Ratio			>1.0	Sewage
Other Indicators:				
Phosphorous - Total	mg/L	20 (per Design Manual)		Sewage; fertilizer
Chlorine - Total	mg/L			Tap/irrigation water
				Feb-09

Benchmark Concentrations to Identify Industrial Discharges (after Pitt, 2004)

Indicator Parameter	Benchmark Concentration	Notes
Ammonia (mg/L)	≥50	• Existing "Flow Chart" parameter • Concentrations higher than the benchmark can identify a few industrial discharges
Color (units)	≥500	• Supplemental parameter that identifies a few specific industrial discharges; should be refined with local data
Conductivity (µS/cm)	≥2,000	• Identifies a few industrial discharges • May be useful to distinguish between industrial sources
Hardness (mg/L as $CaCO_3$)	≤10 ≥2,000	• Identifies a few industrial discharges • May be useful to distinguish between industrial sources
pH (units)	≤5	• Only captures a few industrial discharges • High pH values also may indicate an industrial discharge but residential wash waters also can have high pH
Potassium (mg/L)	≥20	• Existing "Flow Chart" parameter • Excellent indicator of a broad range of industrial discharges
Turbidity (NTU)	≥1,000	• Supplemental parameter that identifies a few specific industrial discharges; should be refined with local data

HANNA instruments

An ISO 9001 Certified Company
Laboratory - Industrial Division

Care and Storage of a pH Electrode

The life of your pH electrode is not infinite. A number of factors affect the life span of your pH electrode. The higher the temperature that the electrode is used at, the more extreme the pH, how often the bulb dries out and needs to be rehydrated, how roughly it is used; all these factors and more **shorten** the life span of your electrode. An electrode that is well maintained and cared for can last up to 2 years, one that is not well maintained will not last as long, and one that is well maintained will not last significantly longer.

Storage of the pH electrode when not in use.

The pH electrode bulb needs to be moist at all times. When you are done with the electrode pour electrode storage solution into the cap that came with the electrode and put the cap over the bulb of the electrode. Keep the cap on until next use. If the electrode will not be used for a long time you may want to check the cap to be sure the storage solution is still in the cap and keeping the bulb moist. **DO NOT STORE THE pH ELECTRODE IN DISTILLED WATER.** Storing the pH electrode in distilled water will shorten the life of your pH electrode.

If you do not have electrode storage solution use pH 4 buffer solution. If you have neither electrode storage solution or pH 4 buffer solution you can use pH 7 buffer solution for a short time.

Rinsing the pH electrode between measurements.

You should rinse your pH electrode between measurements. This can be done with distilled water or rinsing with a sample of the next solution to be measured. Using both distilled water and then a sample of the next solution is also a good way to rinse the pH electrode between measurements.

pH Electrode Fill Hole

Some pH electrodes have a fill hole for refreshing the electrolyte in the pH electrode; other pH electrodes do not have a fill hole. If your pH electrode has a fill hole the fill hole cap should be removed during calibration and use. This allows for the correct amount of reference electrolyte to flow into the sample. Replace the fill hole when done with the electrode at the end of the day.

Hanna Instruments • 3810 Packard Rd. Suite 120, Ann Arbor, MI 48108
Phone: (800) 504-2662 • (734) 971-8160 • Fax: (734) 971-8155 • http://www.hannainst.com

HANNA instruments
An ISO 9001 Certified Company
Laboratory - Industrial Division

If bulb dries out, soak electrode bulb in pH 7

pH electrode bulbs should be keep moist at all times. When not in use the pH electrode bulb should be keep moist by pouring electrode storage solution in the cap provided. If the pH electrode bulb does dry out, soak it in pH 7 buffer for a couple of hours before calibrating or taking measurements.

Do not wipe the pH electrode with a cloth or any other type of material.

When you are done with the pH meter rinse off the electrode with distilled water, put storage solution in the cap, and put the cap on the end of the pH electrode as described above. If the electrode is wet do not dry it off, let the distilled water evaporate by itself.

Accessories:

Electrode storage solution: HI 70300L 500 ml bottle
General purpose electrode cleaning solution: HI 7061L 500 ml bottle
Specific electrode cleaning solutions: e mail or call

Electrode Selection For Specific Application: e mail or call

Hanna Web Site: Hannainst.com

If you have any questions or need additional information please do not hesitate to contact me at **1 800 504 2662** or email me at **Mmuzik@hannainst.com.**

WNYSC MS4 Assistance Project		
Outfall Inspection & Sampling Kit		
Analytical	**Sampling**	**Inventory**
Hanna Photometer - HI 83200	Coliscan Innoculum	Glass Cuvets (spare)
Hanna Turbidity Meter - HI 93414	1 mL Sterile Dropper (for Coliscan)	Spare Caps
pH/Temp/Conductivity Meter (Hi Range)	Bailer (Standard 12")	Filter Discs (spare)
Nitrate Reagent	Dipper	Filter Assembly (spare)
Total Phosphorous Reagents	Swing Sampler (8'-24' pole)	
Ammonia LR Reagents	600 mL beaker (plastic)	
Chlorine Reagent	Cotton Pads	
Fluoride Reagent		
Potassium Reagents	32 oz. Amber Bottles	
Coliscan Easygel (dish)	2000 Super Sabrelight Flashlight	
	24 Can Soft Sided Picnic Cooler	
Nalgene Wash Bottle	Blue Ice Pack	
Elvex Atom Safety Glasses	Tape Measure	
60 ml Graduated Syringe	GPS Unit - etrex Legend HCx	
5 ml Graduated Pipette (disposable)		
250ml Beaker		
Disposable Nitrile Gloves (medium)		
Disposable Nitrile Gloves (large)		
Bottle Brush		
Test Tube Brush		
Black Light Fixture		
18 Gallon Plastic Storage Tote		
Large Sterilite® Showoffs		
Needed - Not Included		
Distilled Water		
Liquid Bleach		
Masking Tape		
Paper Towels		

IDDE Inspection Checklist

Documentation

- ☐ Inspection Checklist Forms/Pen
- ☐ MS4 Inspection Summary Form
- ☐ Outfall Reports
- ☐ Outfall Map (large)
- ☐ Directions, Road Map, etc.

Ecoli Sampling

- ☐ Inoculum
- ☐ Pipettes
- ☐ Gloves
- ☐ Anti-bacterial Gel
- ☐ Dipper
- ☐ Beaker
- ☐ Boots
- ☐ Petri Dishes
- ☐ Sharpie Marker
- ☐ Cooler
- ☐ Ice Packs
- ☐ _____

Other

- ☐ Camera
- ☐ Water
- ☐ Safety Vest
- ☐ Paper Towels

Outfall Reconaissance Inventory Summary

This summary form is designed for NEW outfalls and is to be used to complete a full ORI for inclusion on the Outfall Mapper website.

Name: _____ Dept.:_____

Outfall ID:_____ Date: _____ Weather: _____

Pipe Size ("): _____ Pipe Material: _____ Rip Rap: ☐ ☐ Headwall: ☐ ☐

Outfall at Bridge: ☐ ☐ Side of Bridge: 

End Section: ☐ ☐ End Section Guard: ☐ ☐

Outfall Discharges to: _____ Receiving Stream: _____
(i.e. creek, stream, ditch, municipality)

(Camera) Photo ID: _____ Interconnect: ☐ ☐

(Mapper) Photo ID:_____ Land use: RESIDENTIAL COMMERCIAL MIXED INDUSTRIAL

GPS Coordinates: _____ _____

YES	NO	
☐	☐	Outfall discharging? Describe: _____ (trickle/moderate/substantial)
☐	☐	Cloudy or muddy discharge? Describe: _____
☐	☐	Silt/sediment/other present? Describe: _____ (% age)
☐	☐	Outfall discharge has odor present? Describe: _____ (chemical; chlorine; musty; sewage; rotten egg)
☐	☐	Outfall discharge has color present? Describe: _____ (dark red; orange; blue; multi (oily sheen); other)
☐	☐	Outfall discharge has floatables present? Describe: _____ (foam; trash; toilet paper; other)
☐	☐	Vegetation present? Describe: _____ (normal; excessive; inhibited; dead)
☐	☐	Structural damage present? Describe: _____ (cracks; deterioration; corroded; undermined; crushed)
☐	☐	Stains/Deposits present? Describe: _____ (dark; white; other)

Comments:

WNY Stormwater Coalition

Guidance for Prioritizing Stormwater Outfalls

1. Does the initial inspection information indicate evidence of an illicit discharge?
   - Any outfall with an identified discharge should be the first priority.
   - To search for outfalls where the initial inspection Bergmann conducted identified a potential problem, query the database for outfalls that have identified odors, structural damage, odd colors, floatables, or turbidity. The comment section for the outfalls where any of these problems were identified should provide a more detailed description of the problem.

2. What is the existing land use in the area or sewershed that the outfall drains?
   - Types of land use that should receive priority:
     - Industrial, potential for illicit connections as well as possible contamination from materials stored outside and any industrial processes or practices exposed to the weather. Areas where there are businesses which have industrial stormwater permits, or any type of permitted wastewater discharge as well as any areas where there may be known business sectors with a record of enforcement actions.
     - Heavy commercial use with large impervious parking lots, limited green space.
     - Areas which are under development and have a significant amount of construction activity.

3. Are there any environmentally sensitive areas downstream of the outfall?
   - Does the outfall discharge to a protected stream, Impaired Waters (303(d) and TMDL) or protected wetland?
   - Is the outfall located in an area associated with public use, access or recreational facilities?

4. Areas where there have been repeated complaints
   - Areas where illegal dumping or apparently contaminated discharges were reported in the past.

Western New York Stormwater Coalition

Lab Analysis Report

Outfall ID: T

Sample ID:

Sample Date: 11/2/17

Sample Time:

Analysis Date: 11/2/17

Analysis Time:

Analyst: VR + LA

Condition of Delivered Sample:

Lab Data

Ammonia LR (mg/L)	0.00	Potassium HR (mg/L)	20
Total Chlorine (mg/L)	.64	Detergents (Y or N)	N
Fluoride (mg/L)	.96	Turbidity (NTU) (as needed; separate meter)	.17
Nitrate (mg/L)	0.0		
Phosphorous (mg/L)	.3	E. coli (per 100 mL) (count after 48 hours at room temperature; multipy by100)	

Field Data (transfer from Field Report Form)

pH	7.17	EC- Conductivity (µs/cm OR (mS/cm))	.52
Water Temperature (°F)	70.9	TDS - Total Dissolved Solids (ppm OR (ppt))	.26
GPS Coordinates			

Other Analyses

Parameter (units)		*Parameter (units)*	

Comments (unusual conditions in analysis):

TOWN OF AMHERST

ENGINEERING DEPARTMENT

ERIE COUNTY – NEW YORK

JEFFREY S. BURROUGHS, P.E. – TOWN ENGINEER

December 18, 2017

NOTICE OF VOILATION

Mr. Kevin Wyse
60 Smith Rd
Amherst, NY 14228

RE: 2209, 2213, 2217 SWEET HOME ROAD
STORMWATER INSPECTION RESULTS

Mr. Wyse:

This correspondence serves as a **Notice of Violation (NOV)** of the Town of Amherst Stormwater Local Law Section 172-25.0 for the above referenced site. In a recent site visit by the town's independent inspection firm contracted to perform certain milestone inspections of this project; it came to our attention that the SWPPP weekly inspections for this project have been suspended since the start of the current phase. As the construction permit for this project is still open you are required to perform weekly inspections until the site has reached final stabilization.

You are required to comply with the requirements of the general construction permit and have all the SWPPP related documentation available at the project site within **fourteen (14) days** of the date of this correspondence.

Please be aware that any additional NOV's issued for this site may include an Administrative Fine. Thank you for your continued cooperation. If you have any questions please call me at 716-631-7154.

Sincerely,

Vaishali Reberholt, P.E., CPESC
Stormwater Management Officer

Attachment

cc: Brian P. Andrzejewski, P.E. – Building Commissioner
Tyler Buckley – Watts Architecture and Engineering, PC

ENVIRONMENTAL CONTROL DIVISION
455 TONAWANDA CREEK ROAD
AMHERST, N.Y. 14228
(716) 691-4331 FAX: (716) 691-7608

TOWN OF AMHERST
PHASE II STORMWATER MANAGEMENT PROGRAM
MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

INCIDENT 1D	DATE	TIME	LOCATION	SOURCE	STATUS	COMMENTS

A

Preliminary Sewershed Map

Legend

Stormwater Point Type

- Pipe Discharge to Vegetated Area
- Culvert
- Manhole
- Catch Basin
- Drainage Inlet
- Pipe
- Pond Inlet/Outlet

Draft Outfall Owner

- Erie County
- Private
- Town of Amherst
- University of Buffalo
- Village of Williamsville

Status

- No visible pipes
- Unclear Flow Direction

PRELIMINARY SEWERSHED MAP

B

Legend

Stormwater Point Type

- Pipe Discharge to Vegetated Area
- Culvert
- Manhole
- Catch Basin
- Drainage Inlet
- Pipe
- Pond Inlet/Outlet

Draft Outfall Owner

- Erie County
- Private
- Town of Amherst
- University of Buffalo
- Village of Williamsville

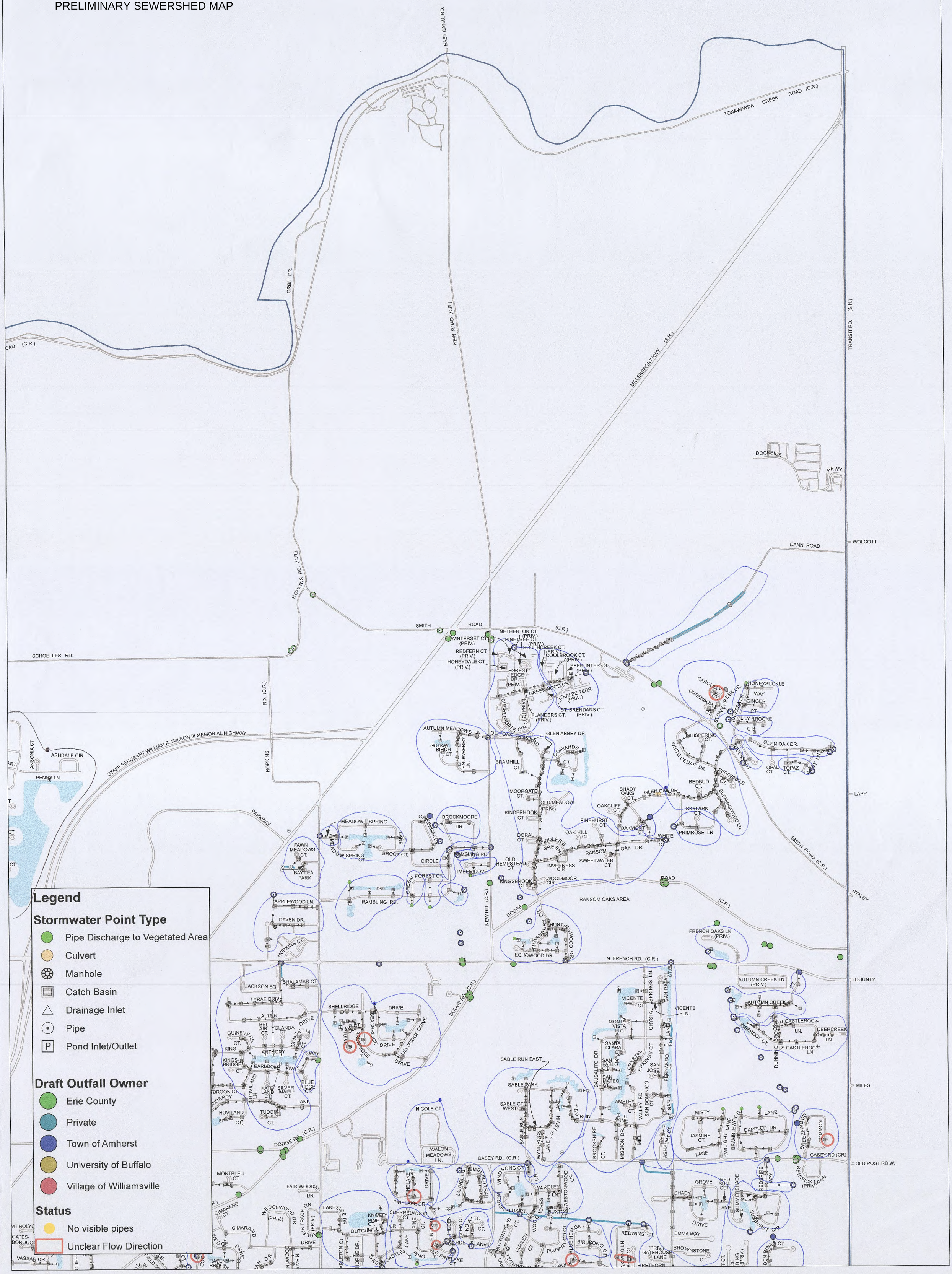
Status

- No visible pipes
- Unclear Flow Direction

PRELIMINARY SEWERSHED MAP

C

PRELIMINARY SEWERSHED MAP



Legend

Stormwater Point Type

- Pipe Discharge to Vegetated Area
- Culvert
- Manhole
- Catch Basin
- Drainage Inlet
- Pipe
- Pond Inlet/Outlet

Draft Outfall Owner

- Erie County
- Private
- Town of Amherst
- University of Buffalo
- Village of Williamsville

Status

- No visible pipes
- Unclear Flow Direction

D

PRELIMINARY SEWERSHED MAP

Outfall Monitoring Observation Sheet

Outfall Number/Address_____

Observers Name _____Town_____

Date_____ Time_____

Weather Conditions:**

Date of last rainfall or significant snow melt (if known)_____

Or, Circle the one that applies

1. No Rain/Snow Melt in past 72 hrs
2. No Rain/Snow Melt in past 48 hrs
3. Recent Rain/Snow Melt within 24 hrs
4. Currently Raining or Snow Melt

Approximate Pipe Diameter _____Name of Receiving Stream _____

Adjacent Land Use: (circle one)

Residential, Commercial, Industrial, Agricultural, Parkland/Open Space

At the time of the observation, is the outfall pipe: discharging? Yes / No Visable/Submerged

Please describe the outfall by circling the appropriate condition(s) within each category:

Odor: Chemical, Chlorine, Musty, Harsh, Sewage, Rotten Eggs, None

Color: Muddy, Cloudy, Grey, Green, Brown, Blue, Red, Clear, Other_____

Floatables: Oily, Rainbow, Trash, Foam, Toilet Paper, None, Other_____

Vegetation: Excessive Growth, Inhibited Growth, Dead Plants, Looks Normal

Structural Damage: Cracks, Deterioration, Peeling Paint, Other _____

Deposits/Stains: Dark Staining, White Deposit, Other_____

Estimate the depth of flow in the outfall pipe (inches)_____

Other Observations:

Overall Outfall Characterization:

____ Unlikely ___Suspect (one strong indicator) ___Potential (two or more indicators) _____ Obvious

APPENDIX E

SWPPP REVIEW CHECKLIST
PERMIT APPLICATION OF STORMWATER INSPECTION SERVICES AND CHECKLIST
PRE-CONSTRUCTION MEETING AGENDA
ACTIVE CONSTRUCTION PROJECT LIST

Town of Amherst
SWPPP Review Checklist

Reviewed by: _____ Date: _____
Project Name: _____
TOA Job No.: _____ Applicant: _____
Project Address: _____

Required Documents and Notifications			
Acceptability			
Yes	**No**	**N/A**	
			Notice of Intent (filed with NYSDEC)
			Owner's contact information
			Contact information for co-permittees (operators or contractors)
			Owner certification and signature
			Anticipated date of construction commencement
SWPPP Contents			
Acceptability			
Yes	**No**	**N/A**	
			Identification of contractor
			Certification statement by contractor
			Requirement for all sub-contractors to sign certification statement
			Statement that SWPPP will be kept on site during all phases of construction
			"SWPPP Manager" identified by name, title, company (contact information)
			Legal description of site (including address)
			Description of on-site activities
			Total acreage of site identified
			Total acreage of are to be disturbed identified
			Runoff coefficient of site after construction completion
			Inspection and maintenance schedule identified, including responsible parties
			Existing soils data
			Receiving waters and ultimate receiving waters identified
			Quantitative stormwater discharge data
			SITE MAP
			Vicinity map and site map (includes North arrow)
			Existing and proposed topography (contours & critical spot elevations)
			Drainage pattern identified (temporary and permanent) (including off-site drainage)
			Approximate slopes after major grading activities
			Areas of soil disturbance identified & consistent with verbiage
			Locations of major structural and non-structural control plans
			Surface waters (including wetlands)
			Location of stormwater discharge to surface water
			Equipment and materials storage areas

Acceptability			
Yes	**No**	**N/A**	
			Upstream diversions, downslope and sideslope perimeter controls installed prior to land disturbing activities
			Description of intended sequence of activities (Phasing plan with 5 acre threshold limits shown)
			Street profiles, utility locations, property boundaries and easement delineations shown
			Construction site parking identified
			Stabilized construction entrance(s) include details
			Other traffic controls identified
			Construction materials storage
			Washout area controls (including specs)
			Equipment fueling areas identified (including specs)
			Cover or stabilize disturbed areas (methods & timing)
			Construction timing to limit impact on seasonal weather changes
			Infiltration/filtration methods used
			Statement of areas disturbed for more than 14 days to be stabilized
			Existing vegetation preserved where appropriate
			Description of stabilization methods (including quantities of materials and specs, seeding rates, mulch material rates, etc.)
			Soil stockpile stabilization methods and timing
			Description of construction site waste disposal methods
			Sanitary waste disposal methods
			Structural Controls (circle methods used)
			Silt fences, earth dikes, brush barriers, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforce soil retaining systems, gabions, temporary or permanent sediment basins, rolled erosion control products (RECP's)
			Detailed specifications provided for all above methods
			Max created slope no steeper than 2' horizontal to 1' vertical
			Sediment basins provide at least 3,600ft^3 of storage per acre
			Positive drainage maintained
			Flow grades stabilized
			Permanent Stormwater Management Controls
			Description of post-construction controls
			Retention ponds, detention ponds, infiltration measure, sequential systems, vegetated swales, natural depressions (including calcs)
			Velocity dissipation devices
			Other Comments

TOWN OF AMHERST

ENGINEERING DEPARTMENT

ERIE COUNTY – NEW YORK

JEFFREY S. BURROUGHS, P.E., TOWN ENGINEER

DOCUMENT CHECKLIST

All applicants MUST include the following three (3) items with their Permit Application for Stormwater Inspection Services.

☐ Notice of Acknowledgement letter from the NYSDEC.

☐ Signed Contractor Certification Form (Include completion certificate of the 4-hour Erosion and Sediment Control training endorsed by NYSDEC)

☐ Application Fee

FOR OFFICIAL USE
DATE RECEIVED: _____
RECEIVED BY: _____

APPLICATION FOR PERMIT FOR STORMWATER INSPECTION SERVICES

Town of Amherst, Erie County, NY

Application is Hereby Made to the Town of Amherst Stormwater Management Officer for Permission to Disturb Soils within the Town of Amherst

Project Location _____

_____

Project Description (include total area of soil disturbance) _____

_____

_____

Town of Amherst Site Plan Number _____ Planning Board Approval Date _____

SWPPP Submitted with Site Plan Y N Maintenance Agreement Required Y N

Maintenance Easement Required Y N

Construction Completion Guarantee Method: Bond Cash Escrow Irrevocable Letter of Credit

Bond by (if applicable) _____

Maintenance Guarantee (if applicable), Irrevocable Letter of Credit by _____

Owner's Name _____

Consulting Engineer's Name _____

Contractor's Name _____ Phone _____

Contractor's Address _____

This application must be submitted in along with one (1) copy of the approved Storm Water Pollution Prevention Plan (SWPPP) and appropriate bonding or irrevocable letter of credit documentation, which will be incorporated into and made part of this application. This application is for the performance of inspection services which are independent of the SWPPP review fees which are included in the Site Plan review process.

Work under this permit shall be started within 60 days from the date of approval thereof. Work under this permit shall be completed within one (1) year from the date of approval thereof. Any request for extension shall be addressed in writing to the Stormwater Management Officer of the Town of Amherst.

Fees from this permit and cost of inspection shall be paid by check made payable to the Town of Amherst at amounts set forth by resolution of the Town Board. The inspection fee is to cover all work under this permit and shall be at no additional cost to the Town of Amherst.

In consideration of the granting of this permit hereby petitioned for, the undersigned hereby agrees that if such a permit is granted he/she will comply with the terms thereof, the Laws of the State of New York, the Ordinances of the Town of Amherst and Regulations of the various departments of the Town and the State of New York, and that he/she shall notify the Engineering Department a minimum of three (3) working days in advance of commencing any work under this permit.

The undersigned hereby certifies that all of the information contained in this petition is correct and true.

Area of Soil Disturbance	Fee
1 - 4.99 Acres	$1,800
5 – 10 Acres	$3,200
>10 Acres	$5,600
Fee Paid	

_____
Owner Signature

_____
Please Print Name

_____
Address & Phone

Subscribed and sworn to before me this _____
day of _____ of 20_____

_____
Notary Public, Erie County, New York

I do certify that I have examined the foregoing petition and Stormwater Pollution Prevention Plan and certify that they conform to Ordinances of the Town of Amherst

_____
Stormwater Management Officer

Receipt is hereby acknowledged of the sum of $ _____, being the required fees established by the Town Board of the Town of Amherst, NY.

Stormwater Inspection Permit No. _____

Stormwater Inspection Firm Assigned: _____

Meeting Agenda

Town of Amherst Engineering Department

Stormwater Inspection Permit

190 Maple Rd

Pre-Construction Meeting

February 22, 2018, 12:00 pm

1) Welcome – Introductions – Exchange of contact information
   a. Vaishali Reberholt, P.E., CPESC – SMO – 716-631-7154 vreberholt@amherst.ny.us
   b. Town's Inspector – Camie Jarrell, P.E. – GHD - Camie.Jarrell@ghd.com
   c. Owner – Kalbacks
   d. Contractor – Kalbacks
   e. Owner's Inspector – Barron & Assoc

2) SWPPP Document
   a. Certification Statements signed by all contractors
   b. SWPPP on site at all times
      1. Publicly available
   c. Trailer / Office / Mailbox
   d. Must contain NOI Acknowledgement from DEC
   e. MS4 Acceptance Form

3) Owner Inspections
   a. Every 7 days

4) Inspection Sequencing – Coordination between Contractor and Inspector for critical stage of construction
   a. Start of construction
   b. Installation of sediment control measures
   c. Completion of site clearing
   d. Completion of rough grading
   e. Completion of final grading
   f. Close of construction season (if applicable)
   g. Completion of final landscaping
   h. Establishment of landscaping in public areas (if applicable)
   i. Project Completion

5) Construction Schedule from Contractor
   a. Start Date
   b. 4 –hr ESC training

6) Notifications of Non-Compliance
   a. Official notice to Permittee from Amherst
   b. Verbal notice to contractor from Inspector

7) Termination of Coverage
   a. After final stabilization and project close out
      b. NOT form to Amherst for signature

Town of Amherst
Stormwater Inspection Project
Tracking Database
TOA Acct# AG4010-0699

SW Project Number	Project Location	Permittee	Project Size (acres)	Fee Amount	Assigned Inspector	Permit Issued	Close-Out	
2008-101	2410 North Forest Rd	Iskalo Office Holdings III	3.3	$1,800.00	Watts	5/16/2008	9/20/2010	
2008-102	2940 Niagara Falls Blvd - Walgreens	Benderson Development Co	3.85	$1,800.00	DiDonato	5/21/2008	3/5/2009	
2008-103	5150 Sheridan Drive	McDonalds USA	1.3	$1,800.00	CRA	6/16/2008	1/20/2009	
~~2008-104~~	~~20 Flint Road~~	~~Hart Hotels, Inc.~~	~~3.4~~	~~$1,800.00~~	~~Bergmann~~	6/16/2008	8/22/2008	
2008-105	192 Park Club Lane	Park Too, LLC.	3	$1,800.00	DiDonato	7/22/2008	8/4/2009	
2008-106	Walmart Sheridan/North Bailey	Benderson Development Co	19.4	$5,600.00	Watts	7/25/2008	11/16/2011	
2008-107	1265 Sweet home	Sweethome Hotels	2.3	$1,800.00	Bergmann	9/12/2008	1/30/2012	
2008-108	2730 North Forest	Clover Construction	3.6	$1,800.00	CRA	10/21/2008	11/19/2009	
2008-109	10300 Transit Road	Jaffarya Center of Niag. Frontier	4.6	$1,800.00	Bergmann	11/20/2008	1/3/2011	
2009-110	3325 Millersport Highway	Levin, Inc.	12.9	$5,600.00	CRA	3/5/2009		*
2009-111	5530 Sheridan Drive	Natale Building Corp.	1.87	$1,800.00	Bergmann	5/28/2009	1/3/2011	
2009-112	495 Skinnersville Road	Catholic Diocese Of Buffalo	3.86	$1,800.00	Bergmann	4/15/2009	10/18/2010	
2009-113	9300 Transit Road	CVS Pharmacy #5496	1.6	$1,800.00	CRA	5/6/2009	10/26/2009	
2009-114	6286 Main Street	Gateway West	3.83	$1,800.00	CRA	6/23/2009		not constructed
2009-115	4900 North French	Bevilacqua	2.2	$1,800.00	Bergmann	7/6/2009	2/8/2011	
2009-116	1837 Hopkins	Fieldstone Estates	12.89	$3,200.00	Bergmann	9/4/2009	1/3/2011	
2009-117	850 Dodge Road	Uniland - Asbury Methodist	2.37	$1,800.00	CRA	10/5/2009	1/28/2011	
2010-118	3650 Millersport Highway	L Visone	4.9	$1,800.00	Watts	1/19/2010		*
2010-119	4460 Chestnut Ridge	MJ Peterson	3	$1,800.00	Bergmann	3/24/2010	8/1/2011	
2010-120	2600 Millersport Highway	West Herr Ford Lincoln Mercury	2	$1,800.00	CRA	4/29/2010	12/16/2010	
2010-121	104 Muegel Road	Morgan Homes of WNY	4.8	$1,800.00	Watts	5/27/2010	9/16/2011	
2010-122	2435 Hopkins Road	Chapel @ Crosspoint	6	$3,200.00	Bergmann	7/8/2010	9/22/2011	
2010-123	480 Crosspoint Parkway	Uniland Partnership of Deleware	6.59	$3,200.00	Bergmann	7/8/2010	8/1/2011	
2010-124	9180 Transit Road	Carubba & Sons	2.1	$1,800.00	CRA	9/7/2010	10/3/2011	
2010-125	2751 N. Forest/465 John James	Amherst Glen Senior Apts	3	$1,800.00	Watts	9/15/2010	11/7/2011	
2010-126	Transit @ Sheridan	N&D Restaurants	2.25	$1,800.00	Bergmann	9/21/2010	8/1/2011	
2011-127	2365 & 2367 Sweet Home	Ashley Gardens Apts	1.1	$1,800.00	CRA	3/1/2011	5/25/2012	
2011-128	Paradise Road	Emma Woods	4.95	$1,800.00	Watts	3/3/2011	1/11/2013	
2011-129	3160 Niagara Falls Blvd	Consumer Beverages	2.589	$1,800.00	Bergmann	3/29/2011	1/30/2012	
2011-130	3995-4145 Rensch Road	ACC OP Development, LLC	23	$5,600.00	Bergmann	7/20/2011	8/23/2012	
2011-131	Dockside Park	Dockside Development	6.44	$3,200.00	CRA	7/26/2011		*
2011-132	various- pipeline locations	Enbridge Engineering	2	$1,800.00	Amherst	7/28/2011	4/26/2012	
2011-133	Lake Forest North	Anastasi Trucking	2	$1,800.00	Amherst	8/29/2011	4/26/2012	
2011-134	3900 Maple Road	Premier Wines	6.36	$3,200.00	Watts	9/16/2011	7/13/2012	
2011-135	4460 Chestnut Ridge	Victor Peterson - Deer Lakes	3	$1,800.00	Bergmann	11/18/2011	10/27/2013	
2012-136	5195 Main Street	Ellicott Development	2.29	$1,800.00	CRA	4/4/2012	10/21/2013	
2012-137	1045 Campbell Blvd	Lake Forest North Phase IVA	6.16	$3,200.00	Watts	3/13/2012	1/11/2013	
2012-138	175 Pineview	Ivoclar Vivadent	1.5	$1,800.00	Bergmann	3/16/2012	11/18/2013	
2012-139	3030 Sheridan Drive	DF Pray (BJ's Plaza)	6.95	$3,200.00	Bergmann	3/21/2012	7/1/2015	
2012-140	1880 Sweet Home Road	Clover Construction	3.43	$1,800.00	Watts	3/28/2012	10/4/2013	
2012-141	8920 Transit Road	Transit Valley CC	7.6	$3,200.00	CRA	3/30/2012	10/25/2012	
2012-142	3400 Sheridan Drive	McDonalds	1.3	$1,800.00	Bergmann	4/18/2012	8/20/2012	
2012-143	9500 Transit Rd	Walden Holding, LLC	10.4	$5,600.00	CRA	5/22/2012		
2012-144	6325 Main St	MCO Real Estate Holdings, LLC	1.5	$1,800.00	Bergmann	6/5/2012	7/23/2013	

2012-145	8270 Transit Rd	Wegmans	3.6	$1,800.00	Watts	6/5/2012	3/7/2013
2012-146	Lake Forest North Phase 4B	Anastasi Trucking	4.0	$1,800.00	Amherst	6/30/2012	completed
2012-147	Country Club of Buffalo	Greystone Strategies	18.8	$5,600.00	Watts	8/9/2012	6/6/2013
2012-148	479 - 489 Campbell Blvd	Ranch View LLC	5.5	$3,200.00	CRA	8/27/2012	
2012-149	various- pipeline locations	Enbridge Engineering	2	$1,800.00	Amherst	8/30/2012	
2012-150	1280 Sweet Home Rd	Rensch Group LLC & 1280 Sweet Home LLC	4.6	$1,800.00	Bergmann	8/31/2012	2/19/2016
2012-151	1690 Wehrle Dr	Zaepfel Development Co., Inc	2.4	$1,800.00	CRA	9/25/2012	
2012-152	199 & 205 Park Club Lane	199 Park Club Lane Assoc., LLC	7.0	$3,200.00	Watts	9/25/2012	
2012-153	100 Tonawanda Creek Rd	Cimato Enterprises, Inc - Evergreen	14.81	$5,600.00	Bergmann	10/12/2012	
2012-154	4460 Chestnutridge Rd - Deer Lakes Phase III	Victor L. Peterson III	2	$1,800.00	Bergmann	10/17/2012	10/27/2013
2012-155	40 John Glenn Drive	Amber Holycross - 40 John Glenn Assoc.	3.5	$1,800.00	Amherst	11/20/2012	10/28/2013
2013-156	196-250 Casey Road	Angelo Natale - Avalon Meadows		$5,600.00	CRA	3/11/2013	
2013-157	4505 Chestnut Ridge	Legacy Development	4.5	$1,800.00	Watts	4/12/2013	
2013-158	210 Charter Oaks Drive	Charter Oaks Condo Assn.	0.6	$1,800.00	Amherst	4/11/2013	
2013-159	2700 North Forest Road (permit transfer)	JCC - Clover Construction	8.3	$3,200.00	Bergmann	4/23/2013	7/21/2015
2013-160	5000 Main Street	Iskalo - Hyatt Place Hotel	6.428	$3,200.00	CRA	4/25/2013	
2013-161	2213, 2209, 2217 Sweet Home Road	Kevin Wyse	3.5	$1,800.00	Watts	5/2/2013	
2013-162	Dockside Parkway	Anthony Cutaia - Dockside Village II	1.47	$1,800.00	Bergmann	6/6/2013	
2013-163	300 Maple Rd	ACC OP Development LLC	21.9	$5,600.00	Watts	6/25/2013	12/30/2013
2013-164	Lake Forest North Phase 4B	Gary Anastasi - Rockingham Estates LLC	9.5	$3,200.00	Watts	7/16/2013	
2013-165	4460 Chestnutridge Rd - Deer Lakes Phase 4 & 5	Victor L. Peterson III	6.08	$3,200.00	Bergmann	7/26/2013	
2013-166	6275 Sheridan Dr	Sheridan Meadows Residential, LLC	8.92	$3,200.00	CRA	8/2/2013	
2013-167	1275 Millersport Hwy	Niagara Mahawk Power Corp	6.9	$3,200.00	CRA	9/23/2013	
2013-168	1731, 1739 & 1759 Wehrle Dr	FT-Amherst Property LLC	3.15	$1,800.00	CRA	10/21/2013	9/26/2014
2013-169	East Robinson & N. French Rd	Accadia Contracting	21.7	$0.00	Amherst	11/7/2013	11/12/2014
2013-170	1555 N. French Rd	NOCO - Timothy Boyle	1.57	$1,800.00	Amherst	11/7/2013	5/6/2014
2013-171	480 Crosspoint Parkway	Carl Montante - Uniland	8.48	$3,200.00	Watts	11/12/2013	3/16/2017
2013-172	467 JJ Audubon Pky	Gary Clinie	1.3	$1,800.00	Bergmann	12/13/2013	
2014-173	6710 Main St	William Mattar	1.4	$1,800.00	Bergmann	3/10/2014	2/8/2016
2014-174	460 Casey Rd	Henry Sicignano III - Hamlet at Sable	2.4	$1,800.00	Watts	5/16/2014	
2014-175	1805 Maple Rd	Paul M. Bliss -	3.46	$1,800.00	CRA	6/3/2014	8/2/2016
2014-176	Dann Road - Wetland mitigation pond	Nick Cutaia	5.98	$3,200.00	CRA	8/1/2014	
2014-177	2187 Wehrle Dr - Stumpf	Eric Stumpf	1.2	$1,800.00	Bergmann	8/7/2014	
2014-178	9490 Transit Rd	Nicholas Cutaia	1	$1,800.00	Watts	8/20/2014	
2014-179	9512, 9514, 9516, 9518 Transit Rd	Nicholas Cutaia	1.87	$1,800.00	CRA	8/20/2014	
2014-180	3930 Sheridan Dr	Lawrence Schreiber	7	$3,200.00	Watts	8/28/2014	
2014-181	2601 Millersport Hwy	West Herr - John Wabick	2.9	$1,800.00	Bergmann	9/4/2014	
2014-182	3800 Sheridan Dr	Craig P. Schreiber	3.6	$1,800.00	CRA	10/15/2014	
2014-183	4460 Chestnut Ridge Rd - Phase 6	Victor L. Peterson III	2	$1,800.00	Bergmann	11/3/2014	
2014-184	200 Casey phase II	Angelo Natale - Avalon Chateaus			CRA	11/17/2014	
2015-185	350 Crosspoint Pkwy	Michael Montante	7.3	$3,200.00	Bergmann	1/21/2015	
2015-186	80 Meyer Rd	Robert Savarino	2.39	$1,800.00	Watts	2/6/2015	
2015-187	205 Crosspoint Pkwy - Columbus Mckinnon	Jon Adams	3.47	$1,800.00	CRA	3/17/2015	
2015-188	Lockwood Villas - 2493 & 2497 Sweet Home Rd	Nicholas Cutaia	2.7	$1,800.00	Bergmann	4/20/2015	
2015-189	1265 Niagara Falls Blvd-Blvd Mall	Brian Calvert	3.4	$1,800.00	Watts	4/22/2015	
2015-190	170 Linwood ave	Andrew Romanowski	4.9	$1,800.00	CRA	5/1/2015	
2015-200	585 (475) Crosspoint Pkwy	Nancy Dobson - Uniland	2.8	$1,800.00	Watts	5/1/2015	3/16/2017
2015-201	2091 Sweet Home Rd - The Grove	Tom George	13.7	$5,600.00	Bergmann	5/4/2015	3/20/2018
2015-202	2435 Hopkins Rd	John Camardo	2.5	$1,800.00	Amherst	5/6/2015	
2015-203	100 Tonawanda Creek Rd - Phase II	Cimato Enterprises, Inc - Evergreen	13.77	$5,600.00	Bergmann	6/8/2015	
2015-204	3901, 3925 Sheridan Dr	Paul Lamparelli		$3,200.00	CRA	7/10/2015	
2015-205	10 Curtwright Dr	Thomas E. Kruez	3.2	$1,800.00	Watts	8/26/2015	
2015-206	2371 - 2395 N. Forest Rd	Timothy Kulbacki	4.1	$1,800.00	GHD	8/28/2015	
2015-207	445 Creekside	Allan Steinberg	3.6	$1,800.00	Watts	9/18/2015	6/12/2017
2015-208	4460 Chestnut Ridge Rd	Victor L. Peterson - Deer Lakes Phase 7	1.5	$1,800.00	Bergmann	9/18/2015	

2016 - 210	3220 Sheridan Dr	Mathew Oates - Benderson Development	1.22	$1,800.00	GHD	2/8/2016	1/10/2017
2016 - 211	2350 Maple Rd	Mathew Oates - Benderson Development	2.4	$1,800.00	Watts	2/8/2016	11/21/2017
2016-212	various pipeline locations	Enbridge Energy	1.0	$1,800.00	Amherst	3/23/2016	1/16/2018
2016 - 213	5933 Main St	Tim Gelder	1.68	$1,800.00	Bergmann	4/22/2016	
2016-214	4460 Chestnut Ridge Rd	Victor Peterson - Deer Lakes Phase 8	4	$1,800.00	Bergmann	5/25/2016	
2016-215	408-410 Mill Street	William Huntress	3.5	$1,800.00	Watts	6/10/2016	
2016-216	903 Sweet Home Rd	Joann Vecchio	5.6	$3,200.00	GHD	6/21/2016	
2016-217	10750 Transit Rd	Nicholas Cutaia	14.9	$5,600.00	Bergmann	6/24/2016	
2016-218	8820 Transit Rd - Alzheimer Center	W.C. Erwin	3.19	$1,800.00	GHD	7/1/2016	
2016-219	1615 Amherst Manor	Sarah Griebner	4.03	$0.00	Amherst	8/18/2016	
2016-220	4949 Sheridan Dr	Bradley Pollack	14 acres	$5,600.00	Watts	8/25/2016	
2016-221	145 Inn Keppers Lane	Jayesh Patel	1.1	$1,800.00	GHD	9/15/2016	
2016-222	100 Tonawanda Creek Rd	David DePaolo	4	$1,800.00	Bergmann	9/22/2016	
2016-223	1265 Sweet Home Rd	Jonathan Rodriguez - Sweet Home Hotel LLC	2.4	$1,800.00	Watts	9/27/2016	
2016-224	370 Casey Rd	Henry Sicignano III	6.6	$3,200.00	GHD	12/15/2016	
2017-225	167-173 Miller Rd	Robert Savarino	2.5	$1,800.00	GHD	2/9/2017	
2017-226	1247 Millersport Hwy	Mary Bitka - National Grid	1.2	$1,800.00	Amherst	2/24/2017	11/29/2017
2017-227	3097 Sheridan Dr (whole foods)	David York		$1,800.00	Amherst	3/20/2017	
2017-228	2240 - 2250 N.Forest Rd	David Kulbacki	1.5	$1,800.00	GHD	4/4/2017	2/22/2018
2017-229	Penny Lane - Lake Forest Phase 5	Elliot Lasky	3.5	$1,800.00	Watts	4/6/2017	
2017-230	3880, 3900 & 4030 Rensch Rd	Williams Paladino	3.1	$1,800.00	Watts	6/27/2017	
2017-231	271 Tonawanda Creek Rd - Wetland mitigation	Victor Peterson	26.3	$5,600.00	GHD	7/27/2017	
2017-232	100 Tonawanda Creek Rd	Anthony Cimato	15.3	$5,600.00	Watts	10/18/2017	
2017-233	1630 N. Forest Rd (Temple Beth Tzedek)	Lisa Wallentels	1.4	$1,800.00	GHD	10/18/2017	
2017-234	4625 Harlem Rd	Christopher Lauricella	2.5	$1,800.00	GHD	11/28/2017	
2017-235	190 Maple Rd	Dennis Chugh	1.7	$1,800.00	Watts	12/21/2017	
2017-236	165 Northpointe Parkway	Zaepfel Develiopment	1.65	$1,800.00	GHD	1/19/2018	
2017-237	5999 Sheridan Dr	David DePaolo	3.6	$1,800.00	GHD	1/24/2018	
2017-238	5999 Sheridan Dr	David DePaolo	10	$5,600.00	GHD	1/24/2018	
2018-239	9150 Transit Rd	Fadi Dagher	1.2	$1,800.00	GHD	2/5/2018	
2018-240	31 Stonham Way - Edukids	Nancy Ware	1.6	$1,800.00	GHD	2/5/2018	
2018-241	100 Northpointe Pkwy	Zaepfel Development		$1,800.00	GHD	2/23/2018	

Running Total

APPENDIX F

EXAMPLE OF OPERATION & MAINTENANCE AGREEMENT
PRIVATE FACILITY CERTIFICATION FORM
POST-CONSTRUCTION MEASURES LIST
EXAMPLE OF LETTER TO PRIVATE ENTITIES OWNING POST- CONSTRUCTION MEASURES

Schedule A

Stormwater Management Practices Acceptable for Water Quality (From: New York State Stormwater Management Design Manual, Table 5.1)		
GROUP	**PRACTICE**	**DESCRIPTION**
Pond	Micropool Extended Detention Pond (P-1)	Pond that treats the majority of the water quality volume through extended detention, and incorporates a micropool at the outlet of the pond to prevent sediment resuspension.
	Wet Pond (P-2)	Pond that provides storage for the entire water quality volume in the permanent pool.
	Wet Extended Detention Pond (P-3)	Pond that treats a portion of the water quality volume by detaining storm flows above a permanent pool for a specified minimum detention time.
	Multiple Pond System (P-4)	A group of ponds that collectively treat the water quality volume.
	Pocket Pond (P-5)	A stormwater wetland design adapted for the treatment of runoff from small drainage areas that has little or no baseflow available to maintain water elevations and relies on groundwater to maintain a permanent pool.
Wetland	Shallow Wetland (W-1)	A wetland that provides water quality treatment entirely in a shallow marsh.
	Extended Detention Wetland (W-2)	A wetland system that provides some fraction of the water quality volume by detaining storm flows above the marsh surface.
	Pond/Wetland System (W-3)	A wetland system that provides a portion of the water quality volume in the permanent pool of a wet pond that precedes the marsh for a specified minimum detention time.
	Pocket Wetland (W-4)	A shallow wetland design adapted for the treatment of runoff from small drainage areas that has variable water levels and relies on groundwater for its permanent pool.
Infiltration	Infiltration Trench (I-1)	An infiltration practice that stores the water quality volume in the void spaces of a gravel trench before it is infiltrated into the ground.
	Infiltration Basin (I-2)	An infiltration practice that stores the water quality volume in a shallow depression before it is infiltrated into the ground.
	Dry Well (I-3)	An infiltration practice similar in design to the infiltration trench, and best suited for treatment of rooftop runoff.
Filtering Practices	Surface Sand Filter (F-1)	A filtering practice that treats stormwater by settling out larger particles in a sediment chamber, and then filtering stormwater through a sand matrix.
	Underground Sand Filter (F-2)	A filtering practice that treats stormwater as it flows through underground settling and filtering chambers.
	Perimeter Sand Filter (F-3)	A filter that incorporates a sediment chamber and filter bed as parallel vaults adjacent to a parking lot.
	Organic Filter (F-4)	A filtering practice that uses an organic medium such as compost in the filter in place of sand.
	Bioretention (F-5)	A shallow depression that treats stormwater as it flows through a soil matrix, and is returned to the storm drain system.
Open Channels	Dry Swale (O-1)	An open drainage channel or depression explicitly designed to detain and promote the filtration of stormwater runoff into the soil media.
	Wet Swale (O-2)	An open drainage channel or depression designed to retain water or intercept groundwater for water quality treatment.

Schedule B

SAMPLE STORMWATER CONTROL FACILITY MAINTENANCE AGREEMENT

Whereas, the Municipality of _____("Municipality") and the _____ ("facility owner") want to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Municipality for the below named project, and

Whereas, the Municipality and the facility owner desire that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, the Municipality and the facility owner agree as follows:

1. This agreement binds the Municipality and the facility owner, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this agreement.

2. The facility owner shall maintain, clean, repair, replace and continue the stormwater control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage ditches, swales, dry wells, infiltrators, drop inlets, pipes, culverts, soil absorption devices and retention ponds.

3. The facility owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.

4. The facility owner shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a Professional Engineer licensed by the State of New York. The inspecting engineer shall prepare and submit to the Municipality within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater control measures.

5. The facility owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the Municipality.

6. The facility owner shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Municipality or in accordance with the recommendations of the inspecting engineer.

7. The facility owner shall provide to the Municipality within 30 days of the date of this agreement, a security for the maintenance and continuation of the stormwater control measures in the form of a Bond, letter of credit or escrow account.

8. This agreement shall be recorded in the Office of the County Clerk, County of _____together with the deed for the common property and shall be included in the offering plan and/or prospectus approved pursuant to _____.

9. If ever the Municipality determines that the facility owner has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake corrective action specified by the Municipality or by the inspecting engineer, the Municipality is authorized to undertake such steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property.

10. This agreement is effective _____.

Post Construction Stormwater Management

Private Facility Certification Form

Cover Sheet

A. General Information

Use only one Cover Sheet per site with as many specific structural BMP Inspection Report attachments as needed. Please attach digital photographs of the site and structural BMPs as applicable.

Development Name:_____ Inspection Date:_____

BMP Owner:_____ Inspection Company:_____

Owner Address:_____ Company Address:_____

_____ _____

Owner Phone #:_____ Inspector Name:_____

Owner Email:_____ Inspector Phone #:_____

Inspector Email:_____

B. Inspection Report Attachments

The listed stormwater controls are the Structural BMPs who's Inspection Reports are to be completed per the NYS Stormwater Design Manual for this site. Please use one inspection report per BMP inspected and submit all forms together with this Cover Sheet as one single report. Also, please document the number of each structural BMP found at this site in the space below.

BMP	# of BMP	BMP	# of BMP
Micropool Extended Detention Pond (P-1)		Infiltration Basin (I-2)	
Wet Pond (P-2)		Dry Well (I-3)	
Wet Extended Detention Pond (P-3)		Surface Sand Filter (F-1)	
Multiple Pond System (P-4)		Underground Sand Filter (F-2)	
Shallow Wetland (W-1)		Perimeter Sand Filter (F-3)	
Extended Detention Wetland (W-2)		Organic Filter (F-4)	
Pond/ Wetland System (W-3)		Bioretention (F-5)	
Pocket Wetland (W-4)		Dry Swale (O-1)	
Infiltration Trench (I-1)		Wet Swale (O-2)	

Post Construction Stormwater Management

C. Inspection Results

FAIL*

*** If any one item on the inspection form is coded as "Work needed", then the entire BMP fails inspection.**

***If a site has multiple BMPs and on fails inspection, this cover sheet is marked as fail until all items on all BMPs pass inspection.**

NOTE: Applicable BMP Inspection Reports and confirmatory digital photographs summarizing required repairs must be submitted to the Town following completion of the preliminary inspection. A re-inspection and certification must be completed within 30 days of the failed preliminary report.

PASS

NOTE: A passing inspection form should be signed below by the appropriate professional and submitted to the Town on or before the established inspection due date. Attach all applicable BMP Inspection Reports and confirmatory digital photographs accordingly.

D. Professional Certification

To be completed only when all structural BMPs at this site are functional with no outstanding maintenance issues.

I, _____, as a duly registered _____ attest that a thorough inspection has been completed for all structural BMPs that are associated with this particular site. All inspected structural BMPs are performing properly and are in compliance with the terms and conditions of the recorded maintenance agreement for the site.

Signature:_____

Date:_____

Town of Amherst

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Post - Construction Stormwater Measures - Long term Maintenance

	Site Stormwater Management System	Location	Type of Maintenance Needed	Date and Type of Maintenance Performed
1	Wet Detention Pond/ Stormwater Retention Basin	9500 Transit Rd	Sediment removal from forebay every five to six years or when 50% full	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
2	Underground Stormwater Detention	9490 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
3	Stormwater Detention Basins	1955 Wehrle Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
4	Stormwater Detention Basins	3650 Millersport Hwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
5	Detention Basin	850 Dodge Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
6	Stormwater Treatment Chamber	15 Stonham Way	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
7	Stormwater Pond	15 Stonham Way	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
8	Stormwater Treatment Unit	5150 Sheridan Dr	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
9	Stormwater Treatment Unit	705 Maple Road	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
10	Stormwater Detention Basins	192 Park Club Lane	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
11	Stormwater Detention/ Retention Pond	2940 Niagara Falls Blvd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
12	Detention Pond	1001-4226 Deer Lakes	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
13	Detention Pond	5512 - 5550 Sheridan Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
14	Stormwater Detention	10300 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
15	Stormwater Treatment Chamber	5488 Sheridan Dr	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program

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Post - Construction Stormwater Measures - Long term Maintenance

16	Stormwater Detention Pond	5488 Sheridan Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
17	Detention Basin with Sand Filter	3750 Millersport Hwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
18	Stormwater Detention	3995 - 4145 Rench Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
19	Underground Stormwater Detention	540 Crosspoint Pkwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
20	Stormwater Retention Pond	3242, 3232, 3240, 3242-3288 Sheridan Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
21	Underground Stormwater Detention	2410 N. Forest Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
22	Underground Stormwater Detention	1260, 1281, 1285 Sweet Home Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
23	Stormwater Retention Pond	400 International Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
24	Detention Basin	10880 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
25	Detention Basin	20 Dann Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
26	Sediment Chambers	20 Dann Rd	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
27	Detention Pond	9570 - 9590 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
28	Detention Pond	3325 Millersport Hwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
29	Stormwater Treatment Chamber	3325 Millersport Hwy	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
30	Stormwater Management Facility	9290 & 9300 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
31	Detention Basin	2211 Sweet Home Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program

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Post - Construction Stormwater Measures - Long term Maintenance

32	Detention Basin	3140 Niagara Falls Blvd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
34	Detention Basin	275 Brompton Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
35	Stormwater Detention Basin	3850 Rensch Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
36	Stormwater Detention Pond	11520 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
37	Stormwater Detention Basin	105-145 Crosspoint Pkwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
38	Stormwater Detention Pond	4100 Maple Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
39	Stormwater Detention Basin	1690 Wehrle Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
40	Detention Basin	677, 679, 691 Skinnersville Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
41	Vortsentry Stormwater Unit	1385 Niagara Falls Blvd	System should be cleaned when inspection reveals that the sediment depth has accumulated to within 12 to 18 inches (300 to 450 mm) of the dry-weather water surface elevation	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
42	Stormwater Detention Basin	1772 Sweet Home Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
44	Stormwater Detention Pond	20 Northpointe Pkwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
45	Storm Seperator	475 JJ Audubon Pkwy	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
46	Detention Pond	475 JJ Audubon Pkwy	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
47	Stormwater Detention Basin	100 N. French Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
48	Retention Pond	4200 Ridge Lea Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
49	Underground Detention	5395 Sheridan Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program

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Post - Construction Stormwater Measures - Long term Maintenance

50	Detention Basin	315 Stahl Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
51	Underground Detention System	175 Pineview Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
52	Detention Basin	675 -681 Skinnerville Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
53	Dry Detention/ Bioretention	2493 & 2497 Sweet Home Rd	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
54	Bioretention	205 Crosspoint Pkwy	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
55	Bioretention	5000 Main St	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
56	Underground Detention	5000 Main St	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
57	Storm Seperator	5000 Main St	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
58	Detention Basin	80 Meyer Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
59	Underground Detention	80 Meyer Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
60	Bioretention	2601 Millersport Hwy	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
61	Underground Detention	6710 Main St	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
62	Bioretention & Underground Detention	1759 Wehrle Dr	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
63	Stormwater Retention Pond	100 - 900 Herron dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
64	Underground Detention	1555 N. French Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
65	Storm Seperator	1555 N. French Rd	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
70	Underground Detention	3900-3904 & 3906 Maple Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program

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Post - Construction Stormwater Measures - Long term Maintenance

71	Detention Pond	1280 Sweethome, 3905 Rensch Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
72	Stormwater Detention Basin	199 & 205 Park Club Lane	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
73	Detention Pond	2209, 2215, 2217 Sweet Home Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
75	CST Storm Separator Unit	5195 Main St	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
76	Underground Detention	1880 Sweet Home Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
77	Detention Pond and Bioretention	1880 Sweet Home Rd	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
78	Storm Separator	1880 Sweet Home Rd	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
79	Underground Detention	6325 Main St	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
80	Stormwater Pretreatment Unit	3030-3060 Sheridan Dr	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
81	Underground Detention	3400 Sheridan Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
82	Storm Separator	3400 Sheridan Dr	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
83	Detention Pond	479 & 489 Campbell Blvd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
84	Detention Pond	2365 - 2367 Sweet Home Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
85	Detention Basin	7700 & 7660 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
86	Detention Basin	3160 Niagara Falls Blvd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program

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Post - Construction Stormwater Measures - Long term Maintenance

87	Detention Basin	2435 Hopkins Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
88	Detention Basin	9180 & 9184 Transit Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
89	Storm Separator	9180 & 9184 Transit Rd	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
90	Detention Basin	4900 N. French Rd	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
91	Sediment Chamber	4900 N. French Rd	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
92	Detention Basin	150 Tech Dr	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
93	Sediment Chamber	1154 N. Forest Rd Creek Bend Estates	Inspection quaterly, Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
94	Sediment Chamber	320 Cayuga Rd Fisher Pond	inspection quaterly, Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
95	Pond with sand filter	320 Cayuga Rd Fisher Pond	Sediment cleaned out of sedimentation chamber when it reaches more than 6” in depth.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
96	Detention Pond	1071 & 1125 Campbell Blvd Lake Forest North	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
97	Stormwater Detention Pond	2615 Millersport Hwy - Collingwood estates	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
98	Sediment Chambers	2615 Millersport Hwy - Collingwood estates	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	Inspection revealed there was no oil residue in the sediment Chambers ON 12/7/16, Highway Depart vacuumed the sediment from the two tanks and appropriately disposed the sediment
99	Retention Pond	259 & 289 N. French Rd Michaels Landing	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
100	Detention Pond	1837 Hopkins rd Fieldstone Estates	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
101	Detention Pond	1530 Hopkins rd Willow Heights	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program

Town of Amherst

Engineering Department
1100 N. Forest Rd, Williamsville, NY 14221

Post - Construction Stormwater Measures - Long term Maintenance

102	Sediment Chambers	6330 - 6350 Main St Greythorne	Sediment should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
103	Stormwater Detention Pond	6330 - 6350 Main St Greythorne	Systems should be cleaned when inspection reveals that accumulated sediment or trash is clogging the discharge orifice	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
104	Wet Detention Pond/ Stormwater Retention Basin	100 Tonawanda Creek Evergreen Landing	Sediment removal from forebay every five to six years or when 50% full	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
105	Bioretention	196 & 214 Casey Rd Chateaus at Avalon	Debris cleanout and vegetation maintenance (monthly)	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
106	Storm seperator	196 & 214 Casey Rd Avalon Meadows	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	No inspections have been performed to date. The Town is in the process of implementing a post-construction inspection program
107	Storm seperator	1040 N. Forest Rd Highway Yard	Sediment and/or oil should be removed when deposits approach within six inches of the invert heights of connecting pipes between StormChamber rows, or in sumped inlet structures.	Crystal Clean Firm was hired to clean and appropriately dispose the contaminants on 11/2/16 & 11/21/17

TOWN OF AMHERST

ENGINEERING DEPARTMENT

ERIE COUNTY – NEW YORK

JEFFREY S. BURROUGHS, P.E., TOWN ENGINEER

To Whom It May Concern:

According to the Town records, you have a site that required stormwater management facilities and practices be constructed and maintained.

Our records indicate we are missing current documentation as to the functionality and condition of this stormwater management facility.

Per EPA Mandates and the Town Code chapter 172.27, the stormwater management facility shall be maintained and inspected per the approved Stormwater Management Pollution Prevention Plan and certified every year by a professional licensed engineer. These facilities are imperative to water quality and potential mitigation of flooding for downstream areas from commercial site.

The Town requests that these stormwater management facilities be inspected per our "maintenance agreement" and the proper documents submitted to the Town. The engineer's inspection shall include all criteria included in the attached 'Private Facility Certification Form".

The report should validate the facility still functions per approved design. Any issues identified via the engineer's report should be addressed accordingly in a timely manner.

The Town requests these certification forms be submitted to the Town by May 31, 2018.

Thank you for your cooperation.

Sincerely,

Vaishali Reberholt, P.E
SMO

APPENDIX G

STAFF TRAINING RECORDS
TOWN OWNED FACILITY MAP
MAP USED FOR CATCH BASIN MAINTENANCE & INSPECTION
CATCH BASIN CLEAN UP SHEETS
MAP USED FOR STREET SWEEPING
MOSQUITO CONTROL MAP & SOP
ROAD KILL COMPOSTING
FACILITY ASSESSMENTS
POLLUTION PREVENTION & GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Town of Amherst – Department of Public Works

January 10, 2018

Pollution Prevention – Good Housekeeping/ IDDE Training

Please Sign In

	Name (PRINT)		Name (PRINT)
1	Eric Fremiewski	26	Thomas Traber
2	Michael Meenaghan	27	Dan Lucey
3	TODD THERRIEN	28	James Geneo
4	Mark Raskopf	29	Steven Cracchiola
5	Donald Vizzo	30	Brian Fish
6	Ken Baker	31	DONALD SMITH
7	Joe FIEGL	32	Scott Hohensee Dr
8	Mike Bridge	33	Mike Cessario
9	Mike Doerfler	34	ROB HESS
10	Robert Huff	35	Shaun Walsh
11	DAVE PETER	36	DAVID RILEY
12	Shaun Baldwin	37	CHARLIE CALVIN
13		38	JOHN BUEME
14	MARK SLAWINSKI	39	Richard P. Monkelbaan
15	PAT HANN	40	THOMAS MONKELBAAN
16	Jim Root	41	MICHAEL D NOLTEE
17		42	DAVID HADLEY
18		43	MICHAEL MELDRUM
19	CHRIS HALTON	44	Duane Probst
20		45	
21		46	
22	MICHAEL P. O'BRIEN	47	Joseph Mallon
23	Kevin Tremblett	48	Ron Wurtz
24	TODD SLIWINSKI	49	Joe Weber
25	Kenny Strom	50	Jim Bentley, Paul Cummer

GLENN ATHANASIO

BRAD ANDERSON

WNY Stormwater Coalition

Town of Amherst – Department of Public Works

January 10, 2018

Pollution Prevention – Good Housekeeping/ IDDE Training

Please Sign In

	Name (PRINT)		Name (PRINT)
1	CHRIS MERCIO	26	David Braunscheidel
2	STEVE KNAUF	27	JanG Figueroa
3	MAX KOCH	28	Eric Blacker
4	Angelo Abramo	29	Stephen Phillips
5	PAUL MILLER	30	Jerry Smith
6	William PWalsh Jr	31	
7	Peter McDonald	32	
8	DAVID WOJTANOWICZ	33	
9	John Wannemacher	34	
10	KEVIN MORSE	35	
11	JLisandrelli	36	
12	Antonino Monti	37	
13	Kenneth A Cerra	38	
14	Eamon Ebere	39	Eric m Ebere
15	Frank Capello	40	
16	MARK A. BENNETT	41	
17	Joe Richter	42	
18	NATE STEGNER	43	
19	Warren Wojtowicz	44	
20	Paul Pagano	45	
21	Michael Lytle	46	Michael Lytle
22	Michael Booth	47	
23	MIKE HUNTER	48	
24	Scott Linneborn	49	
25	Jerome Tenhagen	50	

WNY Stormwater Coalition

Town of Amherst – Department of Public Works

January 10, 2018

Pollution Prevention – Good Housekeeping/ IDDE Training

Please Sign In

	Name (PRINT)		Name (PRINT)
1	Kevin Flynn	26	Kurt Stanley
2	William P. Larkin	27	Alan Spoth
3	Bill Hitzges	28	
4	Bill Schoeck	29	
5	Doug Malzan	30	
6	Sue Jennings	31	
7	Doug Bounds	32	
8	Paula Thompson	33	
9	Jim Dorfler	34	
10	Mike Flynn	35	
11	Renee Burr-Tiggs	36	
12	Gregory T Doll	37	
13	Peter Wolf	38	
14	Kelsey Hinterberger	39	
15	Chris McMenamin	40	
16	Carl Bennett	41	
17	Paul Rubins	42	
18	Mark Kiefer	43	
19	Kathrine Collins	44	
20	David Baldauf	45	
21	David Hopper	46	
22	STEVEN SPECHT	47	
23	NICHOLAS SPECHT	48	
24	Pascal Bongiorno-Binda	49	
25	DAVID WINZIG	50	

WNY Stormwater Coalition

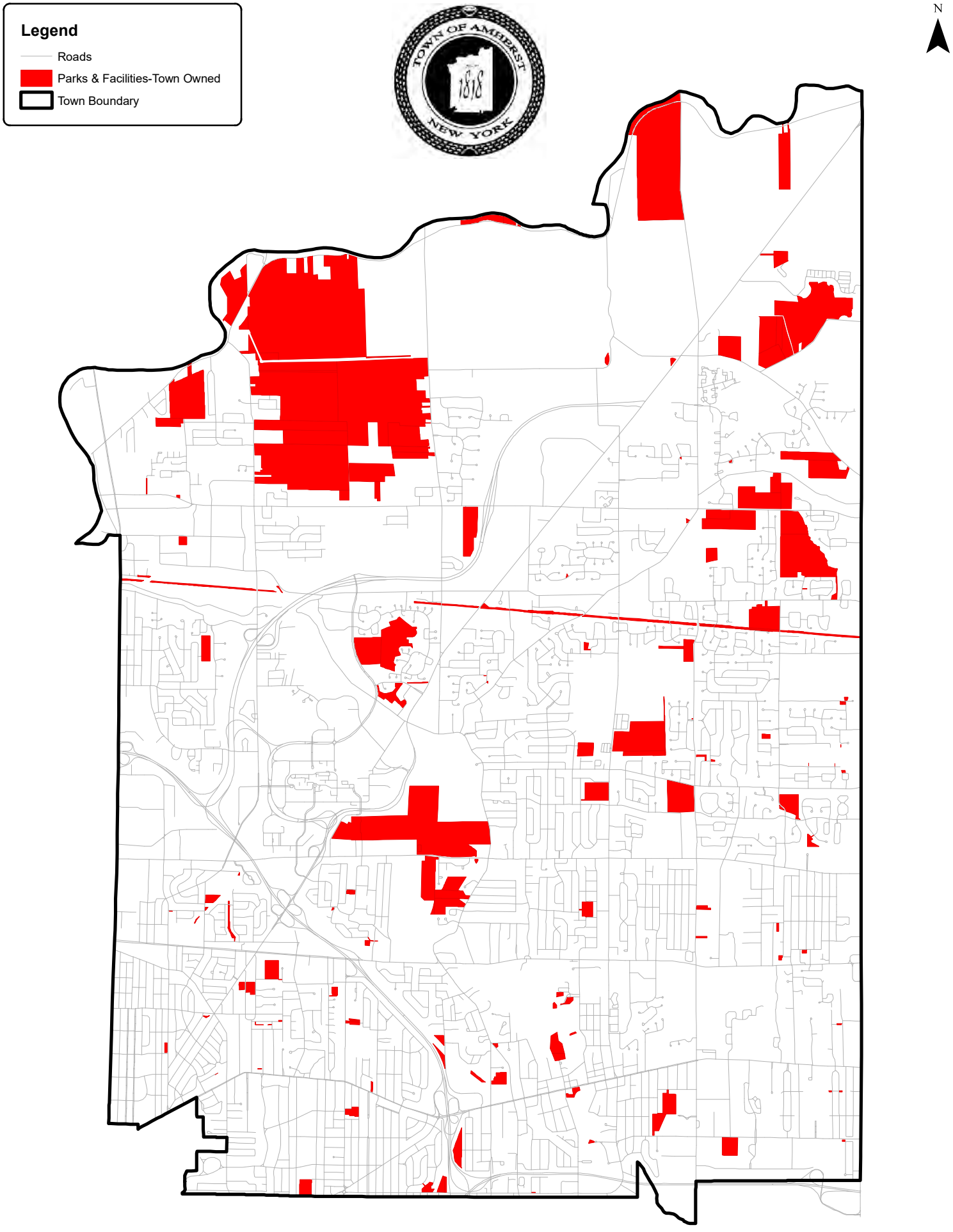
Town of Amherst – Engineering Department

January 10, 2018

Pollution Prevention – Good Housekeeping/ IDDE Training

Please Sign In

	Name (PRINT)		Name (PRINT)
1	MICHAEL JAGIELLO	26	
2	RONALD WOLFF	27	
3	William Burke	28	
4	Michael Namery	29	
5	Dan Roedl	30	
6	MARK KARAMAN	31	
7	Brian Princess	32	
8	John Moslow	33	
9	Mike Clarkson	34	
10	John Whitehead SR	35	
11	Tim McGowan	36	
12	Christopher Petrie	37	
13	Richard Maddigan	38	
14	Shawn Kelly	39	
15	JACK E. Ockmler	40	
16	James Sullivan	41	
17	James Day	42	
18	BLAKESTROM	43	
19	DAVID GRAFF	44	
20	DANIEL KOEPPEL	45	
21	Philip Gerace	46	
22	Stevie Iverson	47	
23		48	
24		49	
25		50	


Legend
Roads
Parks & Facilities-Town Owned
Town Boundary
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TOWN OF AMHERST
1818
NEW YORK

March 2018

Town of Amherst

Erie County, New York

Catch Basin Maintenance and Inspection Districts

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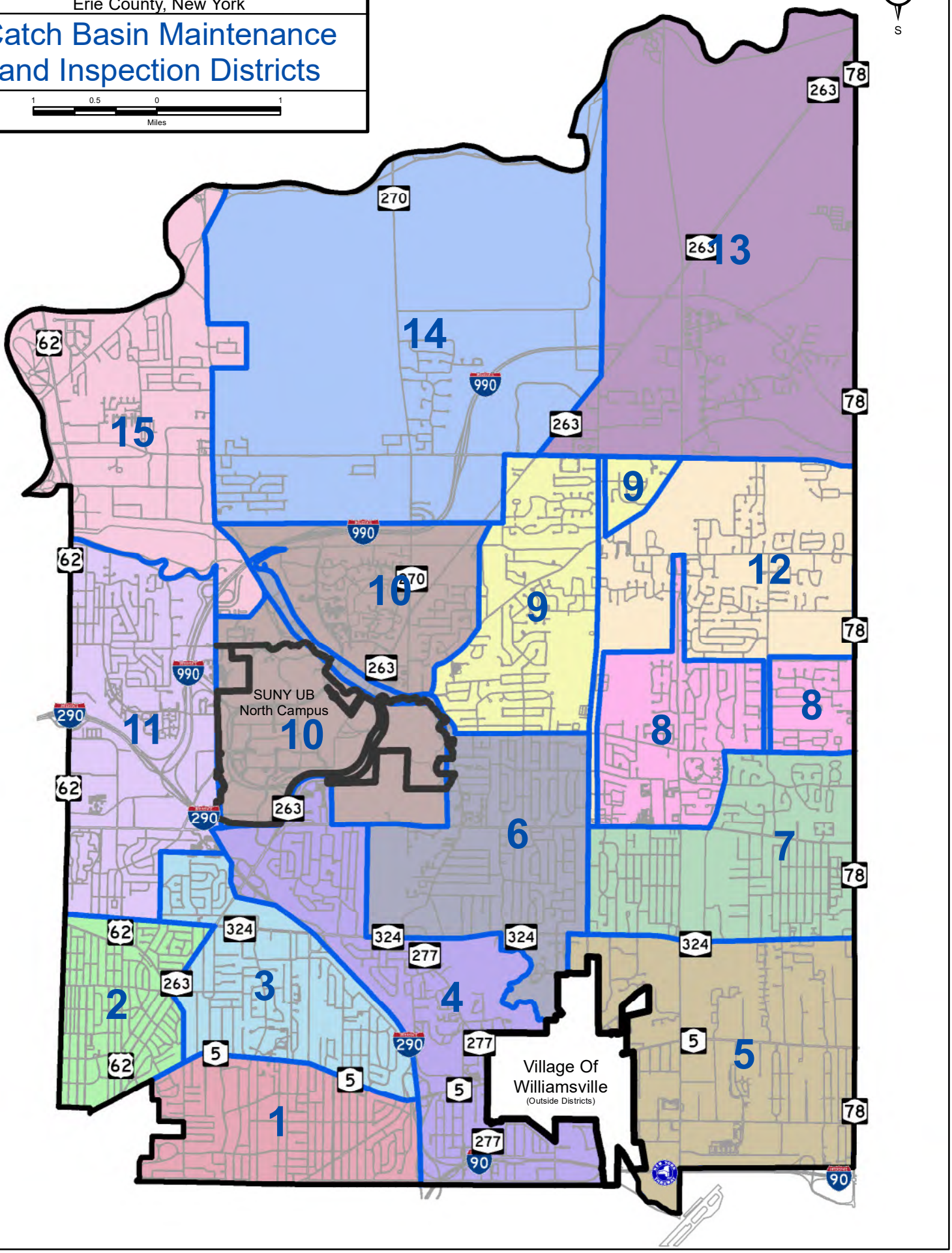
Miles



EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
36 Grandview		1/12	cleaned reciver	
37 Grandview		1/12	cleaned reciver	
24 Bramblewood		1/12	cleaned reciver	
27 Bramblewood		1/12	cleaned reciver	
Dorgent/Northledge		1/12	cleaned top ASAP	
115 Parkwood		1/20	Rebuild reciver	
557 Ayer		1/20	Repair Reciver	
Ayer/Crown Royal		1/20	Large tile	
355 Cottonwood		1/23	Rebuild Reciver	
284 Forest reciver	Flagged Marked	1/23	Bubbler overflowing takes no water needs to be done	
362 Forest reciver		1/23	flushed bubbler takes water 50% no Lip	
44 Birchwood		1/23	flushed bubbler	
64 Birchwood		1/23	flushed bubbler	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
1 San Mateo		10/18	cleaned & flushed	[illegible]
74 Sausalito		10/18	Cleaned Must Return	[illegible]
Greencastle/Dutchmill		10/19	Mason - cleaned & flushed - needs more flushing	[illegible]
Bramblewood		10/19	must return A sst 47	[illegible]
193 Presidents Walk		10/20	Flushed bubbler Takes water OK	[illegible]
Chasewood * 2 Rec		10/21	Mason cleaned & flushed	[illegible]
173 Sundown		10/26	Flushed Bubbler	[illegible]
117 LeBrun		10/27	2 corses repair reciver	[illegible]
Bernhardt/SE Main		10/27	Ponding - reciver cleaned	[illegible]
Four Seasons		11/4	Flushed sections of main	[illegible]
Chasewood at end		11/4	Mason cleaned & flushed	[illegible]
65 Delamere		1/10	cleaned reciver	[illegible]
64 Delamere		1/10	cleaned reciver	[illegible]

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
SE Miller/French	2/10		Rebuild Reciver	
347 Miller	2/10		Large Pipe	
340 Miller	2/10		Large Pipe	
333 Miller	2/10		Repair Reciver 1 Corse	
302 Miller	2/10		Large Pipe	
295 Miller	2/10		Repair Reciver Large Pipe one corse	
260 Miller	2/10		Large Pipe	
275 Miller	2/10		Large Pipe	
AC254 Miller	2/10		Large Pipe	
254 Miller	2/10		Rebuild reciver 4 corses Large Pipe	
213 Miller	2/10		Repair Reciver Large Pipe	
214 Miller N	2/10		Large Pipe	
214 Miller S	2/10		Large Pipe	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
835 Ayer Rd.	2/10		Repair Reciver	
811 Ayer	2/10		Repair Reciver	
Ayer / Crown Royal	2/10		Large Pipe	
557 Ayer	2/10		Repair Reciver	
Ayer / Maple NE	2/10		Large Pipe	
Ayer / Maple NW	2/10		Large Pipe	
6 Haussauer	2/10		Large Pipe	
* 46 Haussauer	2/10		Repair Reciver not in Roadway	
60 Haussauer	2/10		Reset reciver top not in roadway	
55 Haussauer	2/10		Large Pipe not in road	
55 Haussauer N side	2/10		Rebuild reciver not in Road	
Haussauer / Radcliffe SW	2/10		Rebuild Reciver 2 corners not in Road	
Haussauer / Radcliffe NW	2/10		Reciver OK - Top all cracked in Road	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
SW Longmeadow/Westfield	2/7		Rebuild reciver Lowering list	
NW Amherstdale/Westmoreland	2/7	2/7	Reciver not draining does not look to be connected	
579 Longmeadow/Westfield	2/8	2/8	E-reciver Rebuild or repair	
580/579 Longmeadow	2/8	2/8	Bad crossover Replace Lowering list	
580 Longmeadow	2/8	2/8	Rebuild Reciver	
SE Westfield 579 Longmeadow	2/8	2/8	Replace tile between Recivers	
576 Longmeadow	2/8	2/8	Large brick in reciver Raise	
59 Stonecroft	2/9		Rebuild Reciver	
23 Stonecroft	2/9		Rebuild Reciver	
22 Stonecroft	2/9		Rebuild reciver	
SE Berryman/Saratoga	2/10		Large Pipe	
SW Berryman/Saratoga	2/10		Large Pipe	
490 Berryman	2/10		Large Pipe in manhole	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
18 Radcliff @ Markley Topic		1/24	Repair receiver Rock Rammer bottom	
Swamp Park		1/26	Asst. Binder	
94 Benthem E.		1/26	Flush main	
Bassett Rd		1/26	Condo Rent. Pond clean receiver - Brown Pond	
Charlestown / Near Harlem		1/30	Fleshed cross overs for 22	
Arcade / Eggert		2/1	Cleaned receiver	
Charlestown / near Mt Vernon		2/1	Cleaned & fleshed for Paving crew	
54 Contessa ct		2/2	Rebuild receiver	G.C.
21 Grant		2/6	cleaned receiver needs new grate	
Bentham / Grant SE NE		2/6	cleaned receiver	
Seymour / Cranbern		2/7	Cleaned receiver loaded with blacktop	
50 Cranbern		2/7	Cleaned Receiver Blacktop	
Seymour / Cranbern		2/7	Cleaned Reciver Black top	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
174 Old Farmlea W		1/23	Flushed bubbler	
220 Crestwood Ln		1/23	Flushed bubbler not connected needs to be dug Flagged & marked	
35 Byewater Ct		1/23	Flushed bubbler	
47 Byewater Dr.		1/23	Flushed bubbler	
31 Byewater Dr.		1/23	Flushed bubbler	
84 Waverly		1/23	Flushed bubbler not connected but taking water no dig marked w paint	
Flint / Doubletree Driveway		1/23	Rebuild Reciver Marked w paint	
2 Flint		1/23	Repair Reciver	
Collens Ln / Woodshire N NE		1/24	Rebuild reciver	
209 Woodshire Ct.		1/24	Rebuild reciver	
26 Hunters Glen		1/24	Rebuild reciver	
67 ~~Mrs~~ Deer Ridge		1/24	Rebuild reciver	
Markley / Radcliffe NE		1/24	Rebuild reciver Jack hammer old material from bottom of pit	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
240 Miller S	2/10		Repair Reciver & corses. Large Pipe	
240 Miller N	2/10		Large Pipe	
Queen/S Forest	2/13		cleaned reciver Top	
Queen/S. Forest	2/13		Cleaned reciver top	
25 Miller Rd.	2/14	2/14	Cleaned & flushed Large Pipe	
53 Miller Rd	2/14	2/14	Cleaned & flushed Large Pipe	
95 Miller Rd	2/14	2/14	Large Pipe large	
Miller/Golden SE	2/14	2/14	Cleaned & flushed	
Miller/Golden NE	2/14	2/14	Cleaned & flushed	
285 Little Robin		2/15	Cleaned & flushed	
287 Little Robin		2/15	cleaned & flushed	
AC 287 Little Robin		2/15	Cleaned & flushed	
286 Little Robin	2/15	2/15	Rebuild reciver Cleaned & flushed	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
AC286 Little Robin		2/15	Cleaned & flushed	
217 Schenwood Ct	2/17	2/17	Babbler cleaned & flushed not connected needs to be dug flagged & marked	
102 Southwedge		2/17	Cleaned Flushed Babbler - takes water well	
155 Southwedge		2/17	Babbler - cleaned & flushed	
139 Miller Rd	2/21		Rebuild reciver	
161 Miller	2/21	2/21	Rebuild Reciver	
161 Miller N side	2/21	2/21	Rebuild Reciver	
Pole 161 Miller	2/21	2/21	Rebuild Reciver	
179 Miller	2/21	2/21	Rebuild Reciver	
Miller/Millersport SE	2/22	2/22	Rebuild reciver	
Millersport/Miller SW	2/22	2/22	Rebuild reciver	
136 Miller	2/22	2/22	Rebuild reciver	
High Park/Highledge S		2/23	Cleaned & flushed	

Done
DWS

138

EVERY C-BASIN

Paving list

VAC-CON

	STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS	
RP	10 Carolilly Ct	2-2-17		rebuild rec	RSR	✓
RP	41 Stoney Creek	2-2-17		rebuild rec	RSR	✓
RP	Across From 41 Stoney Creek	2-2-17		rebuild rec	RSR	✓
RP	9 Greensboro Ct	2-2-17		rebuild rec	RSR	✓
RP	10 Greensboro ct	2-2-17		rebuild rec	RSR	✓
RP	35 Stoney Creek at Smith	2-2-17		rebuild rec	RSR	✓
RP	Across From 35 Stoney Creek at Smith	2-2-17		rebuild rec	RSR	✓
RP	68 Snowberry	2-6-17		rebuild rec	RSR	✓
RP	69 Snowberry	2-6-17		rebuild rec	RSR	✓
RP	6 Graybirch	2-6-17		rebuild rec	RSR	✓
RP	27 Snowberry	2-6-17		rebuild rec	RSR	✓
RP	100 Snowberry	2-6-17		rebuild rec	RSR	✓
RP	Across From 100 Snowberry	2-6-17		rebuild rec	RSR	✓

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
269 Ranch Trail	2-7-17		Cleaned rec	RSR
263 Getzville Rd	2-13-17		rebuild rec	RSR
50 Londonderry	2-21-17		Flushed rec	TG
152 Londonderry	2-21-17		Cleaned Rec.	TG
200 Londonderry	2-21-17		Cleaned Rec	TG
230 Londonderry	2-21-17		Cleaned Rec.	TG
284 Londonderry	2-21-17		Cleaned Rec	TG
302 Londonderry	2-21-17		Cleaned Rec	TG
219 Londonderry	2-21-17		Cleaned Rec	TG
147 Londonderry	2-21-17		Cleaned Rec	TG
81 burbank	2-21-17		Cleaned Rec	TG
213 burbank	2-21-17		Cleaned Rec	TG
Across From 41 Stoney Creek	2-23-17	2-23-17	Cleaned Rec	RSR

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
115 Hyledal	2/23		Flushed bubbler Takes water well	
109 Hyledge	2/23	Flagged & Marked	Flushed bubbler won't take water Needs to be clean	
Dorchester/Mt. Vernon SE	2/24	2/24	Cleaned won't take water, needs more work	
Dorchester/Mt. Vernon NE	2/24	2/24	Cleaned flushed - won't take water needs more work	
Dorchester/Mt Vernon NW		2/24	cleaned	
96 Meller	2/27	2/27	cleaned & flushed needs new top	
72 Miller	2/27		Rebuild reciver CAT	
66 Miller Rd	2/27	2/27	Rebuild Reciver	
AC 65 Miller	2/27	2/27	Cleaned & flushed, Replace top & Parge Pipe	
32 Miller	2/27	2/27	Cleaned & flushed Rebuild reciver	
65 Siegfried	2/28		Dye tested sink hole	
251 Hawthorne	2/28		Rebuild reciver	
288 Hawthorne	2/28		Rebuild Reciver	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
79 Denrose	3/23/17	3/23/17	Cleaned Rec	TG
Light Pole #82 across from 79 Denrose	3/23/17	3/23/17	Cleaned Rec	TG
✓ Pole # 87 on Roger Chaffee Dr	3/23/17		Rebuild Rec.	TG
311 Meyer on Bowmart	3/23/17	3/23/17	Cleaned Rec.	TG
Pole # 111 Meyer Rd	3/23/17	3/23/17	Cleaned Rec	TG
✓ Pole # 267 Meyer Rd	3/23/17		Needs Patch around Rec.	TG
✓ 2nd Entrance to Mol OH before house # 451 Meyer Rd	3/23/17		Rebuild Rec.	TG
✓ 80 Meyer Rd	3/24/17		Repair TOP (sinking) bad	TG
40 Meyer Rd	3/24/17	3/24/17	Cleaned Rec.	TG
324 Hilcrest on Homecrest	3/24/17	3/24/17	Cleaned Rec	TG
174 Hillcrest	3/24/17	3/24/17	Cleaned Rec.	TG
125 Hillcrest	3/24/17		Concrete + rust around Rec. unable to Remove grate.	TG
411 Homecrest	3/24/17	3/24/17	Cleaned Rec	TG

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
54 Harwood Dr	9/6/16	9/6/16	Cleaned Rec	TG
Across From 179 Amherstdale	9/7/16	9/7/16	Cleaned Rec.	TG
On Amherstdale 326 Westmoreland	9/7/16	9/7/16	Cleaned Rec.	TG
25 Washington	9/7/16	9/7/16	Cleaned Rec.	TG
315 Washington	9/7/16	9/7/16	Cleaned Rec	TG
264 Washington	9/7/16	-	Re-Build Rec	TG
130 Mt. Vernon On Westmorland	9/7/16	9/7/16	Cleaned Rec	TG
754 Lebrun Rd	9/7/16	-	Re-Build Rec.	TG
Across from 135 Wetmoreland	9/7/16	9/7/16	Cleaned Rec	TG
S. Lion Terr.	9/7/16	9/7/16	Flused Crossover For Glen A.	TG
165 Dalewood	03/20/17	03/20/17	Cleaned receiver	CB
164 Parkhaven	3/23/17	3/23/17	Cleaned rec	TG
3Co Joe Mccarthy	3/23/17	3/23/17	Cleaned Rec	TG

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
175 Crosby	3-7-17	3-7-17	Cleaned rec	RSR
15 Lehnsprings	3-10-17	3-10-17	Cleaned Rec. for Mason	TG
81 Lehnsprings	3-10-17	3-10-17	Cleaned Rec. for Mason	TG
230 Londonderry	3-10-17	3-10-17	Cleaned Rec for Mason	TG
22 Meadowbrook at Blossom Heath	3-23-17	3-23-17	Cleaned 2 receivers	RSR
130 Maynard at Hendricks	3-23-17	3-23-17	Cleaned rec Mason	RSR
361 Hendricks	3-23-17	3-23-17	Cleaned rec Mason	RSR
42 Morton on Hendricks	3-23-17	3-23-17	Cleaned rec mason	RSR
23 Arlington	3-24-17	3-24-17	Cleaned rec	RSR
47 Arlington	3-24-17	3-24-17	Cleaned rec	RSR
89 Arlington	3-24-17	3-24-17	Cleaned rec	RSR
88 Arlington	3-24-17	3-24-17	Cleaned rec	RSR
Across From 23 Arlington	3-24-17	3-24-17	Cleaned rec	RSR

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
3 Stoney Creek	2-23-17	2-23-17	Cleaned rec mason	RSR
Across From 3 Stoney Creek	2-23-17	2-23-17	Cleaned rec mason	RSR
10 Greensboro ct	2-23-17	2-23-17	Cleaned rec mason	RSR
75 Morningside	2-24-17	2-24-17	Cleaned rec mason	RSR
76 Meadowbrook	2-24-17	2-24-17	Cleaned rec mason	RSR
Across From 100 Snowberry	2-24-17	2-24-17	Cleaned rec mason	RSR
10 Greensboro ct	2-24-17	2-24-17	Cleaned rec mason	RSR
68 Snowberry	2-28-17	2-28-17	Cleaned rec mason	RSR
19 Snowberry	2-28-17	2-28-17	Cleaned rec mason	RSR
135 Heathwood	3-1-17	3-1-17	Cleaned rec flushed line	RSR
21 Grant	3-1-17	3-1-17	Cleaned rec mason	RSR
100 Snowberry	3-6-17	3-6-17	Cleaned rec mason	RSR
55 Elmhurst	3-7-17	3-7-17	Cleaned rec mason	RSR

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
3 Earlsomb Way	F & M	4/3	Flushed Rubber Dig not connected	(S)
Between Marriott & Red Roof Flint Driveways	4/3		Rebuild Reciver	(S)
Between F & R Marriott Flint Driveways	4/3		Rebuild Reciver	(S)
N of Marriott Flint Front drive	4/3		Purge Pipe	(S)
NW Campus/Aspen		4/3	cleaned & flushed	(S)
SW Campus/Aspen		4/3	cleaned & flushed	(S)
* Campus/Aspen NE		4/3	cleaned & flushed	(S)
Campus/Aspen SE		4/3	cleaned & flushed	(S)
Campus/Aspen		4/3	cleaned & flushed	(S)
192 Shellridge		4/3	flushed Lateral	(S)
100 Candlewood		4-17-17	Cleaned rec mason	KSL
99 Candlewood		4-17-17	Cleaned rec mason	KSL
56 Windridge		4-17-17	Cleaned rec	KSL
62 Windridge Ct		4-17-17	Cleaned rec	KSL

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
Longmeadow / Dellwood NE	3/21		Purge Pipe	
Longmeadow / Dellwood NW	3/21		Rebuild Receiver	
Longmeadow / N. Clayhurst NE	3/21		Rebuild receiver	
Longmeadow / N. Clayhurst NW		3/21	Reset manhole Loose	
Longmeadow / Richmond NW	3/23		Rebuild Receiver	
295 S. Elliott Pkwy	3/24	3/24	Rebuild Receiver	
Countryside / Ball NE	3/30	3/30	Cleaned Rebuild receiver	
11 NW		3/30	cleaned top	
11 S		3/30	cleaned receiver	
311 Sunridge		3/31	Flushed Crossover	
3941 Ridge Lea		3/31	Removed Retro-mat covering receiver - flooding	
8 Earlsboro Way		4/3	Flushed Bubbler	
26 Earlsboro Way		4/3	Flushed Bubbler	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
81 Castle ct	1-17-17	1-18-17	Cleaned rec	RSK
176 Rosemont	1-18-17	1-18-17	Cleaned rec flushed storm line	RSK
567 Cottonwood dr.	1-18-17	1-19-17	Cleaned rec crossover tile droped	RSK
33 Parkwood	1-19-17	1-19-17	cleaned rec rebuild rec	RSK
75 Parkwood	1-19-17	1-19-17	flushed line	RSK
NE Corner Lawrence Bell	1-24-17	1-24-17	Sinkhole drain rec 3 feet from rec	RSK
62 Rabino Ct	1-24-17		rebuild rec	RSK
180 Fox Point w	3-24-17	3-27-17	Cleaned rec flushed line	RSK
205 Presidents walk	3-24-17	3-27-17	Cleaned rec flushed line	RSK
4911 N Bailey Across from	3-27-17	3-27-17	Cleaned rec flushed line	RSK
4911 N Bailey	3-27-17	3-27-17	Cleaned rec	RSK
4955 N Bailey	3-27-17	3-27-17	Cleaned rec	RSK
181 Halewell on Parkledge	3-31-17	3-31-17	Cleaned rec	RSK

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
274 Hawthorne	2/28		Replace reciver Top on island	
66 Stonecroft	2/28		Rebuild reciver	
Longmeadow / Bellwood NE	3/6		Large Crossover	
65 Siegfried	3/6		exterole sink hole #55+21	
Flint / Maple SE	3/7		Rebuild Reciver	
Flint / Maple SW	3/7		Large Reciver	
Flint / Doubletree Dr. W	3/7		Rebuild reciver	
Flint / Red Roof W	3/7		Large Pipe	
Flint / Between Marriott Red Roof W	3/7		Rebuild Reciver	
26 Beachridge		3/10	Flushed bubbler	
188 Londonderry NW		3/10	Flushed bubbler	
Longmeadow / Woodbury		3/21	Large Pipe Cleaned & Flushed	
Longmeadow / Woodbury SW		3/21	Cleaned & flushed	

Flush cross over

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
216 Village Pointe Lane	4/20/17	4/20/17	Cleaned Rec.	TG
on Hampton Hill Pole # 79	4/20/17		Needs Re Build	TG
156 Hampton Hill	4/20/17	4/20/17	Cleaned Rec.	TG
207 Village Point Lane	4/20/17	4/20/17	Cleaned Rec + Flushed Cross over	TG
216 Village Pointe Lane	4/20/17	4/20/17	Cleaned Rec	TG
204 Barberry	4/21/17	4/21/17	Cleaned Rec	TG
190 Sunrise	4/21/17	4/21/17	Cleaned Rec.	TG
149 Audubon	4/21/17	4/21/17	Cleaned Rec. for Mason	TG
223 Audubon	4/21/17	4/21/17	found Rec. Top 1/2 off Cleaned out Rec. To find more than 1/2 full of Black Top	TG.
Le Cindy	4/21/17	4/21/17	Cleaned + Flushed Rec. Line	TG
3 AVA on Cindy	4/21/17	4/21/17	Cleand + Flused Rec. Line	TG
201 Sunrise	4/21/17	4/21/17	Cleaned manhole	TG
201 Sunrise	4/21/17	#	unable to remove Rec. Top! Look like Curb was built on top of Rec.	TG

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
160 Labrun	3/28/17	3/28/17	Cleaned Rec for Mason	TG
117 Hilton Blvd	3/28/17	3/28/17	Cleaned Rec.	TG
Pole # 521 Amsterdam	3/28/17	3/28/17	Cleaned Rec.	TG
545 Emerson	3/28/17	3/28/17	Cleaned Rec.	TG
577 Emerson	3/28/17	3/28/17	Cleaned Rec	TG
577 Emerson	3/28/17		Needs Re-Bulid	TG
675 Emerson	3/28/17	3/28/17	Cleaned Rec & Flushed Rec.	TG
676 Emerson	3/28/17	3/28/17	Cleaned Rec.	TG
650 Emerson	3/28/17	3/28/17	Cleaned Rec. Needs Re-Build	TG

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
160 Lebrun	3/24/17	3/24/17	Cleaned Rec for Mason	TG
526 Emerson	3/27/17	3/27/17	Cleaned and flushed crossover. Needs Rebuild	CB
551 Homecrest	3/27/17		Full of Blacktop needs removed	CB
544 Homecrest	3/27/17	3/27/17	cleaned and flushed crossover.	CB
525 Emerson on Woodcrest	3/28/17	3/28/17	Cleaned Rec.	TG
123 Woodcrest	3/28/17		Needs Re-Ruild	TG
538 Emerson on Woodcrest	3/28/17	3/28/17	Cleaned Rec.	TG
181 Woodcrest	3/28/17	3/28/17	Cleaned Rec.	TG
239 Woodcrest	3/28/17	3/28/17	Back of Rec. flipped over Needs to be rat back on	TG
5 Manser	3/28/17	3/28/17	Cleaned Rec.	TG
659 Emerson on Manser	3/28/17	3/28/17	Cleaned Rec.	TG
141 Manser	3/28/17	3/28/17	Cleaned Rec	TG
141 Manser	3/28/17		Needs Re-Build	TG

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
3 Firethorn ct	4/10/17	4/10/17	Cleaned Rec For Mason	TG
506 Long Meadow	4/10/17	4/10/17	Cleaned Man hole	TG
282 Burroughs	4/10/17	4/10/17	Cleaned Rec for mason	TG
282 Burroughs	4/11/17	4/11/17	Cleaned Rec for mason	TG
127 Lehn Springs	4/11/17	4/11/17	Cleaned Rec for Mason	TG
133 Lehn Springs	4/11/17	4/11/17	Cleaned Rec for Mason	TG
✓ 343 Windermere on Oxford	4/11/17		Needs Re-Build	TG
✓ 344 Windermere	4/11/17		Needs Re-Build	TG
100 Koster Row	4/12/17	4/12/17	Cleaned hole for Bubbler Crew	TG
307 Sout Ellicott	4/12/17	4/12/17	Flushed Cross-over	TG
123 Rand Cliffe	4/13/17	4/13/17	Cleaned Rec. for mason	TG
1 Gatesborough ct on Markley	4/13/17	4/13/17	Cleaned Rec for Mason	TG
25 N. Woodside	4/18/17	4/18/17	Cleaned Rec for mason	TG

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
180 Hallwellon Parkledge	3-31-17	3-31-17	Cleaned rec	
55 Parkledge	3-31-17	3-31-17	Cleaned rec	
99 Parkledge	3-31-17	3-31-17	Cleaned rec flushed line's	
Shadow Wood	3-31-17	3-31-17	Flushed Storm	
272 Brambkewood	4-3-17	4-3-17	Cleaned rec Mason	
3 Firethorne	4-3-17	4-3-17	Cleaned rec Mason	
57 Plantation	4-3-17	4-3-17	Cleaned rec Mason	
✓ 29 Brambly	4/4/17	4/4/17	Needs Re-Baid	TG
✓ 4 Royalwoods	4/6/17		Needs Re-Baild	TG
Sargent + Lakewood Pkwy			Cleaned Rec got water moving	TG
Sargent + Northedge			got water moving Cleaned Rec	TG
269 Lehn Springs	4/10/17	4/10/17	Cleaned Rec For Mason	TG
Highway for Zig's Crew	4/10/17	4/10/17	Sucked out water	

EVERY C-BASIN

VAC-CON

STREET ADDRESS	DATE NOTED	DATE CLEANED	PROBLEMS	INTITALS
161 Brantwood	8/4/17	8/4/17	Cleaned Rec Flushed Cross-over	TG
50 Brantwood	8/4/17	8/4/17	Cleaned Storm Flushed Storm Line To #30 Bottom 100 Block of Brantwood Dou	TG
28 Audubon	8/15/17	8/15/17	Cleaned Rec Flushed Line	TG
58 Audubon	8/15/17	8/15/17	Cleaned & Rec. Flushed Line	TG
222 Audubon	8/16/17	8/16/17	Cleaned Rec.	TG
816 Audubon	8/16/17		Can Not Remove Castiron grate !,!	TG
81 Burbank	8/16/17	8/16/17	Cleaned Rec.	TG
Homewood Ct	8/16/17	8/16/17	Cleaned For Bubbler Crew	TG
107 Autumn View on Chaumont Dr	8/16/17	8/16/17	Cleaned Rec. For Mason	TG
257 Dan Troy	8/16/17		Flushed Bubbler	TG
216 Hendricks	8/17/17	8/17/17	cleaned area for bubbler Crew	TG
81 Burbank	8/17/17	8/17/17	Flushed + Root Cut line.	TG
157 Pressidio	8/21/17	8/21/17	Cleaned Rec	TG

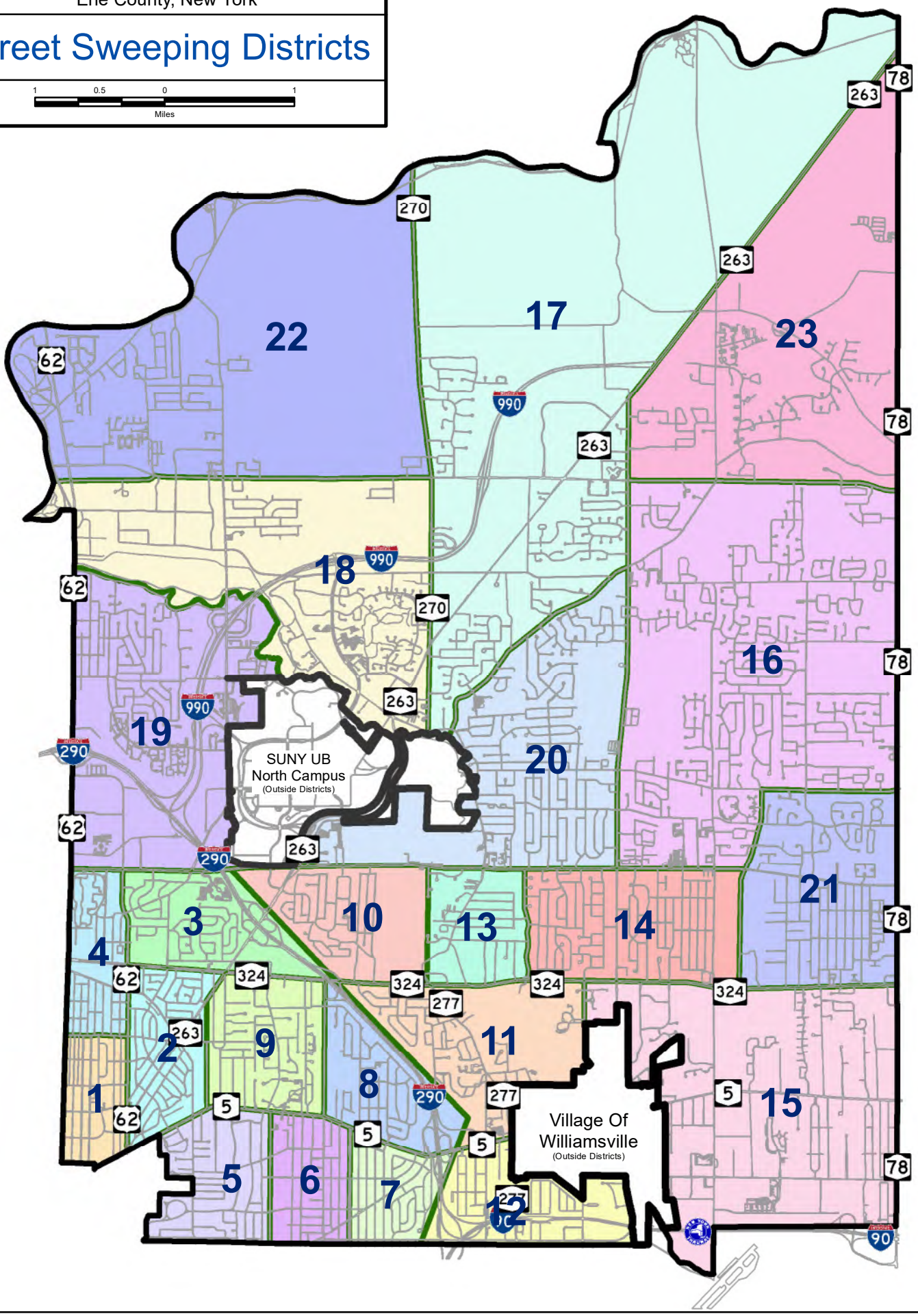
Town of Amherst

Erie County, New York

Street Sweeping Districts

1 0.5 0 1

Miles



TOWN OF AMHERST
Erie County, New York

Proposed Mosquito Treatment Areas 2018

1 0.5 0 1 2

Miles

Treatment Type:

- Adulticide
- Larvicide

N W E S

Tonawanda Creek Road
Campbell Boulevard
North French Road
Sweet Home Road
Millersport Highway
Hopkins Road
Youngs Road
SUNY UB North Campus
Maple Road
Niagara Falls Boulevard
Sheridan Drive
Main Street
Evans Street
Transit Road
Village Of Williamsville
Wehrle Drive
South Youngs Road
Buffalo - Niagara International Airport

Mapping Date: January, 2018

Brian H. Barnes, MS, GISP

Standard Operating Procedures –
Town of Amherst Highway Dept. Mosquito Control Program

January –

- File permits for larviciding and access to Great Baehre Swamp (Temporary Revocable Permit) with the NYS Dept. of Environmental Conservation (NYSDEC) as soon as possible after January 1st (TRP can be done in December); purchase order for larviciding permits needs to be turned in as soon as possible, as the NYSDEC will not supply the permits until payment is made; the NYSDEC does not send invoices out, so we need to submit copies of the permits we turn in to the Finance Dept. with the P.O. There is no cost for the Temporary Revocable Permit.
- Send NYSDEC Certified Pesticide Applicator reports as soon as possible after January 1st (due by February 1st) – reports should be completed in December.
- Beaver dam maps and permit request must be submitted to the NYSDEC by January 31st.
- Chemical bids to be awarded (January or February – process starts in early November).
- Begin mailing process for gaining access to properties throughout Amherst in first two weeks of January – approval of letter to residents, approval of and ordering of postcards for resident response, ordering (if needed) envelopes, update of Town parcels database from Computer Services/Assessor's Office, check on postage for mailing.
- Begin mailing in mid-January – approximately 17-20 working days to complete (project includes: copying letters; printing labels; adding postage to postcards; putting labels on letters, envelopes, and postcards; stuffing envelopes, sealing, and adding postage; shipment).
- Ongoing throughout month – trail-work.
- Double-check labels/MSDS sheets for larvicides and adulticides on DEC website.
- Check for Altosid/FourStar rebate – send out early January if eligible.

February –

- As postcards are returned, tally by zip code (mailing count template in Mosquito Control templates folder) and log approvals/disapprovals (in each year's mailing folder) on computer; also log comments from cards on computer.
- Once approximately 55-60% of postcards have been returned, prepare for second mailing (approximately 8-10 working days to complete) – this is usually ready to be sent out by late February/early March.
- First publication of public notification map in Amherst Bee per NYSDEC permit guidelines; to be published at least 10 days before start of season (best bet: last week of February/first week of March).
- Go through MSDS and labels for products used – check for updated copies online; makes copies for each larviciding crew.
- Ongoing throughout month – trail-work.

March –

- Finish second mailing.
- Continue to log postcard information as they are returned.
- Check with DEC on permit process.

- Prepare for and start spring larviciding – dependent on weather and approval time of permits from NYSDEC, can start as early as March 1st, but usually starts mid-March; NYSDEC must be notified 24 hours in advance of start.

April –

- Continue to log postcard information as they are returned; postcards will continue to trickle into the office throughout the spring and summer.
- Continue larviciding.

May –

- Wrap up spring larviciding program – first to second week of May (weather-dependent).
- Weather-dependent, begin checking areas for adult mosquitoes – adult surveillance ("trapping") begins approximately 7-10 days after initial hatch (approximately third week of May) – initial trapping done with CDC Light Traps, which attracts early season species *Oc. provocans*, *Oc. stimulans* and *Oc. canadensis* most readily.
- Prepare truck for adult spraying ("adulticiding") – weather-dependent, spraying can start late-May.
- Resident complaints/concerns handled by crew chief in charge in a timely fashion; spraying requests handled directly by spraying crew.
- Larvicide treatment of roadside catch-basins ("receivers") begins in mid- to late May (handled by crews as time allows) – receivers are considered a prime breeding ground for *Cx. pipiens-restuans*, the main vector of West Nile Virus; product used (Altosid XR) is an extended-release product that will optimally last 120-150 days.

June –

- Spraying continues.
- Surveillance continues – around June 1st, consider using CDC Gravid Traps and "receiver-style" gravid traps in conjunction with CDC Light Traps. Use of these traps gives us an indication of the presence of *Cx. pipiens-restuans* – the main species involved in the transmission of West Nile Virus (these trap types are highly attractive to the previously-mentioned species) – and other container-breeding species.
- Larvicide treatment of receivers continues.
- Resident complaints/concerns handled by crew chief in charge in a timely fashion; spraying requests handled directly by spraying crew.
- Second publication of public notification map in Amherst Bee is scheduled for first week of July (second publication per NYSDEC permit guidelines).

July –

- Spraying continues.
- Surveillance continues.
- Resident complaints/concerns handled by crew chief in charge in a timely fashion; spraying requests handled directly by spraying crew.
- Finish larvicide treatment of receivers when time allows (if not completed).
- Weather- and time-dependent, additional larviciding may be done in spring treatment areas (this only occurs in extremely wet seasons).
- Additional purchases of larvicides and adulticides if funds are available.

August –

- Spraying continues.
- Surveillance continues.
- Resident complaints/concerns handled by crew chief in charge in a timely fashion; spraying requests handled directly by spraying crew.
- Weather- and time-dependent, additional larviciding may be done (see July).

September –

- Spraying for the season winds down (by end of month).
- Surveillance continues.
- Resident complaints/concerns handled by crew chief in charge in a timely fashion; spraying requests handled directly by spraying crew.

Late September/October –

- Surveillance winds down – wraps up when overnight temperatures are consistently below 50°F.

October through December/early January – the following items need to be completed to finalize the season and begin the next season:

- Mid- to late October – request map updates if needed as well as physical and digital copies from the GIS Dept. at Engineering (lead time needed). Need (10-12) 11" x 17" physical copies for permits and a digital copy for the Amherst Bee publication for upcoming year; both copies need to be EXACTLY the same.
- Early November – contact Steve Bryan (purchasing agent for Highway) about chemical bids for following year (lead time needed) – ideally, would like to have these posted in early to mid-January and awarded by the end of February.
- Enter applicator record sheets onto the computer – these records are used to generate a usage report due to the NYSDEC by December 1st each year per permit guidelines.
- NYSDEC Certified Pesticide Applicator reports need to be completed (for shipment in early January) – due to DEC by February 1st.
- Look for SPDES permit invoice from DEC – usually arrives in October, must be paid ASAP (this is the ONLY permit the DEC sends an invoice for).
- In-house information needs to be collected for various reports and graphs – time sheets, purchases, weather information, number of complaints for the season, breakdown of products used, etc.
- Purchase additional postage for mailing in January (takes approximately two months for entire process to be completed), supplies for the office (check for labels, toner for printer for January mailing), and boots and gloves for crew with any remaining money in budget (as soon as possible).
- Site location and trap collection data needs to be compiled for use in written final report.
- Mapping and graphing projects – progressive West Nile Virus map in office; yearly maps for virus isolations, *Oc. japonicus* site locations, and trap site locations; graphs showing trap counts, species breakdown in traps, pesticide usage, weather information, man-hours used, yearly costs, etc.
- List updates – *Oc. japonicus* site locations (on-going), West Nile Virus and other virus sites (on-going), pools submitted for virus testing (annually).

- Written report summarizing season – this report is submitted to our contact at the NYS Department of Health and also used in-house.
- Update forms and computer applications – applicator report sheets, office message sheets, larviciding lists, species collection sheets, trap site rotation, trail-work list, database used to generate labels for January mailing.
- Update homeowner's pamphlet if necessary.
- Ongoing – trail-work.
- Prepare permits for following year – larviciding permits (annually – Bs and Methoprene, every five years – Bti), beaver dam permit/maps, Temporary Revocable Permit for the Great Baehre Swamp (can be sent in late December).

General –

- Surveillance and spraying crews should be two (2) people whenever possible – this is done as a precautionary measure: 1) CDC Light and Gravid Traps are often set in outlying, wooded areas (safety concerns); 2) "receiver-style" traps are difficult to set for one person as receiver grate needs to be lifted and trap set through the grate; 3) spraying operations sometimes take place in deep wooded areas (safety concerns); 4) two-person crews puts an extra set of eyes on the job at hand in case of resident complaints/concerns.

Occasional –

- Wetland permits renew every 10 years (next – January 2020).
- SPDES permit renews every five years, paid for annually (next – October 2018).
- DEC Business Agency registration renews every three years (next – September 2020).
- Larviciding permits: Methoprene and Bs due annually, Bti due every five years (next – renew in 2020)

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Mary Schwarz

Composting Road Kill

Road Kill — Current Situation

Over 25,000 dead deer and numerous carcasses of other animals, such as raccoon, coyote and fox are managed annually by the New York State Department of Transportation (NYSDOT). NYSDOT maintains and operates a 15,656 mile highway system of interstates, expressways and collectors which comprises about 15 percent of New York State's (NYS) 111,000 miles of highway. The 25,000 dead deer managed annually by NYSDOT do not account for deer killed on county and local roads that must be managed by local highway departments.

Current disposal practices include contracting with service providers to pick up and dispose of the animals, dragging animals further off the road or placing them in pits and depressions off roadsides. These methods are becoming less acceptable as rural areas become more populated and there is increased concern for environmental quality. Water quality can be compromised when animals decompose on or below ground and it could become a public health issue as pets and people may come in contact with the carcasses. Collection services are costly. Contractors are paid between $30 and $125 per deer for pick-up and disposal. Landfills often either do not accept or restrict carcasses. Disposal options are thus limited.

The Need: Consider Static Pile Composting

Composting provides an inexpensive alternative for disposal of dead animals in many cases. Composting animal carcasses is not new; chickens, pigs, calves, cows and even whales have been composted.

Passively aerated static pile composting in which piles are not turned and natural processes result in high temperatures is proving to be a viable method of managing carcasses. It is quick and simple, uses

equipment and materials used in daily road maintenance operations and is cost effective. This method helps protect ground and surface water by keeping the carcasses out of contact with water. Composting also reduces pathogens, nuisance to neighbors and odors in properly managed piles.

In many states, including NYS, mortality composting is a legal and accepted way of disposal. Composting and compost use can be accomplished in compliance with environmental regulations in many states, but check regulations before you start. The temperatures and microbial processes achieved during composting will kill or greatly reduce most pathogens, reducing the chance to spread wildlife disease. Properly composted material is an acceptable soil amendment for use where public contact is low, such as roadside projects.

Regulations

In NYS, composting of any material, except sludges, generated by a private or public entity on their own property is exempt from regulation. This includes road killed animals that are collected and composted on the agency's land. However, the agency is responsible for

Why Compost Road Kill?

- Pathogen kill occurs in thermophilic composts
- Can be done any time of the year, even when the ground is frozen
- Can be done using common highway equipment and readily available materials
- Relatively odor free
- All sizes of animals can be composted
- Relatively low labor and management needed
- Low cost

siting and implementing composting practices that do not cause air or water pollution or create a general nuisance. Use of the end product is not subject to regulation in NYS, however it is recommended that the product be used in applications with low public contact such as roadside revegetation projects so that an unknowing person would be unlikely to come into contact with the compost.

Carcass Handling

For proper handling of carcasses, and to ensure worker health and safety, please refer to NYSDOT Safety Bulletin on Handling Animal Carcasses (see Common Questions on page 8).

Composting

Static pile composting of dead deer, bear, moose, raccoon, fox and more is a practice that can fit into the daily operations of those responsible for road maintenance. Road managers have all the components for successful composting: trained personnel, equipment, wood chips and the animals killed by vehicles. The practice requires space to construct the compost piles and takes from four to six months for the animals to decompose and a year to make a useable end product. Many people are skeptical that road kill composting will manage road kill but become convinced when they see it working.

Static pile mortality composting is an easily managed technique. Air flow through the pile is key (Figure 1). By properly constructing the compost pile to allow for adequate natural aeration, mortality composting can be completed on intact animals with little or no turning. An adequate bed of chips beneath the pile and surrounding the carcasses is important. The process is effective if the animals are enveloped in chunky carbonaceous material such as wood chips (see CWMI fact sheet #5, Compost Bulking Materials: http://cwmi.css.cornell.edu/compostfs5.pdf). Make sure there are enough chips!

Timing

Mortality composting can be done at any time during the year. However, when you are learning how to compost it is best to start piles in forgiving weather. In southern climates it will not matter, but in climates that experience freezing temperatures, planning is important. Get piles started before the cold temperatures set in so you experience the learning curve when temperatures are warm and the pile is more likely to get hot. This will also set the process up to keep composting through the winter months since there will be heat in the pile to warm the carcasses and keep the composting process going. Piles can be started in the winter, but it may take months for the composting process to begin during warm weather.

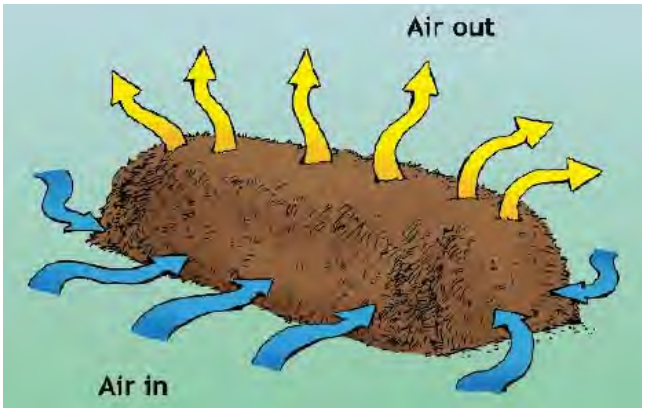


Figure 1. Natural air flow through compost windrow.

Road kill compost windrows in NYSDOT yard.

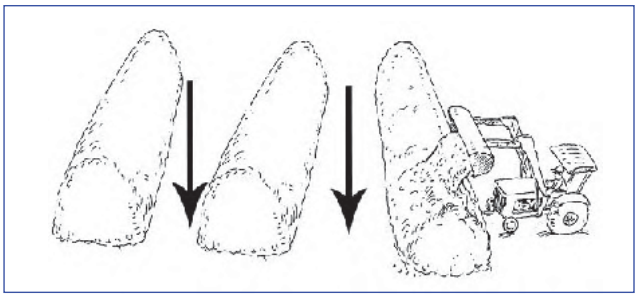


Figure 2. Pad slope.

Choosing a Compost Site

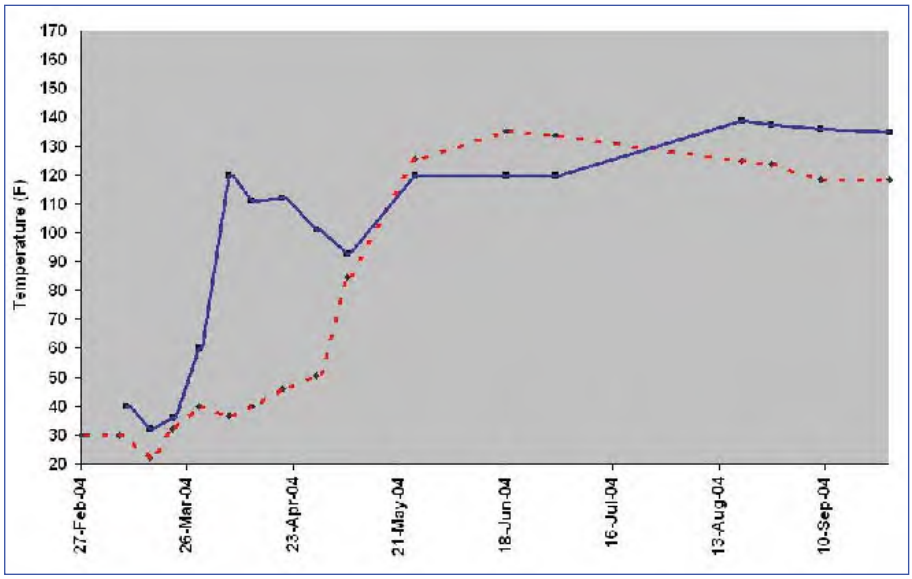
Highway yards are often good sites for composting if space allows. They have compacted or improved surfaces and public and animal access is often limited by fencing. NYSDOT personnel can contact their Maintenance Environmental Coordinator for advice.

Consideration of water flow is important. Sites should be selected that are unlikely to receive water running onto the site. They should be well away from surface water bodies and swales to reduce the chance that runoff from the site will enter surface water. Moderate to well-drained, hard-packed soils with gentle slopes are well suited. A slope of about two percent is desirable to prevent ponding of water. Steep slopes are not satisfactory because of potential problems with erosion, vehicular access, and equipment operation. Compost windrows should run up and down a minimal slope, rather than across, to allow runoff water to move between the piles rather than through them (Figure 2).

Siting is very important to help avoid neighbor complaints. Compost processing can generate odors, though these should be minimal in well-run operations. Odor is likely the main reason neighbors may complain about the operation. Determine the dominant wind direction, and if most air flow is directed toward populated areas, look for another site. In NYS, permitted compost facilities need to be at least 500 feet away from the closest dwelling. They cannot be sited in a floodplain or wetland, where the seasonal high groundwater is less than 24 inches from the ground surface, or where bedrock lies less than 24 inches below the ground surface, unless provisions have been made to protect water quality. Although road kill composting piles operated by highway personnel are not required to have New York State Department of Environmental Conservation (NYSDEC) permits, it is advisable to use existing regulations as guidelines and to keep piles as far as possible from neighbors.

Managing Frozen Deer--Don't Wait Until They Thaw!

In late February 2004, NYSDOT in Washington County had a pile of frozen deer that they had collected. They had heard about composting through the NYSDOT Maintenance Environmental Coordinator and Washington County Cornell Cooperative Extension and were interested in trying it. On a very cold day compost piles were built with the frozen deer. The pile temperature read 30° F and then dropped (see graph below). The insulation from the wood chips kept the deer frozen until May. When the outside temperatures warmed in April and May, the deer thawed in the piles and the compost process started. It is easier to place frozen deer in compost piles before they thaw and let nature work out the rest. When managing frozen piles, the process clock starts when the pile gets hot (110°).



Carcass Pile Temperature Curves, NYSDOT, Washington County.
Dotted line: pile built with frozen deer. Solid line: pile built with recently killed deer.

Potential Environmental and Biosecurity Risk of Dead Animal Disposal

Lowest Risk

♦ Composting - minimizes risk and produces a soil amendment.

♦ Landfill - acceptable if landfill will accept carcasses.

♦ Buried in a pit - carcasses "mummify" and do not break down (NYSDOT is allowed to bury 10 animals in a 3 foot deep pit above groundwater and at least 50 feet from a water body or water course).

♦ Carcass is left outside for scavengers or to decay. Because of the cost of disposal, it will be tempting to dispose of carcasses by leaving them to be scavenged. This is very risky from an environmental standpoint and encourages wild animals and house pets to come close to roads to become road-kill themselves.

♦ Placed in ravines and low areas to degrade - pollute ground and surface water.

Highest Risk

Adapted from NYS Agriculture Environmental Management (AEM) Tier II Worksheet on Farm Waste Disposal, Revised Sept 2000.

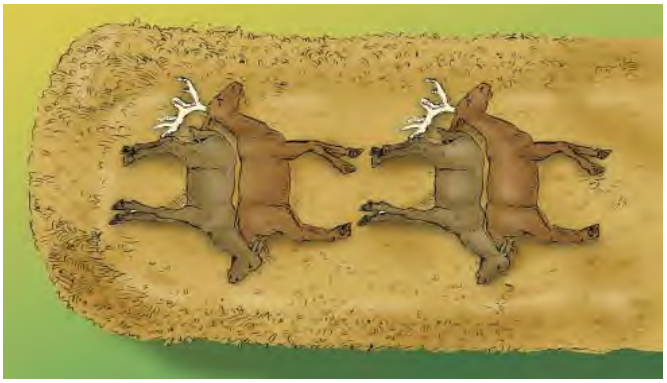
Key Points of Static Pile Carcass Composting

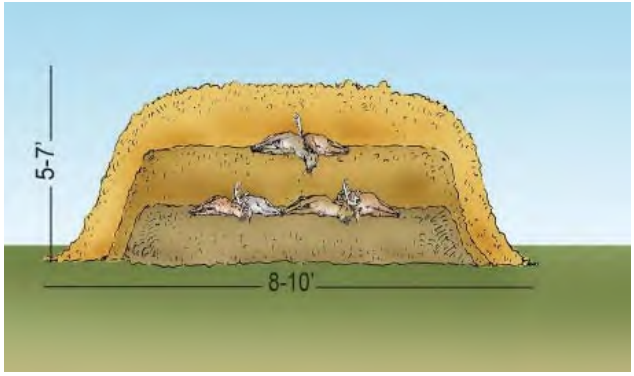
◆Select a site that is well drained and not subject to flooding. Depending on site topography, keep piles away from water courses, sinkholes, seasonal seeps or other landscape features that indicate the area is hydrologically sensitive (see CWMI fact sheet #6 Compost Pads: http://cwmi.css.cornell.edu/compostfs6.pdf).

◆Start with a hard surface made of asphalt, concrete or millings. Obtain a sufficient supply of fresh wood chips. Buy a compost thermometer. Have loader nearby. NYSDOT personnel should contact their Maintenance Environmental Coordinator.

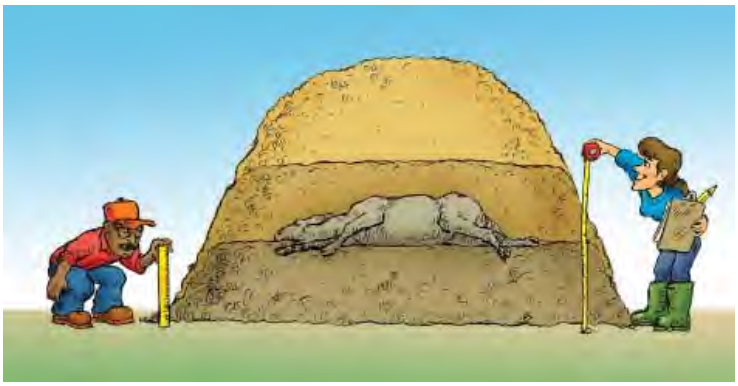
◆Lay a 24-inch bed of bulky, absorbent organic material; chips from tree chipping operators 2-inches or larger work well. Ensure the base is large enough to allow for a 2-foot clearance around the carcasses on all sides. To promote air flow, do not drive on the compost bed or pile.

◆Lay animal(s) in the center of the bed. Lance the stomach if the carcass is bloated. Lancing to avoid bloating and possible explosion of the body cavity is optional. Explosive release of gases can result in odor problems and it would blow the cover material off the composting carcass. Place animals as shown. When adding a new animal to the windrow, pull back some of the wood chips that are covering the previously placed animal and place the new animal near the others. Small animals should be layered similar to stair steps.





◆With animals under 150 pounds, there can be two layers of animals with a 12-inch layer of wood chips in between. This seems to create conditions where the carbon and nitrogen levels are in balance and provides the mass needed to reach thermophilic temperatures. Animals over 150 pounds will be difficult to layer and they have enough mass to compost when enveloped in one layer of wood chips.



◆When layering, position one layer of animals then cover with a 12-inch layer of wood chips, add another layer of animals and cover with 2 feet of wood chips. The finished height should be 5-7 feet high. A pile too wide or too high prevents good air flow.

◆With large animals (over 150 pounds or too heavy to lift to a second layer), cover a single layer of carcasses with 24 inches of wood chips.

◆Check temperatures to be sure the composting process is active. If carcasses are not frozen and the pile built properly, the temperatures should reach 120°-150° F (49°-65° C) in the first few days (Figure 3).

◆Let sit for 4-6 months after the last carcass is added and the pile has gotten hot (110° F), then check to see if the animal is degraded. If the compost process worked well you should find clean bones and some hair.

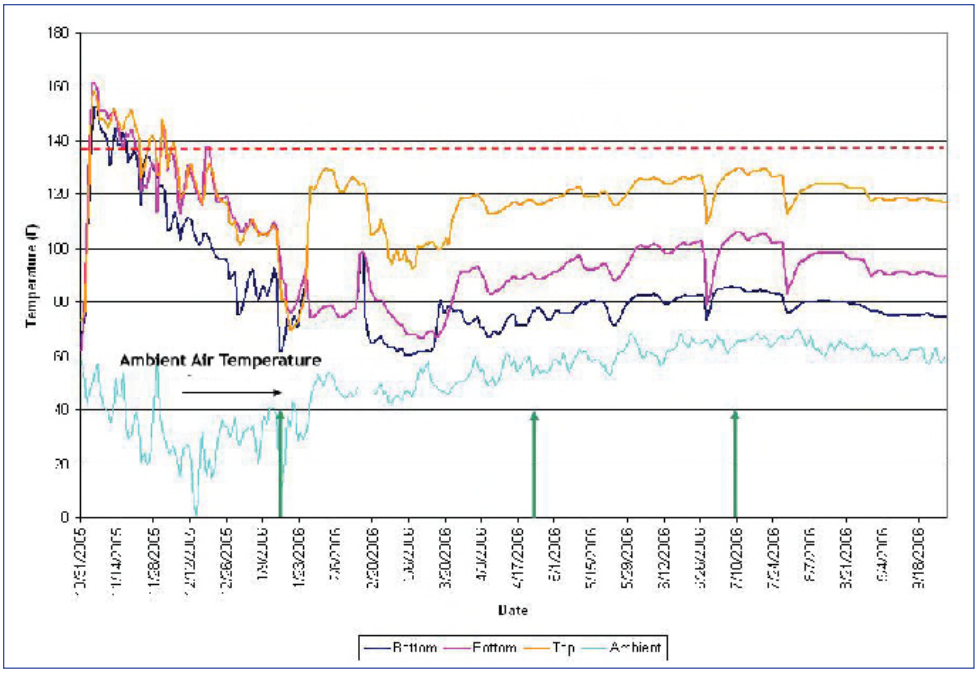


Figure 3. Pile temperatures over time.

◆Reuse the material as a bed for additional carcass compost piles or allow it to age for a year after the last carcass was added and the pile got hot. Then remove large bones and use the compost in roadside maintenance or establishment projects. The bones can be used in the base of the next pile. Keep track of the pile start date and when the last carcass is added and the pile has gotten hot (110° F).

◆Site cleanliness is an important aspect of composting; it deters scavengers, helps control odors and keeps good neighbor relations.

Signage on Compost Sites

Be sure to place signs on the piles so that those managing road kill know the difference between active piles, unused wood chips, and storage piles and to prevent people from taking the material for personal use. Also, use flags or signs to indicate when the last carcass was added and when the pile got hot (110° F).

Monitoring Compost Piles or Windrows

A log of temperature, odor, unwanted animal visitors, leachate (liquid that comes out of the pile), carcass fluid spills and other unexpected events should be kept as a record of the process (Table 1). Temperatures should be taken in several spots towards the center of the most recently constructed portion of the pile. Thermometers with a 3-4 foot probe are available and should be inserted close to the middle of the pile (Thermometer sources on page 11). The temperature log will allow the composter to see if sufficiently high temperatures have been reached and adjust the process if there is any problem.

Internal compost pile temperatures affect the rate of decomposition as well as the destruction of pathogenic bacteria, fungi and many seeds. The temperature at which active composting begins is 110° F (43° C). Compost pile temperatures depend on how much of the heat, produced by the microorganisms that are decomposing the organic matter, is lost through aeration or surface cooling. During periods of extremely cold weather, piles may need to be larger to minimize surface cooling. As decomposition slows, temperatures will gradually drop and remain within a few degrees of ambient air temperature (Troubleshooting Chart on page 10).

Thermometer showing elevated temperatures.

Odor can be an issue and compost piles are an easy target for complaints. If an odor event occurs, add an additional 12 inches of wood chips or finished compost on top of the pile to act as a biofilter (Figure 4).

Moving the Compost

Carcass piles should not be turned early in the process. Odor is a big issue and if liberated would be problematic. After a minimum of 4-6 months after the last carcass is added and the pile has gotten hot (110° F), turning is an option that may speed the curing process and further reduce pathogens. Piles shrink as they compost, so they can be combined for aging 4-6 months after the last carcass is added. This saves space and will help aerate the pile.

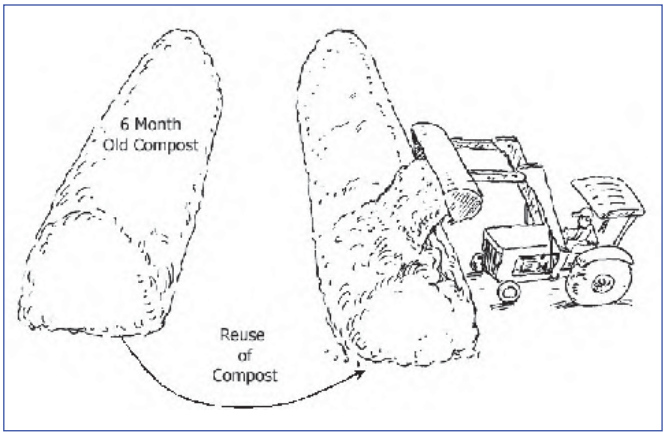


Figure 4. Aged compost or wood chips can be used as a biofilter to help contain orders.

Date	Pile Location	PileTemperature	# of Carcasses	Comments	Person Recording

Table 1. Sample chart.

Pathogen Control

Pathogens are organisms that have the potential to cause disease. There is a wide array of pathogens found in our environment and pathogens may be elevated in animal carcasses. There are currently no temperature or pathogen regulations for mortality composting in NYS.

Very little work has been done on documenting pathogen kill in composting of road kill. The Cornell Waste Management Institute conducted a research project with NYSDOT to assess pathogen levels in passively aerated static piles of composting deer. In this study, which included three research piles and three field piles throughout NYS, significant pathogen reduction was observed after a year.

For information on the CWMI/NYSDOT project, see: http://cwmi.css.cornell.edu/tirc/tirc.htm.

Chronic Wasting Disease

Chronic Wasting Disease (CWD) is a prion disease that is of concern in deer populations. There are no data to show whether CWD would be disabled in the composting process. Compost temperatures are not high enough to inactivate prions, but it is possible that microbial and enzymatic activity could have an effect on disabling prions. Disposal of prion-diseased animals and animals from the containment area identified by the NYS Department of Environmental Conservation (NYS DEC) in Oneida and Madison counties is restricted and composting is not an acceptable option at this time.

Roadside spreading of compost by NYSDOT.

Use of the End Product and Bones

Use of the material as the base for the next pile is recommended and can be done 4-6 months after the last carcass is added and pile has gotten hot (110° F). The remaining bones add structure to the base material for improved aeration. After a year of composting, the end product can also be used on roadside construction and maintenance projects. Testing to prove the safety of carcass compost materials would be a very expensive undertaking, and would require the testing of essentially every pile. It is, therefore, appropriate to limit the use of these products to the highway right-of-way where there is low human or pet traffic. Applying this compost to "table-top" crops directly consumed by people or distributing the compost material for public use is not recommneded. In addition, all compost materials may contain environmental microbes and decomposition products, such as mold spores, which may pose an inhalation, ingestion or contact risk to some individuals.

Common Questions

Q Are there worker health and safety issues?

A Proper precautions including personal protective gear, hygienic practices like hand washing and tick inspections will minimize risks.

More information on worker safety and health is available at: NYSDOT Safety Bulletin on Handling Animal Carcasses (https://www.nysdot.gov/portal/page/portal/divisions/operating/employee-health-safety/repository/sb-05-1.pdf). A NYSDOT Safety Bulletin on Carcass Composting is under development.

Workers wearing personal protective gear.

Q Are animals attracted to the windrows?

A If built properly, it is unlikely that animals and flies will be attracted to the piles. If the site is messy with blood and animals parts spilled on the ground, animals will be attracted and investigate further. Make sure that all parts of the carcasses in the piles are well covered.

Q Can road kill be composted in turned windrows?

A Turning is not recommended. Composting mortalities in turned piles requires more labor, machinery and management than static pile composting, thus increasing costs. It also provides the potential for release of odors if turned too early in the process.

Montana Experience: Montana started composting road kill in the spring of 2005. The facility handles mostly white-tailed deer from about 60 miles of highway in the Bitterroot Valley. One site near Victor has processed 1,800 deer in 21 months of operation. Another site in Clearwater Junction has handled 90 deer and 10 elk in two months of operation.

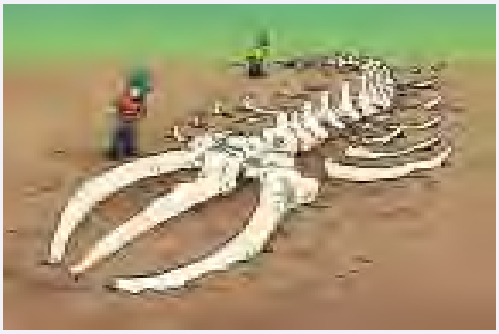
Source: Patrick Crowley

A Note on Fire Danger

As with any collection of woody waste, be aware of potential fire danger. In the compost piles, temperatures can reach 170° F and with that there can be spontaneous combustion. Carcasses supply a lot of moisture to mortality piles therefore the occurrence is unlikely. Take basic precautions by keeping piles not too wide or tall, separated from each other for fire department access and not driving machinery on piles or smoking around piles.

Elk and deer composting in Montana.

A Whale of a Tale!



In 1999, a Northern Right Whale in the North Atlantic became severely entangled in fishing equipment. About six months later the whale was found dead off the coast of New Jersey. The US Coast Guard hauled the 30,000 pound whale to shore. Since there are only approximately 300 individuals left, a call went out to museums to see if there was interest to preserve the whale in some way. The Paleontological Research Institute (PRI) in Ithaca, NY said they would take it. They cut some of the flesh and blubber off the carcass and hauled it on a flat bed truck to Ithaca. Behind PRI, next to the Cayuga Medical Center, the whale was laid in a large bed of horse manure and completely covered and left to compost in a large pile. The pile was left for six months (October-April) and gently uncovered so the bones could be tagged and turned by hand. The bones, bits of flesh and skin were again covered and left until October. With many volunteers, the bones were cleaned and weighed and ready to be assembled. If you are ever in Ithaca, come to PRI and visit the whale skeleton that was composted on their site. (Note: in one year the bones actually showed signs of pitting and degradation, for preservation purposes it could have come out of the pile a bit sooner.)

Source: Jean Bonhotal, Cornell Waste Management Institute

Troubleshooting Table

Symptoms	Problems	Recommendations
Pile fails to reach temperature.	Material is dense. Not enough air circulation.	Rebuild pile with more chunky carbon. *If it is in an odor sensitive area and the pile can not be moved, let process run its course and turn in 4-6 months.
	Pile too small.	To heat, pile needs to be greater than 4'x4'x4'.
	Frozen carcasses placed in pile.	May need to wait until warmer weather to reach temperature.
Insects and other animals attracted to pile.	Carcasses not covered well.	Cover carcass or residual well with carbon.
	Leachate puddling on pad surface.	Pad should have 1-2% slope and holes should be filled to avoid standing water.
Carcass uncovered.	May not have lanced rumen (stomach area) resulting in carbon cover material being thrown off the pile.	Lance rumen of bloated carcasses before animal is put into pile.
	May have insufficient cover.	Use plenty of wood chip cover material.
Standing water/surface ponding.	Inadequate slope.	Establish 1-2% slope with proper grading.
	Improper windrow/pile alignment.	Cover standing water with wood chips.
		Improve drainage, add an absorbent such as wood chips. Run windrows/ piles down slope, not across.
	Depressions in high traffic areas.	Fill and grade.
Odors	Ponded water.	Regrade the site to make sure there is no standing water.
	Insufficient cover.	Make sure piles are covered with at least 2 feet of wood chips.
		Add a cover blanket of fresh chips or finished compost.
	Anaerobic conditions.	Build piles that are not too wide or too dense so that air flow can keep the piles aerobic. DO NOT turn or disturb piles for 4 months (depending on the size of the animals). Turning can release odors, especially early in the process.

Other Mortality Composting Resources

(Fact Sheets, DVD/VHS and Posters are available at:
http://cwmi.css.cornell.edu/naturalrendering.htm)

Fact Sheets:

- Composting Road Kill (2007) – Jean Bonhotal, Ellen Z. Harrison, and Mary Schwarz
- Avian Influenza (coming in 2007)
- Composting Livestock Mortality and Butcher Waste (2002) – Jean Bonhotal, Lee Telega, and Joan Petzen

DVD/VHS:

- Composting Road Kill (2007) – 10-minute DVD produced by Insights International (http://hdl.handle.net/1813/7870)
- Composting Livestock Mortality and Butcher Waste (2002) – 20-minute VHS video (A Spanish DVD will be available soon). Produced by Insights International.

Posters:

- Composting Road Kill (2007)
- Key Points of Static Pile Butcher Residual Composting (2002) (English or Spanish)
- Key Points of Static Pile Carcass Composting (2002) (English or Spanish)
- Potential Environmental and Biosecurity Risk of Dead Animal Disposal (2002) (English or Spanish)

NYSDOT:

- NYSDOT Road Kill Composting Operation and Maintenance Manual (https://www.nysdot.gov/portal/page/portal/divisions/engineering/environmental-analysis/repository/deer_c_manual.pdf)
- NYSDOT Safety Bulletin on Handling Animal Carcasses (https://www.nysdot.gov/portal/page/portal/divisions/operating/employee-health-safety/repository/sb-05-1.pdf).
- NYSDOT Safety Bulletin on Carcass Composting (in press)

Suppliers — Temperature Probes

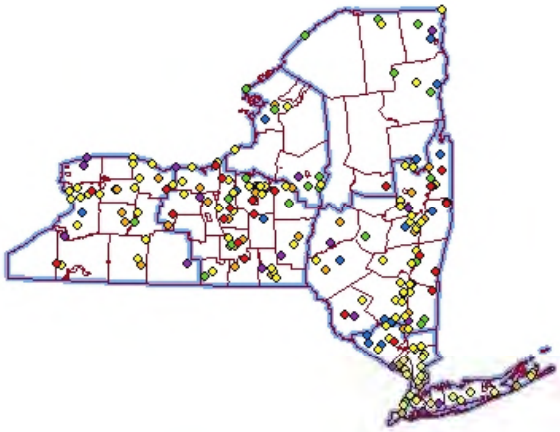
• Meriden Cooper Corporation	Meriden, CT 06450	203-237-8448
• Morgan Scientific	Haverill, MA 01832	508-521-4440
• Omega Engineering, Inc.	Stanford, CT 06907	203-359-1660
• Reotemp Instruments	Strong, ME 04983	800-648-7737
• Spectrum Technologies	Plainfield, IL 60544	800-248-8873
• Trend Instruments	Westchester, PA 19380	800-431-0002

CWMI Compost Fact Sheet Series

#1 Marketing Composts and Meeting Consumer Needs	(http://cwmi.css.cornell.edu/compostfs1.pdf)
#2 Regulation and Certification of Composts	(http://cwmi.css.cornell.edu/compostfs2.pdf)
#3 Improving and Maintaining Compost Quality	(http://cwmi.css.cornell.edu/compostfs3.pdf)
#4 Testing Composts	(http://cwmi.css.cornell.edu/compostfs4.pdf)
#5 Compost Bulking Materials	(http://cwmi.css.cornell.edu/compostfs5.pdf)
#6 Compost Pads	(http://cwmi.css.cornell.edu/compostfs6.pdf)
#7 Compost Equipment	(http://cwmi.css.cornell.edu/compostfs7.pdf)
#8 Composting Liquids	(http://cwmi.css.cornell.edu/compostfs8.pdf)

Maps and database of NYS Compost Facilities can be accessed at: http://compost.css.cornell.edu/maps/simple-search.asp.

NYS Compost Facilities Search



Select a Map to View Facilities:

- All Compost Facilities
- Yardwaste Compost Facilities
- Manure Compost Facilities
- Foodscrap Compost Facilities
- Biosolids Compost Facilities
- Compost Research Farms
- Small Scale Compost Demo Sites

Special Thanks to Contributors and Supporters

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Thanks to Cornell Cooperative Extension and the College of Agriculture and Life Sciences at Cornell for funding in support of CWMI compost work.

Illustrations by Bill and Colleen Davis, Artbear Pigmation Inc.

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

According to the current NYS SPDES MS4 General Permit for Stormwater Discharges (GP-0-15-003) Part VII.A.6.ii, covered entities, at a minimum frequency of once every three years, are required to perform and document a self-assessment of all municipal facilities and operations addressed by the SWMP.

Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

According to the current NYS SPDES MS4 General Permit for Stormwater Discharges (GP-0-15-003) Part VII.A.6.ii, covered entities, at a minimum frequency of once every three years, are required to perform and document a self-assessment of all municipal facilities and operations addressed by the SWMP.

Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

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Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

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Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

Oil filters are recycled.

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Advised to store baking soda - completed 11/15/17

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

minimal scrap with no contaminants

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

rooftop drains are tied into the storm sewers

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

According to the current NYS SPDES MS4 General Permit for Stormwater Discharges (GP-0-15-003) Part VII.A.6.ii, covered entities, at a minimum frequency of once every three years, are required to perform and document a self-assessment of all municipal facilities and operations addressed by the SWMP.

Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

Oil filters are recycled.

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Advised to store baking soda - completed 11/15/17

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

minimal scrap with no contaminants

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

rooftop drains are tied into the storm sewers

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

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Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

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Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
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Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
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Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
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Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

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May 2017

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SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

According to the current NYS SPDES MS4 General Permit for Stormwater Discharges (GP-0-15-003) Part VII.A.6.ii, covered entities, at a minimum frequency of once every three years, are required to perform and document a self-assessment of all municipal facilities and operations addressed by the SWMP.

Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

Oil filters are recycled.

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Advised to store baking soda - completed 11/15/17

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

minimal scrap with no contaminants

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

rooftop drains are tied into the storm sewers

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

According to the current NYS SPDES MS4 General Permit for Stormwater Discharges (GP-0-15-003) Part VII.A.6.ii, covered entities, at a minimum frequency of once every three years, are required to perform and document a self-assessment of all municipal facilities and operations addressed by the SWMP.

Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Municipal Facility/Operation Assessment Form:

Public Works/Highway Department & Parks Department Facilities

Inspections must be conducted by a person with the knowledge and skills to assess conditions and activities that could impact stormwater quality at the facility, and evaluate the effectiveness of best management practices required by the SPDES MS4 General Permit.

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Facility Name:	Amherst Police Department, Town Court and Senior Center
Address:	400 John James Audubon Parkway
Completed by:	Vaishali Reberholt & Mary Rossi
Date:	10/24/17 **Date of Previous Self-Assessment:** -
Weather Conditions:	60 and cloudy

SWPPP	**Yes**	**No**	**N/A**
Is there a completed SWPPP available for this facility?			✔
Does the facility have MS4s that discharge to any surface waters?		✔	
Comments:			

Good Housekeeping	**Yes**	**No**	**N/A**
Are paved surfaces free of sediment and debris?	✔		
Date the paved area was last swept or vacuumed.	once a month		
Do outdoor waste receptacles have covers?	✔		
Are the waste receptacles emptied on a regular basis?	✔		
Are there signs of leaks, contaminants or overfilling at the waste receptacle area?		✔	
Are the following facility areas free of accumulated sediment, debris, contaminants and spills?			
Salt storage areas	✔		
Container storage areas	✔		
Maintenance areas	✔		
Staging areas			✔
Material stockpile areas			✔
Comments: Minimal salt storage			

Vehicle and Equipment Areas	Yes	No	N/A
Are vehicles parked indoors or under a roof?	✔	✔	
Are vehicles/equipment washed in only designated areas?			✔
Are vehicles washed regularly to remove contamination and prevent them from polluting stormwater?	✔		
Is all wash water treated in an oil water separator prior to discharge?			✔
Is all wash water captured and treated in a sanitary system?			✔
Comments: All vehicles are washed at a vehicle washing facility			

Vehicle/Equipment Maintenance	Yes	No	N/A
Is equipment stored under shelter or elevated and covered?	✔	✔	
Are fluids drained over a drip pan or pad?	✔		
Are funnels or pumps used when transferring fluids?	✔		
Are waste rags and used absorbent pads disposed of properly?	✔		
Are any vehicles and/or equipment leaking fluids?		✔	
Are drip pans immediately placed under leaks?	✔		
Are materials, equipment, and activities located so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas)?	✔		
Comments:			

Fueling Areas	Yes	No	N/A
Is fueling performed under a canopy or roof?	✔		
Are spill cleanup materials available at the fueling area?	✔		
Are breakaway valves used on fueling hoses?	✔		
Is the fueling handle lock disconnected so the operator must attend the fueling?	✔		
Is stormwater runoff from fueling area treated in an oil/water separator?		✔	
Is the fueling automatic stop inspected regularly to ensure it is working properly?	✔		
Are all fuel deliveries monitored?	✔		
Comments:			

Salt Storage	Yes	No	N/A
Is salt stored in a salt storage building or under a roof?	✔		
Are controls in place to minimize spills while adding or removing material from the pile?			✔
Are salt spills cleaned up promptly?			✔

Is overflow and tracked salt removed promptly from loading areas?			✔
Is stormwater draining away from the salt pile directed to a vegetated filter area?			✔

Comments:

minimal salt storage

Fluids Management	**Yes**	**No**	**N/A**
Are all drums and containers of fluids stored with proper cover and containment?	✔		
Are fluids stored in appropriate containers and/or storage cabinets?	✔		
Are all fluids kept in original containers or labeled in a manner that describes the contents adequately?	✔		
Are Material Safety Data Sheets (MSDS/SDS) readily available?	✔		
Are all containers that are stored free of leaks or deposits?	✔		
Are containers of product inspected regularly?	✔		
Is used oil and antifreeze stored indoors and/or on spill containment pallets?	✔		
Is used oil and antifreeze properly disposed of or recycled?	✔		

Comments:

Oil filters are recycled.

Lead-Acid Batteries	**Yes**	**No**	**N/A**
Are lead-acid batteries stored indoors on spill containment pallets or in bins?	✔		
Are intact batteries stored on an acid resistant rack or tub?	✔		
Are cracked or leaking batteries stored in labeled, closed leak-proof containers?	✔		
Is the date each battery was placed into storage recorded?	✔		
Are batteries stacked more than 5 high?		✔	
Are batteries inspected regularly for leaks?	✔		
Are acid neutralizing agents, such as baking soda, available in case of leaks?		✔	
Are batteries stored longer than 6 months before recycling?		✔	
Are lead cable ends left on the batteries to be recycled?			✔

Comments:

Advised to store baking soda - completed 11/15/17

Spill Prevention and Control	**Yes**	**No**	**N/A**
Are vehicles inspected daily for leaks?	✔		
Is spill control equipment and absorbents readily available?	✔		
Are emergency phone numbers posted in conspicuous areas?	✔		
Are material safety data sheets (MSDS/SDS) readily available?	✔		
Are spills contained and cleaned up immediately?	✔		

Comments:

General Material Storage Areas	Yes	No	N/A
Are leaking or damaged materials stored inside a building or another type of storm resistance shelter?			✔
Are all material stockpiles within containment structures (e.g. concrete barriers, earthen berms) or stored in a manner that does not allow discharge of impacted stormwater?			✔
Are used fuel tanks and other scrap metal and parts drained of fluids and stored under cover?			✔
Are outdoor containers covered?			✔
Are piles of spoils, asphalt, debris, etc. stored under a roof or cover?			✔
Are spills of material or debris cleaned up promptly?			✔
Are used tire storage piles placed away from storm drains or conveyances?			✔
Are tires recycled frequently to keep the number of stored tires manageable?			✔

Comments:

minimal scrap with no contaminants

Stormwater Management	Yes	No	N/A
Are employees trained annually on the proper procedures, specific control measures and documentation requirements of stormwater management at the facility/operation?		✔	
Is uncontaminated stormwater prevented from mixing with process areas?			✔
Are BMPs and treatment structures working as designed?			✔
Are BMPs and treatment structures free from debris buildup or overgrown vegetation that may impair function?			✔
Catch basins should be cleaned when the depth of sediment or debris reaches 50% of the sump depth. Based on this, do any catch basins need to be cleaned?		✔	
Are berms, curbing or other methods used to divert and direct discharges adequate and in good condition?			✔
Are rooftop drains directed to areas away from pavement?		✔	

Comments:

rooftop drains are tied into the storm sewers

Erosion and Sediment Controls	Yes	No	N/A
Are soil stabilization measures (e.g. seed and mulch, rolled erosion control products) considered in areas that have the potential for significant soil erosion?			✔
Are natural buffers maintained around surface waters?	✔		

Are flow velocity dissipation devices in place at stormwater outfalls and channel outlets (rock riprap, stone check dams, concrete baffles)?			✔
Do controls conform to the NYS Standards and Specifications for Erosion and Sediment Control (2016), or equivalent?			✔
Comments:			

Observation of Stormwater Discharges from the Site	**Yes**	**No**	**N/A**
Is the discharge free of floating materials, visible oil sheen, discoloration, turbidity, odor, foam or any other signs of contamination?	✔		
Is process water commingling with stormwater or entering storm drains?		✔	
Were any illicit discharges observed during the inspection? Illicit discharges include wastewater, detergents, paint, de-icing materials (in excess of what is applied to control ice at the facility), oil, grease, antifreeze, garbage, chemicals, pesticides, and fertilizers.		✔	
If illicit discharge(s) are discovered, describe below, and initiate procedures to eliminate the illicit discharge.			✔
Comments:			

Corrective Actions and Comment

Describe Inspection findings and if necessary, the corrective actions taken.

oil water separator cleaned 3/2/17

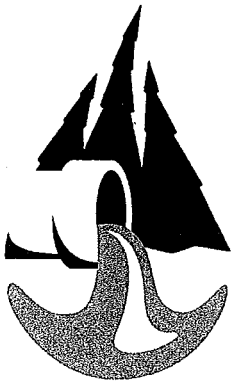
Inspector Signature: **Date:** 10/24/17

Following completion of the Environmental Self-Assessment Checklist, a visual inspection of both indoor and outdoor operations areas should be conducted to document stormwater pollution prevention practices in place and to identify opportunities for improvement. The outdoor visual inspection should specifically address operations/activities that may contaminate stormwater runoff during rain/snowmelt events.

May 2017

Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practices and Inspection Checklists



WNY
Stormwater
Coalition

Erie County Department of Environment and Planning
Division of Environmental Compliance Services

Pollution Prevention/Good Housekeeping for Municipal Operations: Best Management Practices and Inspection Checklists

Table of Contents

Introduction

This group of (18) Pollution Prevention/Good Housekeeping Best Management Practices and Inspection checklists that relate to municipal operations and their potential effects on stormwater have been developed and assembled by a group of municipal officials that have a wealth of experience pertaining to operations and maintenance within municipalities. The information that has been formulated as guidance material for implementation of the Stormwater Phase II Municipal Separate Storm Sewer System Permit **has not** been designed to be comprehensive in all aspects of each topic. Municipalities should be "flexible" in their use of this information as pertains to their own unique municipal operations.

Reference Information

Many sources of information concerning stormwater are available. The sources listed below were used to develop the Guidance Document:

New York State Dept. of Transportation – (http://www.dot.state.ny.us)
Use the search function to locate the Environmental Handbook for Transportation Operations document and other related information.

Cornell University - (http://www.cornell.edu)
The Department of Horticulture has information pertaining to pest control, landscaping and lawn care

U.S. Environmental Protection Agency - (http://www.epa.gov)
National Menu of Best Management Practices (BMPs) for NPDES Storm Water Phase II document:
http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=6

California Stormwater BMP Handbook - http://www.cabmphandbooks.com/Municipal.asp

Glossary of Terms

Catch Basin – A unit that is installed to capture and retain debris, particulate matter, or other solid materials, but allows stormwater to "flow through" to its discharge location

Drip Irrigation –Irrigation via a perforated device (i.e. hose) that allows for a slow watering method with reduced evaporation and runoff losses

Hydraulic – Referring to water

(IPM) Integrated Pesticide Management – An environmentally sensitive approach to pest management (**not** elimination) that uses the least toxic control method – a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools

Loading – Term used in conjunction with *sediment* and *hydraulic* to describe excessive amounts (of the term that is described)

Naturescaping – An alternative landscaping technique that incorporates native plants and creates beneficial wildlife habitat – also conserves water and energy, reduces soil/water pollution

Oil/Water Separator – A unit that is installed "in line" to a wastewater discharge pipe which is devised to capture petroleum derived materials that float on water

Oxygen demand – Depletion of dissolved oxygen in water caused by decomposition of chemical or biologic matter

Pesticides – Products that are toxic and are used to kill pests - can be classified as insecticides, herbicides, rodenticides, biocides, aquacides

POTW – Publicly Owned Treatment Works - - a municipal wastewater treatment plant

Scupper – An opening (in a bridge deck) to allow water drainage – it does not capture debris, particulate matter, or other solid materials

Sediments - Small particles of matter that settle to the bottom of a body of water

Silt – Material consisting of mineral soil particles ranging in diameter from 0.02 millimeters to 0.002 millimeters

Stormwater - Rainwater runoff or snow melt waters – these waters can interact with different types of materials, transporting contaminants to surface waters (i.e. streams, creeks, rivers)

Toxicity –The relative degree of being poisonous

Xeriscaping – An alternative landscaping technique that incorporates slow growing plants to conserve water and reduce yard trimmings

Zero input, low input (lawns) - have minimal need for care (i.e. addition of fertilizers/pesticides, water, etc.)

Landscaping and Lawn Care
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Landscaping activities include vegetation removal; herbicide application; fertilizer application; watering; and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. These maintenance practices have the potential to contribute herbicides, fertilizers, landscape waste and other lawn care chemicals to receiving waters via the storm sewer system.

2. **Pollutants/Environmental Issues of Concern**

- Nutrients
- Silt/Sediment
- Floatables
- Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Purchase only enough lawn care products necessary for one year – store properly to avoid waste generation (spills, leaks, product deterioration)
- Use slow release or naturally derived (organic) fertilizers
- Develop zero input/low input lawns
- Consider alternative landscape techniques (i.e. naturescaping, xeriscaping)
- Use drip irrigation techniques for landscaping
- Train employees in the proper application of lawn care products

4. **Inspection Procedures**

- Routinely monitor lawns to identify problems during their early stages
- Identify nutrient/water needs of plants, inspect for problems by testing soils

5. **Maintenance Procedures**

- Minimize/eliminate fertilizer application
- Leave grass clippings on lawn, or mulch clippings into lawn
- Limit watering as necessary to supplement rainwater (1 inch/week is adequate)
- Mow with sharpened blades set high (3 inches) – remove only the top 1/3 of the leaves
- Water plants in the early A.M.
- Plant trees away from sewer lines or other underground utilities

6. **Advisory**

- Refer to the Cornell University website (Department of Horticulture)

Landscaping and Lawn Care Inspection Checklist

Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Grass/plant condition	Wilted/brown leaves	Yes No	❑ Add water
General area	Barren soils	Yes No	❑ Re-seed, cover with hay or burlap to prevent erosion

Date of Inspection _____ Name_____

Frequency _____

Spill Response and Prevention
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Spills and leaks, if not properly controlled, can adversely impact storm sewer systems and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

2. **Pollutants/Environmental Issues of Concern**

- Nutrients
- Metals
- Oil and Grease
- Organics
- Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Keep all materials properly stored in closed, labeled containment systems
- Use secondary containment systems where appropriate
- Obtain spill recovery materials for immediate response to a spill

4. **Inspection Procedures**

- Inspect secondary containment systems, oil/water separators periodically
- Inspect containers for leaks, areas near storm drain inlets and outlets, floor drains for indications of spills

5. **Maintenance Procedures**

- Use reusable spill clean up materials (sponge mops, oil absorbent pads, etc.)
- Pump out oil water separators as needed
- Protect drains with oil absorbent materials
- Clean out receivers on regular schedule
- Remove spilled salt from salt loading area

6. **Advisory**

- Report petroleum spills (as necessary) to the NYSDEC (851-7220 or 1-800-457-7362)
- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Spill Response and Prevention Inspection Checklist

Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary		Action
Products/waste storage areas	Uncovered/deteriorating containers Materials spilled, leaks	Yes	No	❑ Cover/replace ❑ Clean up
Equipment storage areas	Fluid leaks	Yes	No	❑ Clean up
Secondary containment systems	Structural deterioration Leakage of fluids	Yes	No	❑ Repair/replace ❑ Clean up
Oil/water separators	Excessive amounts of contaminants	Yes	No	❑ Pump out
Floor drains, storm receiver inlets and outlets	Accumulation of contaminants	Yes	No	❑ Clean up/remove

Date of Inspection _____ Name_____

Frequency _____

Pest Control
Pollution Prevention/Good Housekeeping Practices

1. **Description**

   Pest control activities typically involve a combination of chemical (pesticide) application and mechanical methods (traps). Pesticide is a composite term that includes all chemicals that are used to kill or control pests: insecticides (insects), fungicides (fungi), nematocides (nematodes), and rodenticides (vertebrate poisons). Pesticides are toxic to aquatic organisms and animals.

2. **Pollutants/Environmental Issues of Concern**
   - Organics

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**
   - Purchase only enough pesticides necessary for one year – store properly to avoid waste generation (spills, leaks, product deterioration)
   - Minimize/eliminate pesticide application, use lowest toxicity pesticides
   - Do not apply pesticides immediately prior to or during rain events
   - Ensure that employees are properly trained and certified in pesticide application techniques and safety
   - Develop zero input, low input lawns
   - Eliminate food, water, and shelter for pests
   - Adopt integrated pest management (IPM) techniques
   - Adopt alternatives to pesticides options (i.e. use mechanical traps, physical methods for removal, or biological controls)

4. **Inspection Procedures**
   - Identify pests – are levels acceptable or must action be taken to control pests?
   - Inspect pesticide inventory – properly dispose of out-of-date pesticide materials

5. **Maintenance Procedures**
   - Inspect pest traps (i.e. bait boxes) regularly – remove (and properly dispose of) dead pests
   - Block/eliminate access to buildings/structures for pests
   - Remove pests (insects) by hand

6. **Advisory**
   - Abide by NYSDEC regulations (6NYCRR Part 325) pertaining to this topic
   - Refer to the Cornell University website (Department. of Horticulture)

Pest Control Inspection Checklist

Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Pesticide storage area	Excessive amounts of pesticides Spilled pesticides Empty containers No security or access control	Yes No	❑ Reduce volumes, implement IPM ❑ Clean up ❑ Properly dispose ❑ install
Application equipment	Improper amounts of pesticides applied	Yes No	❑ Properly calibrate
Floor	Drain system Not curbed around perimeter No impermeable surface	Yes No	❑ Eliminate ❑ Install curbing ❑ Install impermeable surface

Date of Inspection _____ Name_____

Frequency _____

Pet Waste Collection
Pollution Prevention/Good Housekeeping Practices

1. **Description**

   Improperly disposed pet waste can be transported into storm sewer systems via runoff where it can elevate bacteria levels and contaminate water. Decaying pet waste consumes oxygen; low oxygen levels are harmful to fish and other aquatic life. Nutrients in pet waste may increase algae and weed growth in waterbodies, which consumes oxygen as they decompose, further harming aquatic life.

2. **Pollutants/Environmental Issues of Concern**
   - Nutrients
   - Bacteria
   - Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**
   - Municipal animal shelters
     - House all animals in an enclosed, roofed structure
     - Identify/utilize "permitted" waste disposal facilities for animal wastes
   - Municipal Properties
     - Pet waste bag stations/waste receptacles
     - Pooper scooper law
     - Pet waste education (signage, printed material)

4. **Inspection Procedures**
   - Inspect shelter regularly for necessary cleanup/removal of wastes
   - Inspect grounds for excessive amounts of pet waste

5. **Maintenance Procedures**
   - Remove animal wastes on a regular basis
   - Maintain pet waste bag stations/waste receptacles

6. **Advisory**
   - None

Pet Waste Collection Inspection Checklist

Facility Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Animal housing area	Excessive amounts of waste Dead animals	Yes No	❑ Remove/rinse to floor drain (to sanitary sewer) ❑ Bag and remove
Facility's floor drain	Discharges directly to environment	Yes No	❑ Connect to sanitary sewer
Grounds	Excessive amounts of pet waste	Yes No	❑ Remove pet waste
Pet waste bag stations	Empty	Yes No	❑ Service bag station

Frequency of Inspection _____ Name_____

Date _____

Septic System Management
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Septic systems provide on-site wastewater treatment. Proper use and maintenance of septic systems is imperative to protect water quality. A failing septic system can discharge untreated/inadequately treated sanitary waste to waterbodies or cause wastewater to pond on surfaces above the system. Ponding of inadequately treated wastewaters (on the surface of a leach field or a sand filter system) can pollute stormwater runoff. Failing septic systems can increase bacteria levels and oxygen demand of receiving waters. Excessive amounts of disinfectant (i.e. chlorine) applied to a wastewater discharge from a sand filter system can be toxic to aquatic plants and animals.

2. **Pollutants/Environmental Issues of Concern**

- Bacteria
- Oxygen demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Divert stormwater runoff (i.e. from roof drains) away from septic system
- Divert groundwater (sump pump) discharges away from septic system
- Locate swimming pools away from the septic system (at least 20' from the septic tank, at least 35' from the closest edge of the leach field or sand filter system)
- Prevent problems caused by vegetation - growth of woody plants on the system
- Prevent hydraulic loading - "spread out" the use of devices which use large volumes of water across the entire day – clothes washing, dish washing, bathing
- Minimize water usage by using flow restrictors on potable water distribution devices (i.e. shower heads, water faucets); repair leaky fixtures

4. **Inspection Procedures**

Physical evidence:

- "Back up" of wastewater in sewer lines
- Sewage odors
- Leach field/sand filter - wetness/ponding on surface
- Overflow of wastes from system components
- Heavy vegetation (woody plants) growth on system components

5. **Maintenance Procedures**

- "Pump out" septic tank as needed (NYSDEC recommends once/year)
- Mow surface vegetation regularly
- Prevent "heavy equipment" from driving on top of the system components

6. **Advisory**

- Obtain site plan/site sketch of system, and retain for reference.

Septic System Management Inspection Checklist

Unit ID:_____NYSDEC Permit #_____ Location_____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Septic tank cover	Broken/cracked?	Yes No	❑ Replace
Distribution box	sewage overflowing, distribution box level?	Yes No	❑ Clean out ❑ Re-level
Leach field or sand filter	sewage on surface, odors, excessive vegetation growth	Yes No	❑ Clean out distribution lines ❑ Cut vegetation
Disinfection system (if present)	Operating improperly	Yes No	❑ Check/repair equipment
Outfall	Improper chlorine residual	Yes No	❑ Perform monitoring, sampling/analysis as permit requires

Frequency of Inspection _____ Last pump out (date) _____

Date of Inspection _____ Name_____

(If unit is a HOLDING TANK, pump out schedule)_____

Vehicle/Equipment Maintenance
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Vehicle or equipment maintenance and repair is potentially a significant source of stormwater pollution, due to the use of materials and wastes created that are harmful to humans and the environment. Engine repair and service (e.g. parts cleaning), replacement of fluids (e.g. oil change), and outdoor equipment storage and parking (dripping engines) can impact water quality if stormwater runoff from areas with these activities occurring on them becomes polluted. Trace amounts of metals/hydrocarbons are found in materials (i.e. fuels, antifreeze, batteries, motor oils, grease, parts cleaning solvents) that are typically used in maintenance operations.

2. **Pollutants/Environmental Issues of Concern**

- Metals
- Oil and Grease
- Organics
- Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Conduct maintenance work indoors – if work must be performed outside, guard against spillage of materials that could discharge to storm receivers
- Seal floor drains that discharge directly to the environment, if possible
- Initiate single purpose use of vehicle bays – dedicate one (or more) bays that have no (or sealed) floor drains for repairs/maintenance
- Clean up spilled materials immediately, using "dry" methods
- Install pretreatment systems (oil/water separators) where necessary in sewer lines to capture contaminants (oil, grit), and maintain as needed
- Never leave vehicles unattended while refueling
- Identify appropriate recycling/disposal options for wastes

4. **Inspection Procedures**

- Inspect (for maintenance purposes) floor drain systems, oil/water separators
- Monitor "parked" vehicles/equipment for leaks

5. **Maintenance Procedures**

- Maintain clean work area – remove contaminants from floors, drains, catch basins, using "dry" methods
- Use non-hazardous cleaners; use non-chlorinated solvents
- Repair or replace any leaking containers
- Use steam cleaning /pressure washing instead of solvent for parts cleaning
- Store waste fluids in properly capped, labeled storage containers
- Store batteries in leak-proof, compatible (i.e. non reactive) containers
- Rinse grass from lawn care equipment on permeable (grassed) areas
- Protect against pollution if outside maintenance is necessary (cover storm receivers, use secondary containment vessels, etc.)

6. **Advisory**

- Report petroleum spills (as necessary) to the NYSDEC (851-7220 or 1-800-457-7362)
- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Vehicle/Equipment Maintenance/Storage Area Inspection Checklist

Unit ID: _____ Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Truck/equipment	Leaks/spills	Yes No	❑ Clean spill, repair leak, capture fluids in drip pan
Salt/sand spreader	Improper amounts of product applied	Yes No	❑ Recalibrate
Lawn care equipment	Improper operation	Yes No	❑ Inspect/repair

Date of Inspection _____ Name _____

Frequency _____

Vehicle/Equipment Washing
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Wastewater from vehicle and equipment washing performed outdoors or in areas where wash water flows onto the ground can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to stormwater runoff.

2. **Pollutants/Environmental Issues of Concern**

- Sediment
- Nutrients (biodegradable soaps)
- Floatables
- Metals
- Organics (petroleum based wastes)
- Oxygen Demand
- Hydraulic loading

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Initiate single purpose use of vehicle bays - dedicate only one bay for washing (with floor drain system)
- Steam clean (without soap) where wastes can be captured for proper disposal (i.e. oil/water separator)
- Perform cleaning with pressurized cold water, without the use of soaps, if wastewaters will flow to a **storm sewer** system
- Use minimal amounts of biodegradable soaps **only** if wastewaters will discharge to a **sanitary sewer** system
- Rinse lawncare equipment on grass/vegetated areas
- Rinse with hoses that are equipped with automatic shutoff devices and spray nozzles

4. **Inspection Procedures**

- Inspect floor drain systems regularly - use only those that discharge to a sanitary sewer, identify the need for cleaning of catch basins, oil/water separators

5. **Maintenance Procedures**

- Map storm drain locations accurately to avoid illegal discharges
- Perform steam cleaning or pressure washing where wastes can be captured for proper disposal
- Take precautions against excess use of/spillage of detergents
- Sweep washing areas frequently to remove solid debris.

6. **Advisory**

- Require all facilities to connect floor drain systems to sanitary sewers (if available)
- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Vehicle/Equipment Washing Area Inspection Checklist

Facility location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Designated "wash only" area	No impermeable pad with wastewater collection system	Yes No	❑ Designate/construct area
Wastewater discharge location	Does not flow to either a holding tank or to sanitary sewers	Yes No	❑ Properly relocate discharge
Washing/degreasing compounds	Solvent based	Yes No	❑ Change to biodegradable products
Floor drain sump	Nonexistent	Yes No	❑ Install and maintain sump, remove debris
Oil/water separator	Excessive oils/sludges	Yes No	❑ Clean out contaminants
Catch basin	Non existent, accumulation of contaminants	Yes No	❑ Install/maintain catch basin

Date of Inspection _____ Name_____

Frequency _____

Roadway and Bridge Maintenance
Pollution Prevention/Good Housekeeping Practices

1. Description

Streets, roads, and highways are significant sources of pollutants in stormwater discharges. Operation and maintenance (O&M) practices, if not conducted properly, can contribute to the problem. Stormwater pollution from roadway and bridge maintenance should be addressed on a site-specific basis. Use of the procedures outlined below that address street repair, bridge and structure maintenance and unpaved roads will reduce pollutants in stormwater.

2. Pollutants/Environmental Issues of Concern

- Sediment (particulate matter)
- Floatables
- Oil and Grease
- Organics
- Oxygen Demand

3. Best Management Practices (BMP's): Identify & Select as Appropriate

- Incorporate preventive maintenance and planning for operations & maintenance activities
- Pave in dry weather only
- Stage road operations and maintenance activity (patching, potholes) to reduce spillage. Cover catch basins and manholes during this activity
- Clean up fluid leaks or spills from paving equipment/materials immediately
- Sweep and vacuum paved roads and shoulders to remove debris and particulate matter
- Maintain roadside vegetation; select vegetation with a high tolerance to road salt
- Restrict the use of herbicides/pesticide application to roadside vegetation
- Mechanically remove (i.e. sweep) debris from bridge deck and structure prior to washing
- Control particulate wastes from bridge sandblasting operations
- Use porous asphalt for pothole repair and shoulder work
- Use calcium magnesium acetate for deicing around bridges to minimize corrosion
- Clean out bridge scuppers and catch basins regularly
- Direct water from bridge scuppers to vegetated areas

4. Inspection Procedures

- Inspect paving, sweeping, vacuuming, and all other maintenance vehicles/equipment as appropriate
- Inspect roads and bridges for implementation of applicable BMP's

5. Maintenance Procedures

- Clean bridge scuppers routinely and keep free of debris
- Direct runoff water from bridges to vegetated areas
- Install catch basins in place of bridge scuppers
- Use tarps, booms, and vacuums during painting or blasting activities (refer to reference information to control/capture particulate matter)
- Repair leaking/defective containers or equipment on paving equipment

6. Advisory

- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations

Roadway and Bridge Maintenance Inspection Checklist

Bridge No.: _____ BIN: _____ Carried: _____ Crossed: _____

Wetlands Present: Y N Stream Restriction: Y N If yes, Dates: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Bridge Deck (Top Side)	Debris Along Curb	Yes No	❑ Sweep bridge, deposit debris on bank 50' from sweep and spread out ❑ Wash Bridge Deck
Bridge Seats at Abutment, or Top of Piers	Debris on Seat or Top of Pier	Yes No	❑ Remove debris, deposit on stream banks ❑ Bird Nest Present? If yes, wait until nesting is complete. ❑ Wash Abutment & Pier
Washing of Superstructure	Debris – Salts on Superstructure	Yes No	❑ Bird Nest Present? If yes, wait until nesting is complete. ❑ Flaking Paint Present? If yes, do not wash. ❑ Stream Restriction? If yes, wait until restrictions are removed. ❑ Wash Superstructure

Alternative Discharge Options for Chlorinated Water
Pollution Prevention/Good Housekeeping Practices

1. **Description**

The primary pollutant of concern in municipal swimming pool water is chlorine or chloramine used as a disinfectant. This water, if discharged to the storm sewer system, can be toxic to aquatic life. In ponds and fountains, the pollutants of concern are chemical algaecides that are added to control algae mainly for aesthetic reasons (visual and odor). Discharge of chlorinated waters to surface waters can injure or kill aquatic life

2. **Pollutants/Environmental Issues of Concern**

- Chlorine
- Hydraulic Loading

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Dechlorinate pool water before any discharge, be it over land or to the sanitary sewer, or allow the "disinfectant" to dissipate with sunlight, use, etc. prior to discharge
- Use ultraviolet radiation or osmosis to disinfect water/wastewater
- Backwash water should be discharged to the sanitary sewer, if available – if not available, discharge water over vegetated areas, not to surface waters

4. **Inspection Procedures**

- Check chlorine residuals prior to discharge
- Do not discharge wastewaters into the sanitary sewer system during periods of high flow

5. **Maintenance Procedures**

- Maintain proper levels of chlorine residuals in pool
- Allow disinfectant to dissipate prior to discharge of pool waters

6. **Advisory**

- Obtain permission from the municipal POTW prior to discharging any chlorinated pool waters to a sanitary sewer system

Alternative Discharge Options for Chlorinated Water Inspection Checklist

Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary	Action
Pools, hot tubs	Need to empty unit and replace water	Yes No	☐ Discharge to sanitary sewers or to vegetated areas after the disinfectant dissipates, not to storm sewers or surface waters

Date of Inspection _____ Name_____

Frequency _____

Hazardous and Waste Materials Management
Pollution Prevention/Good Housekeeping Practices

1. **Description**

   Improper storage and handling of solid wastes can allow oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing run-on and runoff.

2. **Pollutants/Environmental Issues of Concern**
   - Nutrients
   - Floatables
   - Oil and Grease
   - Organics
   - Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**
   - Ensure that all materials are stored in closed, labeled containers – if stored outside, drums should be placed on pallets, away from storm receivers – inside storage areas should be located away from floor drains
   - Eliminate floor drain systems that discharge to storm drains, if possible
   - Use a pretreatment system to remove contaminants prior to discharge
   - Reduce stock of materials "on hand" – use "first in/first out" management technique
   - Use the least toxic material (i.e. non hazardous) to perform the work
   - Install/use secondary containment devices where appropriate
   - Eliminate wastes by reincorporating coating/solvent mixtures into the original coating material for reuse
   - Recycle materials if possible, or ensure proper disposal of wastes

4. **Inspection Procedures**
   - Physical on-site verification of sealed floor drains (or redirected to sanitary sewer)
   - Regular inspection of material storage areas (inside and outside)
   - Regular inspection and cleaning of oil/water separators by qualified contractor
   - Inspect stormwater discharge locations regularly (for contaminants, soil staining, plugged discharge lines)

5. **Maintenance Procedures**
   - Repair or replace any leaking/defective containers, and replace labels as necessary
   - Maintain caps and/or covers on containers
   - Maintain aisle space for inspection of products/wastes

6. **Advisory**
   - Abide by NYSDEC regulations (6NYCRR Part 372) and OSHA regulations (29 CFR Part 1910) pertaining to these topics
   - Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Hazardous and Waste Materials Management Inspection Checklist

Location: _____

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary		Action
Outside storage areas	Weathering	Yes	No	❑ Protect from weathering – store on pallets, cover
Salt piles	Salt staining	Yes	No	❑ Cover with tarps
Soil staging areas	Silt runoff	Yes	No	❑ Cover with tarps, install physical barriers
Aboveground storage tanks	Deterioration	Yes	No	❑ Inspect/repair/maintain, install secondary containment
Inside storage areas	Potential for discharges	Yes	No	❑ Seal floor drains, install secondary containment
Drums, other containers	Deterioration Uncovered	Yes	No	❑ Repair/replace ❑ Cover/cap

Date of Inspection _____ Name_____

Frequency _____

Operational By-Products Wastes
Pollution Prevention/Good Housekeeping Practices

1. **Description**

   It is important to control dumping to eliminate trash and other materials in stormwater runoff. Management of waste once it is collected may involve reuse, recycling, or proper disposal. Depending on the type of waste dumped, leaching of toxic and biologic contaminants to receiving waters may result.

2. **Pollutants/Environmental Issues of Concern**
   - Depends on Waste

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**
   - Post "no dumping" signs
   - Illuminate area if possible
   - Prevent access – erect barriers
   - Identify the by products/wastes that should be recycled (i.e. paper, cardboard) or can be legally disposed of on municipal lands (i.e. deer carcasses) by referencing NYSDEC regulations (6NYCRR PART 360)

4. **Inspection Procedures**
   - Regularly scheduled inspections - for maintenance concerns
   - Unscheduled patrolling of areas by police

5. **Maintenance Procedures**
   - Clean up and dispose of "illegally dumped" materials, trash/debris in accordance with environmental regulations
   - Cut and remove vegetation

6. **Advisory**
   - Abide by NYSDEC regulations (6NYCRR Part 360) pertaining to this topic
   - Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Operational By-Products Wastes Inspection Checklist

Location _____

(example. Temporary dumping areas for bulky trash items)

Components/Items to Check	Problems Observed	Maintenance/Repair Necessary		Action
Condition of general area	Possible runoff to/ contamination of storm sewer or water body	Yes	No	❑ Remove ❑ Fix
Type of material/waste observed?	Appropriate?	Yes	No	❑ Remove to appropriate container/location
Security	Regular policing of area, Location properly secured/closed/locked?	Yes	No	❑ Secure waste area
Disposal	Past disposal date?	Yes	No	❑ Dispose timely

Inspection Frequency _____

Last Clean-up Date _____

Date of Inspection _____ Name_____

Catch Basin and Storm Drain System Cleaning
Pollution Prevention/Good Housekeeping Practices

1. Description

A stormwater conveyance system collects and transports urban runoff that may contain pollutants. Maintaining catch basins, drainage inlets, and other stormwater conveyance structures on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding. Catch basins capture grit and debris, which, if not removed in a timely fashion, can discharge toxic and biological pollutants during rain and/or snow melt events. Roadside ditches, if stripped of vegetation during cleaning, can result in silt deposition in receiving waters.

2. Pollutants/Environmental Issues of Concern

- Silt/Sediment
- Nutrients
- Floatables
- Metals
- Bacteria
- Oil and Grease
- Organics
- Oxygen demand

3. Best Management Practices (BMP's): Identify & Select as Appropriate

- Routine (annual/bi-annual) inspection of catch basins; storm sewer system; drainage inlets; open ditches; clean as needed
- Routine (annual/bi-annual) cleaning of catch basins; drainage inlets
- Catch basins and floor drain systems inside of buildings:
    - sealed to prevent discharge
    - "permitted" by NYSDEC
    - discharged to sanitary sewers
- Contaminated wastewaters should not be discharged to a catch basin/drainage inlets/ditch
- Increase frequency of cleaning, as necessary
- Repair/replace storm drain receiver and catch basin receiver grates as necessary

4. Inspection Procedures

- Physical inspection – prioritize storm sewer systems and catch basins – catch basins on steep grades may need more frequent cleaning
- Clean catch basin when depth of deposits are >1/3 the depth from the bottom of the basin to the invert of the lowest pipe/opening into or out of basin – Institute temporary street parking bans to facilitate access to catch basins
- Ditch inspections – identify problems while traveling to job site
- Storm event inspection – identify pollution problems (i.e. sediments) to determine the need for additional protective measures
- Post storm event inspection – identify problems (i.e. blockages)

5. Maintenance Procedures

- Catch basins/storm sewer pipe – clean in spring to remove sand/grit/salt from winter road maintenance, cleaning in fall to remove leaves/silt/debris
- Established ditch:
    - Maintain proper slope
    - Maintain vegetation by cutting (to capture sediment) – Do not allow vegetation to grow to a height that would impair sight lines of drivers of motor vehicles
    - Remove obstacles/ debris – (i.e. trash, tree branches, brush, cut vegetation)
    - Excavation/ditch scraping – if necessary, use devices (i.e. hay bales, silt fence) to capture sediment prior to stormwater discharge into receiving waters, reseed ditch
- New installation – capture particulate matter – install sediment basins/other devices in ditch
- Proper disposal of debris

6. Advisory

- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Street Cleaning and Maintenance
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Streets, roads, and highways are significant sources of pollutants in stormwater discharges. Poorly maintained streets allow for a "build up" of trash, grit, and debris, from which pollutants can be "washed out" during rain and/ or snow melt events. Street sweeping will reduce pollutants in stormwater.

2. **Pollutants/Environmental Issues of Concern**

- Sediment
- Floatables
- Metals
- Oil and Grease
- Organics
- Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Street sweeping/vacuuming - at regular intervals, and "as needed"
- Sweep in a pattern to avoid storm drain inlets and catch basins
- Maintain roadside vegetation; select plants/trees that can withstand the action of road salt. Direct runoff to these areas.
- Prior to road reconstruction, consider/evaluate the use of "shouldered roads" instead of "curbed roads"

4. **Inspection Procedures**

- Inspect streets, and plan (as needed) for maintenance/repairs
- Prioritize – some streets (i.e. those with high traffic flows, on flat grades, or with many trees) may need more frequent cleaning

5. **Maintenance Procedures**

- Spring sweeping/vacuuming – remove salt/sand residues
- Fall sweeping, collection of leaves at appropriate time intervals
- Dry sweep or vacuum streets during dry weather
- Initiate temporary street by street parking bans to allow access for cleaning
- Maintain equipment - check for/repair fluid leaks
- Stage road operations and maintenance activity (patching, pothole repair) to reduce spillage of materials. Cover catch basins and manholes during activity

6. **Advisory**

- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Road Salt Storage and Application
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Salting of roads as a means of de-icing has obvious public safety benefits. However, once the de-icing occurs, the salt residue can be washed off the road surface with stormwater runoff and discharged to receiving waters. Road salt stock piles can also pollute stormwater if not stored properly. Road salt is very soluble in water, and, in high concentrations, can have a deleterious effect on plants and aquatic life.

2. **Pollutants/Environmental Issues of Concern**

- Sodium Chloride (harmful to aquatic life and vegetation)

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Require covered facility for salt storage (prevents lumping and run-off loss), and size properly for seasonal needs
- Calibrate salt spreaders for proper application
- Construct diversion berm to minimize run-on to salt storage area
- Consider alternative deicing materials (i.e. calcium chloride, magnesium chloride)
- Establish low salt/sand areas for sensitive environs
- Use a wetting agent with salt to minimize "bouncing" during application
- Cover salt loading area, or build into storage shed
- Unload salt deliveries directly into storage facility, or if not possible, move inside immediately

4. **Inspection Procedures**

- Look for physical evidence of problems:
  - inspect salt storage shed for leaks, structural problems
  - inspect salt piles for proper coverage, tarps for leaks or tears
  - inspect salt application equipment
  - inspect salt regularly for lumping or water contamination
  - inspect surface areas for evidence of runoff – salt stains on ground near and around the salt shelter, loading area, or downslope
  - inspect for excessive amounts of salt on roads

5. **Maintenance Procedures**

- Service trucks and calibrate spreaders regularly to ensure accurate, efficient distribution of salt
- Clean up "track out" after storm events
- Educate and train operators on hazards of over-salting to roads and environment
- Repair salt storage shed – structural problems can lead to salt spillage
- Repair/replace tarps

6. **Advisory**

- Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)

Road Kill Composting Operations
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Without proper road kill management, water quality can be compromised when animals decompose on roads or along road shoulders. Road kill left to decompose can also create a public health issue as pets and people may come in contact with the decaying carcasses. Road kill composting provides an effective method for disposal of dead animals.

2. **Pollutants/Environmental Issues of Concern**

- Bacteria
- Oxygen Demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Establish compost pile/windrow on a well drained, impervious surface that has minimal slope – segregate from other operations
- Locate compost piles at least 200 ft. away from receiving waters or wetlands
- Identify the proper types of carcasses (typically, deer) that should be composted
- Prevent access by vermin/scavengers – erect barriers (i.e. snow fence) around pile

4. **Inspection Procedures**

- Check for odors, temperature of compost, exposed carcasses
- Keep records (use a daily log)

5. **Maintenance Procedures**

- Monitor temperatures
- Take samples, analyze for pathogens
- Establish windrows
- Prevent erosion
- Recycle completely composted material

6. **Advisory**

- Abide by NYSDEC regulations (6NYCRR Part 360) pertaining to this topic
- Refer to NYSDOT guidance

Construction and Land Disturbance
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Construction and land disturbance activities that exceed 1 acre are subject to New York State's SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-10-001). Projects under 1 acre do not require a permit, however, regardless of size, use of erosion and sediment control practices and basic site stabilization strategies will help protect against sediment flowing into storm drains. Sediment runoff (i.e. silt, debris) can affect fish reproduction and habitat. Removal of vegetation and shade trees from stream banks can increase water temperature which can result in reduced dissolved oxygen content in streams.

2. **Pollutants/Environmental Issues of Concern**
   - Silt/Sediment
   - Oxygen demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**
   - File NOI for construction/land disturbance >1 acre
   - Maintain and protect existing native vegetation (especially near waterways)
   - Install erosion and sediment control devices before disturbing soil
   - Protect against sediment flowing into storm drains
   - Phase construction and/or land clearing activities to minimize exposed soil; limit grading to small areas
   - Minimize compaction of soils and impervious cover
   - Maximize opportunities for infiltration
   - Stabilize site to protect against erosion

4. **Inspection Procedures**
   - Regularly scheduled inspections (erosion and sediment control practices)
   - Inspect during storm or snow melt events

5. **Maintenance Procedures**
   - Check/repair all devices that have been installed to ensure protection against erosion

6. **Advisory**
   - Refer to NYSDOT guidance information (Environmental Handbook for Transportation Operations)
   - NY State Standards and Specifications for Sediment and Erosion Control
   - NY State Stormwater Management Design Manual

Building and Grounds Maintenance
Pollution Prevention/Good Housekeeping Practices

1. **Description**

Stormwater runoff from building and grounds maintenance activities can be contaminated with fertilizers and pesticides, suspended solids, heavy metals, and abnormal pH. Washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater drainage system are simple practices to keep pollutants out of stormwater.

2. **Pollutants/Environmental Issues of Concern**

- Silt/Sediment
- Floatables
- Nutrients
- Metals
- Oil and Grease
- Organics
- Oxygen demand

3. **Best Management Practices (BMP's): Identify & Select as Appropriate**

- Wash with pressurized cold water; no soap
- Direct washwater away from storm drain inlet or block drain
- Minimize use of salt
- Use less harmful de-icers (e.g. calcium chloride, magnesium chloride)
- Direct roof drains to grass, rain barrel, rain garden
- Fluorescent light recycling
- Paper/plastic recycling

4. **Inspection Procedures**

- Inspect stormwater drainage system regularly
- Inspect rain barrel/ rain garden function during rain events

5. **Maintenance Procedures**

- Check rain barrels regularly; remove rain barrels in winter
- Maintain native vegetation in rain garden
- Store spent fluorescent lights in original packaging to protect from breakage; label appropriately:" Universal Waste – Waste Lamps"

7. **Advisory**

- Refer to NYSDEC Disposal Options for Fluorescent and HID Lamps in NYS: http://www.dec.ny.gov/chemical/9088.html

Pollution Prevention/Good Housekeeping for Municipal Operations

Standard Operating Procedures

WNY
Stormwater
Coalition

Erie County Department of Environment and Planning
Division of Environmental Compliance Services

Pollution Prevention/Good Housekeeping for Municipal Operations:
Standard Operating Procedures

Table of Contents

Introduction

This group of (18) Pollution Prevention/Good Housekeeping Standard Operating Procedures that relate to municipal operations and their potential effects on stormwater have been developed and assembled by a group of municipal officials that have a wealth of experience pertaining to operations and maintenance within municipalities. This information, which has been formulated as guidance material for implementation of the Stormwater Phase II Municipal Separate Storm Sewer System Permit, **has not** been designed to be comprehensive in all aspects of each topic. Municipalities should adapt this information as it pertains to their own unique municipal operations.

Standard Operating Procedures for:
Landscaping and Lawn Care
Purpose: To prevent contamination of stormwater by minimizing contact with fertilizer and by using innovative landscaping techniques

1.	Plant vegetation that needs minimal amounts of care (i.e. water, fertilizer)	Suggested frequency – at time of initial landscaping
2.	Implement landscaping techniques that minimize water usage	Suggested frequency – at time of initial landscaping
3.	Water just enough to supplement rainfall – use drip irrigation techniques	Suggested frequency - always
4.	Minimize fertilizer application, use slow release fertilizers	Suggested frequency – always
5.	Mow with blades set high, leave grass clippings on lawn	Suggested frequency – always
6.	Use compost or natural (organic) fertilizers	Suggested frequency - always

Standard Operating Procedures for:
Spill Prevention
Purpose: To prevent contamination of stormwater by using proper storage techniques & preventive measures

1.	Monitor equipment storage areas, materials storage areas, and waste storage areas, checking for: fluid leaks, uncovered containers, and deteriorating labels and/or containers, and correct any problems that are noted.	Suggested frequency- daily
2.	Inspect secondary containment systems (i.e. oil, fuel storage tanks) as necessary, and empty them as necessary.	Suggested frequency- monthly
3.	Monitor oil/water separators and their downstream discharges. An oily discharge indicates that the unit is either not functioning properly or needs to be "pumped out".	Suggested frequency- monthly
4.	Install oil absorbent materials in floor drains and/or catch basins, and inspect, remove/replace as appropriate.	Suggested frequency- monthly
5.	Monitor floor drains and storm receiver inlets and outlets for excessive amounts of contaminants, and clean out as necessary.	Suggested frequency - monthly
6.	Remove spilled salt from salt loading area, and use or store	Suggested frequency - daily
7.	Document any/all inspection activities on the proper forms	

Standard Operating Procedures for:
Spill Response
Purpose: To prevent contamination of stormwater by following proper spill response protocol.

1. Municipal* personnel will close (or limit traffic flow around) the affected portion of any municipal roadway or right-of-way to the extent necessary.
2. Municipal personnel are to provide written information (Attachment #1) to the spiller of the material which informs the "spiller" of legal responsibilities to report the spill to the New York State Department of Environmental Conservation (NYSDEC) and to clean up the spill.
3. Municipal personnel are to assist by providing any available communications equipment (phone, portable radio, etc.) to the "spiller" for notification to his supervisor, the NYSDEC (1-800-457-7362), and/or the cleanup contractor of the occurrence of the spill.
4. No municipal personnel are to engage in spill abatement, remediation, or any other spill cleanup activities.
5. No municipal personnel are to allow contaminated debris/material to be staged or stored at any municipal facility.
6. A Spill Information Form (Attachment #3) is to be completed by municipal personnel that respond to the spill.
7. A copy of the completed Spill Information Form is to be filed and maintained at a central repository at a dedicated municipal location within five working days of the incident.

(* The word "municipal" in 1-5 above should be replaced by the name of your municipality)

ATTACHMENT #1

NOTIFICATION OF SPILLS SHOULD BE MADE **WITHIN 2 HOURS** OF THE OCCURRENCE OF THE SPILL TO:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

716-851-7220 (Region 9 office)

OR

1-800-457-7362 (24 HOURS)

ATTACHMENT #2

Spill Information Form

Spiller

Company_____ Street_____

City_____ State/Zip_____

Municipality:_____ Contact _____

Vehicle License #_____

Spill Logistics:

Location:_____

Street:_____

Phone _____

Date/Time of Spill_____

Additional Information:_____

_____

Cause of Spill:_____

_____

Product Spilled:_____ Quantity:_____

Notification to (Your) Municipality (date/time):_____ Person Notified:_____

Cleanup Contractor:_____ Phone:_____

Resource Affected? (Yes/No)

Land: _____

MS4: (identify section/outfall) _____

Surface Water: (name of waterbody)_____

Standard Operating Procedures for:
Pest Control
Purpose: To prevent contamination of stormwater by pesticides which can be toxic to aquatic life and may contaminate receiving waters

1.	Purchase only enough pesticides for 1 year, and store properly	Suggested frequency – always
2.	Adopt Integrated Pesticide Management techniques	Suggested frequency – always
3.	Adopt alternatives to pesticides options	Suggested frequency - always
4.	Eliminate food, water, harborage for pests by implementing routine inspections	Suggested frequency – once/week
5.	Inspect pest traps regularly, remove and properly dispose of dead pests	Suggested frequency -- once/week
6.	Minimize pesticide application, use non toxic/lowest toxicity pesticides - (glue boards)	Suggested frequency – as warranted
7.	Do not apply pesticides immediately before/during rain events	Suggested frequency - always

Standard Operating Procedures for:
Pet Waste Collection
Purpose: To prevent contamination of stormwater via contact with pet related wastes

Municipal Animal Shelters:

1. Check for pet waste (i.e. feces, food wastes) each day; once at the beginning of the work day, once at the end of the work day. Suggested frequency – 2x per day

2. Remove all pet waste, and dispose of properly. Preferred method of disposal is into a toilet for disposal at either a municipal wastewater treatment plant or a septic system. Suggested frequency – 2x/day

3 Wash the affected areas with a disinfectant soap and hot water, and rinse to a sanitary sewer (if available) or to a vegetated area. Suggested frequency – 2x/day

4. Document any/all inspection activities on the proper forms

Municipal Properties:

1. Check pet waste bag stations and service as needed Suggested frequency – 1x per week

2. Empty pet waste receptacles Suggested frequency – 1x per day

Standard Operating Procedures for:
Septic System Management
Purpose: To prevent contamination of stormwater that may contact septic system effluents

1.	Physically mark the locations of each of the appurtenances that make up the system - septic tank/lid, distribution lines, distribution box, absorption field or sand filter, chlorination tank, and outlet. Then, make a site sketch of the system, and file that document	Suggested frequency – at time of construction/replacement
2.	To prevent damage, never allow heavy equipment to travel on top of the system	
3.	Prevent materials that are not readily decomposed (i.e. cigarette butts, plastic items, trash) from entering the system	Suggested frequency – continuous
4.	Minimize solids loading by avoiding the use of a garbage disposal, and minimize hydraulic loading by "spreading out" the processes that use water	Suggested frequency – continuous
5.	Maintain vegetation (optimally, grass) that grows on the system by mowing regularly. Remove all woody vegetative growth.	Suggested frequency – as needed
6.	Inspect the system, looking for evidence of problems, such as sewage odors, backup of wastewater in sewer lines or the distribution box, "ponding" of wastewater on the ground's surface at the system's components	Suggested frequency- monthly
7.	Pump out the septic tank as needed	Suggested frequency– once/year
8.	Maintain records of inspections, pump outs. Store ontractor information where it is readily available.	Suggested frequency - continuous
9.	Document any/all inspection activities on the proper forms	

Standard Operating Procedures for:
Vehicle and Equipment Maintenance
Purpose: To prevent contamination of stormwater by using proper maintenance techniques, proper maintenance locations, and retrofitting infrastructure

1.	Conduct maintenance work indoors – dedicate specific vehicle bays & seal floor drain systems	Suggested frequency – continuous
2.	If work is performed outside, protect stormwater drainage conveyances from spills	Suggested frequency – continuous
3.	Clean up spilled materials immediately, using dry methods (absorbents)	Suggested frequency – continuous
4.	Install oil/water separators where necessary	Suggested frequency – at time of need
5.	Rinse grass from lawn care equipment over permeable, vegetated areas	Suggested frequency– continuous
6.	Never leave vehicles/equipment unattended while refueling	Suggested frequency - continuous
7.	Document any/all inspection activities on the proper forms	

Standard Operating Procedures for:
Vehicle and Equipment Washing
Purpose: To prevent contamination of stormwater by using proper washing techniques, proper washing locations, and proper disposal of wash water

1. Designate a specific vehicle washing bay/facility – the wastewater from the floor drain should flow into an oil/water separator – the treated wastewater should flow to a municipal sanitary sewer line, if possible. If a sanitary sewer is not available, a wastewater permit must be obtained for the floor drain discharges.
   Suggested frequency – at time of construction/modification

2. Close unneeded floor drains
   Suggested frequency – at time of construction/modification

3. Wash vehicles indoors
   - Steam clean (without soap) where wastes can be captured for proper disposal (i.e. oil/water separator) DO NOT USE DETERGENTS, as they emulsify oils thereby making the oil/water separator ineffective
   - Perform cleaning with pressurized cold water, without the use of soaps, if wastewaters will flow to a **storm sewer** system (see #1 above)
   - Use minimal amounts of biodegradable soaps **only** if wastewaters will discharge to a **sanitary sewer** system

   Suggested frequency – continuous

4. Rinse lawncare equipment on grass/vegetated areas
   Suggested frequency – continuous

5. Equip hoses with automatic shutoff devices and spray nozzles
   Suggested frequency – continuous

6. Inspect oil/water separators and floor drain systems periodically to determine maintenance needs
   Suggested frequency – continuous

7. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:
Roadway and Bridge Maintenance
Purpose: To prevent contamination of stormwater as it flows over debris that is deposited on road infrastructure and bridges

Roadway Maintenance

1.	Pave only in dry weather	Suggested frequency – always
2.	Cover manholes and catch basins prior to paving, patching, etc.	Suggested frequency – always
3.	Clean all fluid leaks immediately	Suggested frequency - always
4.	Maintain roadside vegetation – restrict pesticide use	Suggested frequency – whenever possible
5.	Sweep/vacuum roadways and shoulders to remove debris, particulate matter	Suggested frequency – whenever possible

Bridge Maintenance

1.	Install catch basins instead of scuppers	Suggested frequency – at time of construction
2.	Direct runoff from bridge scuppers/catch basins to vegetated areas	Suggested frequency – at time of construction
3.	Remove debris from bridge scuppers/catch basins routinely	Suggested frequency - always
4.	Sweep bridge deck and structure prior to washing	Suggested frequency - always
5.	Use tarps and vacuums during sandblasting/painting activities	Suggested frequency - always
6.	If bird nests are occupied (includes eggs & chicks) do not perform maintenance	Suggested frequency - always
7.	If flaking paint is present, do not wash	Suggested frequency - always

Standard Operating Procedures for:
Alternative Discharge Options for Chlorinated Water
Purpose: To prevent contamination of stormwater that may come into contact with pool water or with treated waters from municipal systems

1.	For each source of chlorinated water which will be discharged, determine whether (or not) a sanitary sewer system is available for that discharge.	Suggested frequency – at time of construction
2.	Prior to discharge, allow disinfectant in the pool to dissipate, or dechlorinate. The disinfectant will break down more quickly in sunny conditions. Check the residual with the proper test kit –the target residual is 0.2 ppm or less	Suggested frequency – as needed
3.	If a sanitary sewer is available for discharge, contact the sewer authority/wastewater treatment plant personnel and obtain their guidelines for this activity.	Suggested frequency – as needed
4.	If no sanitary sewer is available, discharge the water at a slow rate (i.e. using a siphon hose) to a vegetated area so that it can be filtered and absorbed, not to a surface water, storm sewer, or ditch where it can potentially harm aquatic life.	Suggested frequency - as needed
5.	Discharge during dry weather conditions only.	
6.	Document any/all inspection activities on the proper forms	

Standard Operating Procedures for:
Hazardous and Waste Materials Management
Purpose: To prevent contamination of stormwater by properly storing, handling, and disposing of hazardous and waste materials

1.	Store all materials/wastes in closed, labeled containers – if outside storage is necessary, the storage area should be sheltered from the weather	Suggested frequency – continuous
2.	Designate storage areas away from floor drains (if inside) and storm receivers (if outside)	Suggested frequency – continuous
3.	Install a pretreatment system (oil/water separator) where a potential exists for petroleum products to enter floor drains. Eliminate floor drains if possible	Suggested frequency –at time of construction
4.	Reduce stocks of materials where viable - use "first in/first out" management techniques	Suggested frequency – as needed
5.	Use least toxic materials	Suggested frequency- continuous
6.	Install secondary containment devices where appropriate	Suggested frequency– at time of construction
7.	Recycle/dispose of materials properly	Suggested frequency – continuous
8.	Do not mix dissimilar wastes in the same containers	Suggested frequency - continuous
9.	Document any/all inspection activities on the proper forms	

Standard Operating Procedures for:
Operational By Products/Wastes
Purpose: To prevent contamination of stormwater from "illegal" disposal, and by properly storing, handling, and disposing of facility generated and wastes

Facility Generated Waste

1.	Develop a list of wastes, with associated procedures for handling/storage/recycling/ disposal, and provide to staff. Instruct all staff to adhere to this information, and to inform the facility manager if new wastes are generated.	Suggested frequency – initially, with annual reviews/updates
2.	Secure the facility to prevent access (fence/lock gates)	Suggested frequency – at close of business

Municipal Areas Susceptible to Dumping:

1.	Post/maintain "NO DUMPING" signs, erect barriers to prevent access, illuminate area	Suggested frequency – as needed
2.	Patrol areas	Suggested frequency – as needed
3.	Maintain areas/remove illegally dumped trash/debris	Suggested frequency – as needed
4.	Document any/all inspection activities on the proper forms	

Standard Operating Procedures for:
Catch Basin and Storm Drain System Cleaning
Purpose: To prevent contamination of stormwater via contact with debris which has been deposited in storm drain systems by performing periodic maintenance

Catch basins

1.	Identify catch basins that need frequent maintenance, and prioritize	Suggested frequency – always
2.	During cleaning, identify the need for repair of structure (also pertains to manholes, piping)	Suggested frequency - always
3.	Clean catch basins when debris has filled it 1/3 of the way to the outlet	Suggested frequency – always
4.	Inspect/determine the need for cleaning after storm events	Suggested frequency - always
5.	Coordinate catch basin cleaning with related street sweeping events	Suggested frequency – always

Ditches

1.	When cleaning, remove obstacles/debris	Suggested frequency - always
2.	Cut/remove vegetation (as opposed to ditch scraping) to allow capture of sediment	Suggested frequency – whenever possible
3.	ID excessive siltation in ditch - may indicate the need to re-grade the ditch	Suggested frequency - always
4.	During ditch scraping, maintain vegetation (downstream in ditch) to capture sediment	Suggested frequency – always

Standard Operating Procedures for:
Street Cleaning and Maintenance
Purpose: To prevent contamination of stormwater as it comes into contact with debris that has been deposited on roadways

1.	Sweep in a pattern to avoid storm drain inlets and catch basins	Suggested frequency - always
2.	Maintain roadside vegetation, re-seed as necessary	Suggested frequency – whenever possible
3.	Consider shouldered roads instead of curbed roads	Suggested frequency – at time of construction
4.	Coordinate activity with catch basin cleaning	Suggested frequency – always
5.	Prioritize street cleaning, perform maintenance routinely	Suggested frequency – always
6.	Maintain equipment – address fluid leaks immediately	Suggested frequency – at scheduled times
7.	Collect leaves (Autumn)	Suggested frequency – as warranted
8.	Sweep sand/salt residues (Spring)	Suggested frequency – as warranted

Standard Operating Procedures for:
Road Salt Storage and Application
Purpose: To prevent contamination of stormwater by using proper storage techniques, and improving application techniques of deicing materials

1.	Store road salt, road salt/sand mixtures in properly sized, covered structure	Suggested frequency – at time of construction
2.	Order/request salt delivery prior to the onset of winter weather to enable immediate storage (i.e. in salt barn, under tarp) to prevent runoff	Suggested frequency – at time of purchase
3.	Unload salt deliveries directly into barn, or move inside immediately	Suggested frequency each delivery
4.	Cover salt loading area or "build into" storage shed	Suggested frequency – at time of construction
5.	Control spreading speeds, use a wetting agent to minimize "bounce"	Suggested frequency- as needed
6.	Control spread patterns to concentrate material where it is most effective	Suggested frequency – continuous
7.	Inspect salt storage area, salt loading area to ensure that salt is not exposed to weather	Suggested frequency– once/day
8.	Minimize salt usage by calibrating salt application equipment periodically	Suggested frequency - weekly
9.	Minimize salt spillage by not exceeding capacities of equipment (i.e. front end loader, truck bed) during loading operations	Suggested frequency – always
10.	Clean up "track out" after storm events	Suggested frequency – always
11.	Reference/use Chemical Application Rate Charts	Suggested frequency – continuous
13.	Consider alternative treatments (plow only, erect snow fence) that do not require the application of materials	Suggested frequency – as applicable
14.	Document any/all inspection activities on the proper forms	Suggested frequency – continuous

Standard Operating Procedures for:
Road Kill Composting Operations
Purpose: To prevent contamination of stormwater that may come into contact with compost piles

1. Identify the proper location for siting the compost pile/windrow. It should be on a well drained, impervious surface with minimal slope, at least 200 ft. from a receiving water body or wetland. Also, determine the types of materials/dead animals that will be composted.

   Suggested frequency – prior to construction

2. Obtain the proper materials to construct the compost pile

   Suggested frequency – prior to construction

3. Perform visual inspections regularly – check for odors, exposed carcasses, leachate, and utilize the inspection checklist

   Suggested frequency – as needed

4. Document any/all inspection activities on the proper forms

Standard Operating Procedures for:
Construction and Land Disturbance
Purpose: To prevent contamination of stormwater runoff by preventing contact with barren soils and/or capturing silt and sediment prior to leaving the site

1.	File NOI for construction/land disturbance < 1 acre	Suggested frequency – always
2.	Maintain and protect native vegetation, if possible	Suggested frequency – always
3.	Install erosion and sediment control devices before disturbing soil	Suggested frequency – always
4.	Protect storms drains to prevent sediment from entering	Suggested frequency - always
5.	Phase land disturbance activities to minimize exposed soils; limit grading to small areas	Suggested frequency – always
6.	Minimize compaction of soils, limit grading to small areas	Suggested frequency – whenever possible
7.	Maximize opportunities for infiltration	Suggested frequency - always
8.	Divert stormwater away from barren slopes	Suggested frequency – whenever possible
9.	Stabilize site to protect against erosion	Suggested frequency – always

Standard Operating Procedures for:
Building and Grounds Maintenance
Purpose: To prevent contamination of stormwater from maintenance activities at municipal facilities.

1.	Wash building exteriors with pressurized cold water; no soap	Suggested frequency – always
2.	Direct washwater away from storm drain inlets	Suggested frequency – always
3.	Minimize use of salt	Suggested frequency – whenever possible
4.	Use less harmful de-icers	Suggested frequency – whenever possible
5.	Disconnect roof drains from storm sewer system	Suggested frequency – whenever possible
6.	Recycle lighting classified as Universal Waste:	
•	High intensity discharge lamps	
•	Mercury vapor lamps	
•	Metal halide lamps	
•	High pressure sodium lamps	
•	Neon lamps	Suggested frequency - always
7.	Store spent lamps in original packaging to prevent breakage; label appropriately: "Universal Waste – Waste Lamps"	Suggested frequency - always
8.	Recycle paper/plastic	Suggested frequency – always

SPDES General Permit for Stormwater Discharges from MS4s, GP-0-10-002

(Part VII.A.6.)

6. Pollution Prevention/Good Housekeeping For Municipal Operations - SWMP Development / Implementation

At a minimum, all *covered entities* must:

a. *Develop (for newly authorized MS4s)* and *implement* a pollution prevention / good housekeeping program for *municipal* operations and facilities that:

i. addresses *municipal* operations and facilities that contribute or potentially contribute *POCs* to the *small MS4* system. The operations and facilities may include, but are not limited to: street and bridge maintenance; winter road maintenance; stormwater system maintenance; vehicle and fleet maintenance; park and open space maintenance; municipal building maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; hydrologic habitat modification; or other;

ii. at a minimum frequency of once every three years, perform and document a self-assessment of all municipal operations addressed by the SWMP to:

- - determine the sources of pollutants potentially generated by the *covered entity*'s operations and facilities; and
- - identify the *municipal* operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already;

iii. determines *management practices*, policies, procedures, etc. that will be *developed* and *implemented* to reduce or prevent the discharge of (potential) pollutants. Refer to management practices identified in the NYS Pollution Prevention and Good Housekeeping Assistance Document and other guidance materials available from the EPA, *State,* or other organizations;

iv. prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and *covered entity*'s capabilities;

v. addresses pollution prevention and good housekeeping priorities;

vi. includes an employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;

vii. requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet permit requirements as the requirements apply to the activity performed ; and

viii. requires *municipal* operations and facilities that would otherwise be subject to the NYS Multi-sector General Permit (MSGP, GP-0-06-002) for industrial stormwater discharges to prepare and *implement* provisions in the SWMP that comply with Parts III. A, C, D, J, K and L of the MSGP. The covered entity must also perform monitoring and record keeping in accordance with Part IV. of the MSGP. Discharge monitoring reports must be attached to the MS4 annual report. Those operations or facilities are not required to gain coverage under the MSGP. *Implementation* of the above noted provisions of the SWMP will ensure that MEP is met for discharges from those facilities;

b. Consider and incorporate cost effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing stormwater conveyance systems and municipal properties to the MEP. Some examples include replacement of closed drainage with grass swales, replacement of existing islands in parking lots with rain gardens, or curb cuts to route the flow through below grade infiltration areas or other low cost improvements that provide runoff treatment or reduction.

c. *Develop (for newly authorized MS4s)*, record, periodically assess and modify as needed measurable goals; and

d. Select and implement appropriate pollution prevention and good housekeeping *BMPs* and *measurable goals* to ensure the reduction of all *POCs* in *stormwater discharges* to the *MEP*.

e. Adopt techniques to reduce the use of fertilizers, pesticides, and herbicides, as well as potential impact to surface water.

Required SWMP Reporting

Program *implementation* reporting for **continuing *covered entities*** (MS4s covered for 3 or more years on the *reporting date*). *Covered entities* are required to report on all *municipal* operations and facilities within their jurisdiction (*urbanized area* and *additionally designated area*) that their program is addressing. The *covered entity* shall report at a minimum on the items below:

i. indicate the *municipal* operations and facilities that the pollution prevention and good housekeeping program assessed;

ii. describe, if not done so already, the management practices, policies and procedures that have been developed, modified, and / or implemented and report, at a minimum, on the items below that the *covered entity=s* pollution prevention and good housekeeping program addressed during the reporting year:
- acres of parking lot swept;
- miles of street swept;
- number of catch basins inspected and, where necessary, cleaned;
- post-construction control stormwater management practices inspected and, where necessary, cleaned;
- pounds of phosphorus applied in chemical fertilizer
- pounds of nitrogen applied in chemical fertilizer; and
- acres of pesticides / herbicides applied.

iii. staff training events and number of staff trained; and

iv. report on effectiveness of program, *BMP* and *measurable goal* assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Part VII.A.6.a(ii), the *covered entity* shall report on items that will demonstrate program effectiveness.