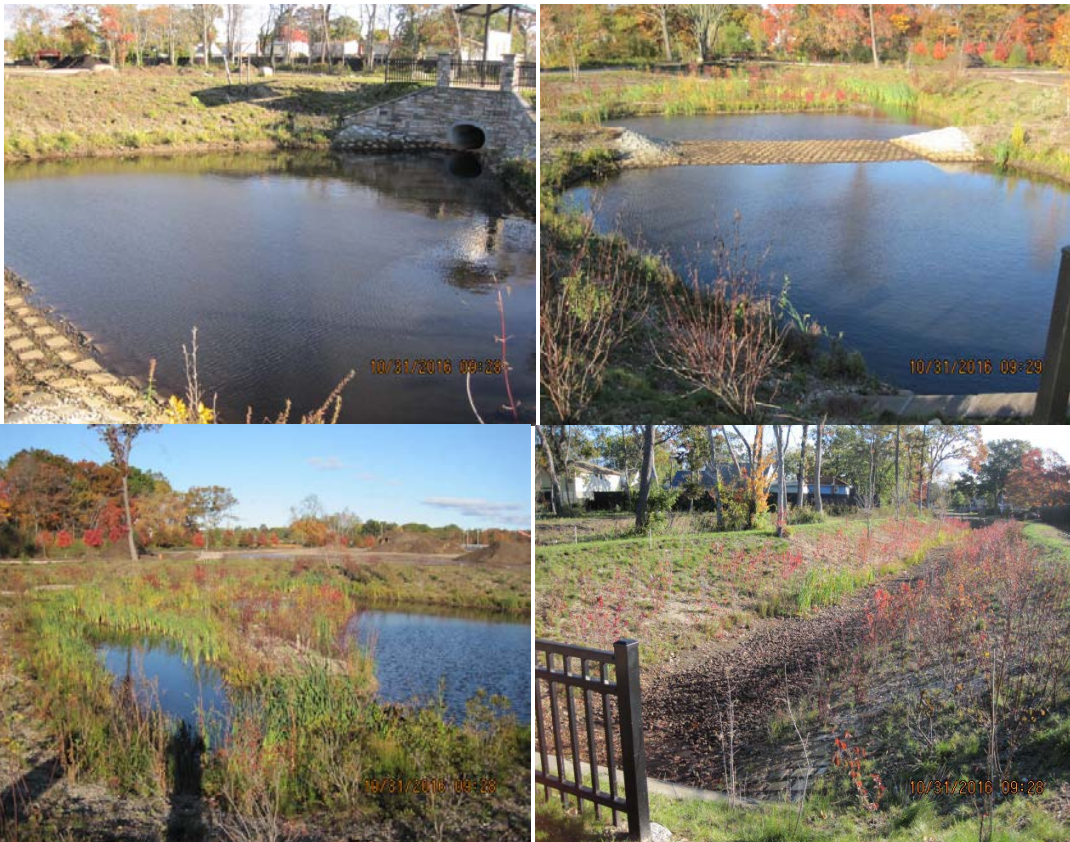




## Town of Babylon MS4 SPDES No. NYR20A043 Stormwater Management Program Plan Spring 2017 Update



Richard H. Schaffer Supervisor Town of Babylon

# Babylon Stormwater Management Program Plan

Victoria A. Russell Commissioner Town of Babylon  
Department of Environmental Control

**Prepared by Richard Groh  
Chief Environmental Analyst  
Town of Babylon Department of Environmental Control**

*On the cover page: The Geiger Lake Park Stormwater Treatment Wetland was completed by the Town of Babylon in 2015. The project was funded by a New York Environmental Facilities Green Innovation Grant. The stormwater treatment wetland, designed in accordance with the New York State Stormwater Design Manual, naturally treats stormwater runoff that was discharging to the Carll's River from a section of Deer Park. Other environmental improvements included the restoration of wetlands and buffers along the shoreline of Carll's River and Geiger Lake.*

# Babylon Stormwater Management Program Plan

**Latest Update May 24, 2017**

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(631) 422-7640  
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# Babylon Stormwater Management Program Plan

## **TOWN OF BABYLON NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MS4/SPDES ID. NO. NYR20A043**

This Stormwater Management Program Plan (SWMPP) has been prepared in accordance with the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) Permit No. GP-0-08-002 issued pursuant to Article 17 Titles 7, 8 and Article 70 of the Environmental Conservation Law Part IV.

The Town of Babylon is required by SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) Permit No. GP-0-08-002 issued pursuant to Article 17 Titles 7, 8 and Article 70 of the Environmental Conservation Law Part IV to develop, implement, and enforce a Stormwater Management Plan (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 Town of Babylon must, by March 9, 2009 (or at the time of a New York State Department of Environmental Conservation audit of the SWMP), prepare a Stormwater Management Program Plan (SWMPP) documenting their SWMP. This SWMPP is readily available to Town of Babylon staff, the general public, New York State Department of Environmental Conservation and Environmental Protection Agency. The document may be viewed on the Town of Babylon web site at [TownofBabylon.com](http://TownofBabylon.com) or requested in hard copy from the Department of Environmental Control. The Town of Babylon recognizes that failure to strictly comply with GP-0-08-002 (or the Town’s contractors, subcontractors, agents and/or assigns adhere to any of the permit requirements contained) shall constitute a MS4 SPDES No. NYR20A043

# Babylon Stormwater Management Program Plan

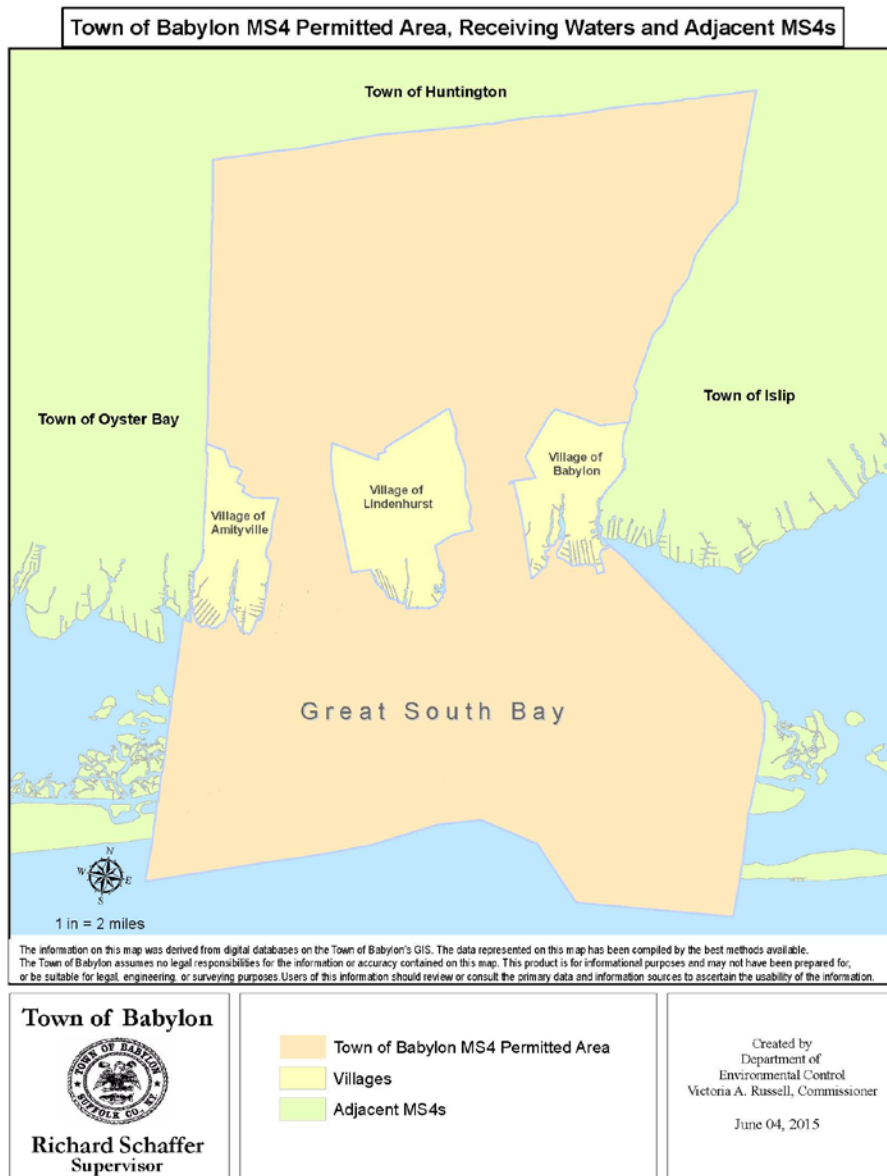
permit violation and that there are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense. The Town of Babylon is making every reasonable effort to comply with these State regulations to the best of its ability.

## Introduction

Through this Plan the Town of Babylon hopes to continue with the important goal of protecting and improving the water quality of its highly valued surface waters and the associated recreational, environmental and economic benefits these resources provide. The Town seeks to maximize its efforts to the greatest extent possible to realize this goal. These efforts require extensive participation and dedication within many official levels and Departments in Town government. Support is also required by our Town officials for the program's success. Additionally, for some aspects of the program, the Town may also require assistance from other outside agencies. On a bright note, the Department has had unprecedented cooperation and assistance from our Town officials, Departments and their staff in connection with this program. The Town recognizes it must periodically self evaluate the effectiveness of this Plan and when necessary update and modify program elements to meet its goals. Additionally, the Town expects the New York State Department of Environmental Conservation to update the General Permit in 2017 which will cause changes to the Town's Plan upon its effective date. Some elements of the Town's Program are now being updated, for example, additional features are being added in the MS4 mapping in anticipation of elements of these new regulations. To this end, this document is updated by the Town no less than on an annual basis and frequently more than several times within a reporting period.

# Babylon Stormwater Management Program Plan

## Location of the Town of Babylon Municipal Separate Stormwater System (MS4) Permitted Area and Geographically Adjacent MS4s



Depicted above is the Town of Babylon Municipal Separate Stormwater System (MS4) permitted area, receiving waters and adjacent MS4s, the villages of Amityville, Lindenhurst and Babylon and the Towns of Oyster Bay, Huntington and Islip.

## Stormwater in the Town of Babylon

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# Babylon Stormwater Management Program Plan

Non-Point Source Pollution (NPS) pollution occurs after precipitation events or snowmelt when stormwater runoff flowing off the land surface picks up animal waste, oil, grease, fertilizers, pesticides, herbicides, floatable debris, chemicals, road salt, sediment and a number of other pollutants from various sources, enters the storm drain system and discharges directly to a lake, stream, wetland or the Great South Bay. The source of these pollutants may include bacteria from animal wastes (examples; dogs, cats, wild animals and waterfowl), oils and grease from motor vehicles (petroleum hydrocarbons), and heavy metals and organic chemicals from industrial operations. In other cases this polluted runoff may flow directly off the land surface into surface waters, which is called sheet runoff. A good example of how this type of pollution is generated is from the droppings created by the feeding of waterfowl in parks that is carried directly into surface waters such as a pond by stormwater runoff. In other cases the application of fertilizers, pesticides and herbicides associated with turf or landscape management adjacent to surface waters may carry these pollutants directly into waterways. This type of pollution occurs at numerous parks and institutional uses adjacent to surface waters within the Town of Babylon. These pollutants may also enter the storm drain system as mentioned above.

**Rain, Rain, Go Away...  
But Pollution Ends Up In The Great South Bay!**

**The Town of Babylon Storm Drain System**

Storm drains are constructed to prevent flooding by diverting excess stormwater off streets and into local waters. Chemicals that are used or disposed of improperly frequently mix with stormwater and are transported by the same system into our local streams and lakes, like the Carl's River and Belmont Lake. Once in our environment, these chemicals eventually end up in the Great South Bay and the aquifer that is the source of our drinking water.

**PHASE II PROGRAM**

**COMMON CULPRITS**

- Sediment** - Dirt and leaves clog pipes, causing flooding, and fill in flowing streams. Sediment in the water column affects the clarity of surface waters and impacts wildlife.
- Fertilizers** - Chemicals in fertilizers are washed down the drain and cause excessive algae growth that depletes fish and other aquatic life of oxygen. It turns beautiful ponds into green slimy muck.
- Oil & Grease** - Dumped cooking and engine oil and chemicals from leaking cars coat streambeds and seep into soil, possibly reaching the groundwater we drink.
- Pesticides/Herbicides** - are poisons that are carried away by rainwater and end up in waterways, killing fish and other organisms.
- Animal Waste** - Transported into the storm drain system, elevates bacteria levels and contributes to beach and shellfish ground closures.

**WHAT YOU CAN DO**

- See any discharge? Say something** - Report any discharge to Richard Grah, Chief Environmental Analyst, Stormwater Manager Town of Babylon, Department of Environmental Control (831) 422-7840.
- Be conscious of your actions** - Use fertilizers, pesticides, and herbicides only when necessary and in the smallest amounts possible. Follow manufacturers' directions. Don't put things in the drain that you don't want in your water.
- Use an oil drip pan** and other preventative measures if you work on your car. Properly dispose of chemicals.
- Pet Waste Management** - Clean up after your pet. It is a violation of Town Code to deposit animal waste on our streets. Free Pooper Scoopers are available for Town Residents from the Town of Babylon Animal Shelter (831) 843-9270.
- Educate others** - Tell neighbors about the dangers of pollution through storm drains - their pollution affects your family too!

Prepared By Stormwater, Environmental Systems, TOS/SC/2005

BMP One of the Town's public outreach/BMP flyers for residents on stormwater

The volume and concentration of these pollutants in stormwater is dependent on the season, rainfall amounts, frequency and duration, surface water drainage area, topography, manmade environment (especially the amount of impervious surfaces/natural vegetation lost) and soils. For example, areas with steep slopes and poor quality soils may potentially generate more stormwater runoff and sediment than flat areas with well drained soils. Developed areas with a high groundwater table can also be a problem because it is difficult to efficiently recharge stormwater to the ground under these conditions. As impervious surfaces are increased with development in these areas, stormwater impacts subsequently increase.

NPS pollution is not what most people identify as Babylon's major source of water MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

quality degradation. However, it has been well established that NPS pollution is the primary source of pollutants affecting the Town's surface waters. Stormwater runoff that may carry hydrocarbons, oil and grease, fertilizers/nutrients, animal waste, sediment, highway deicing salts, thermal pollution or a number of other contaminants from roadways or the land surface adversely impact the Town's surface water resources. This may cause bathing beach and shellfish ground closures, degradation of finfish habitat, freshwater and tidal waters habitat, the occurrence of nuisance algal blooms and increased turbidity of the water column and sedimentation of stream beds. These adverse environmental impacts on surface waters and habitats may also result in negative economic effects in connection with the use of the Town's coastal resources and stream corridors. These potential impacts are of great concern to the Town of Babylon.

In addition to these "traditional" stormwater pollutants, thermal pollution may also impact aquatic resources. A common cause of thermal pollution is the heating of stormwater runoff flowing off of large expanses of hot pavement during summer months after a rainfall event. During precipitation events, the heat from the hot pavement is transferred to the stormwater runoff. This heated stormwater is then discharged to surface waters possibly resulting in substantial increases in the temperature of the water body. Presumably, shallow waterways with lower surface water volumes would be more impacted than large water bodies, example; stream versus a large lake. In addition, the clearing of trees and vegetation along stream banks also eliminates the shade necessary to protect the stream from direct sunlight and heating. There is not a great deal of information published on thermal pollution from stormwater runoff. It is believed that significant increases in water temperature of the surface waters may adversely impact aquatic species including finfish species inhabiting streams, especially trout.

Although the State regulations require Babylon to focus on pollutants only affecting surface waters through the municipal stormwater system (MS4), the Town has also included other potential pollutant pathways to surface waters to the extent necessary for this Plan. This includes direct sheet runoff and the introduction of nutrients and pathogens to groundwater resources that impacts surface waters in the Carll's River watershed.

The Town of Babylon has established its long term commitment to protecting and restoring the environmental resources and water quality of the Great South Bay, the Carll's River and all of the tributary streams, surface waters, wetlands and groundwater resources of the Town through a variety of programs. Babylon's watersheds and the portion of Great South Bay within its jurisdiction are part of the vast south shore coastal system identified as the South Shore Estuary Reserve (SSER). The SSER system stretches the entire length of the south shore of Long Island and includes most all of the land area of the Town of Babylon. The South Shore Estuary Reserve Council was established by the New York State Legislature to protect and prudently manage the Reserve. The Town of Babylon is a dedicated and active member of the SSER council. The SSER Council has completed a Comprehensive Management Plan (CMP) which identifies major issues facing the Reserve and provides recommendations to preserve protect and enhance the system for future generations. Water quality improvement is high MS4 SPDES No. NYR20A043



## Babylon Stormwater Management Program Plan

on the list of priorities in the SSER CMP for the Reserve. This Plan is consistent with the recommendations of the SSER CMP to protect and improve water quality and wetland habitat and the natural resources of the Reserve. At this time the SSER CMP is being updated and is to include MS4 and Nitrogen issues not covered in the original Plan.

Stormwater management is especially difficult in the Town of Babylon because of its intensely developed land use found in nearly the entire mainland portion of the Town. This includes all land use categories; residential, commercial, industrial and institutional. There are great challenges here in Babylon because in the past the most convenient and effective means to manage stormwater from the land surface and storm drain system was to discharge this effluent to the nearest waterway. So it will be difficult to eliminate these inputs structurally (by volume) to address these stormwater inputs in the near future in a cost effective manner. In the immediate future, best management practices in the form of public outreach to reduce the concentrations of pollutants in the stormwater discharged to surface waters will be one of number important strategies the Town is undertaking. While this will not reduce the volume of stormwater affecting surface waters, it will reduce the concentration of pollutants typically associated with stormwater.

# Babylon Stormwater Management Program Plan

## Definitions

The following acronyms and definitions are utilized in this document:

### 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

SWMPP - Stormwater Management Program Plan

SWPPP - Stormwater Pollution Prevention Plan

TMDL - Total Maximum Daily Load

TOBSWMP - Town of Babylon Stormwater Management Program Plan

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).

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

permittee), 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

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referred to as “activities” or “management practices” throughout this general SPDES 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.

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 general SPDES permit when the permittee 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 permittee 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

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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 permittee 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.

General SPDES Permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21

authorizing a category of discharges.

Green Infrastructure - Green infrastructure approaches essentially infiltrate, evapotranspire 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 - Any discharge to a municipal separate storm sewer and or the Town of Babylon stormwater drainage system that is not entirely composed of stormwater.

Illicit discharges shall include but not be limited to those sources as identified by § 122.26(b) (2) of the Code of Federal Regulations; sanitary wastewater, effluent from septic tanks, commercial car wash wastewater, petroleum products, antifreeze and radiator flush liquid, laundry wastewater, spills from roadway accidents, and household and motor vehicle chemicals, but does not include liquids discharged from fire-fighting activities. An illicit discharge could be any other non-permitted discharge which the Town of Babylon or Department has determined to be a substantial contributor of pollutants to the small MS4.

Implementation - period after development of SWMP, where the permittee puts into effect the practices, tasks and other activities in their SWMP.

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.

Individual SPDES Permit - means a SPDES permit issued to a single facility in one location in accordance with this Part (as distinguished from a general SPDES permit).

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Industrial Activity - as defined by the SPDES Multi-Sector General Permit (GP-0-06-002).

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 microscale 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 permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other

hand, if a permittee 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 permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose,

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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 permittee 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.



## Babylon Stormwater Management Program Plan

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 general SPDES 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.

Permittee - means the holder of this general SPDES permit or an entity required to gain coverage under this general SPDES permit. The owner / operator of the small MS4.

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, and floatables impacting waterbodies on the 303(d) list known to come in contact with stormwater that could be discharged to that water body. The sources of these pollutants are typically: urban runoff; urban / stormwater runoff; erosion; municipal; onsite waste treatment system (WTS); or other various, multiple sources.- 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 permittee to assess known and potential POCs within the area served by their small MS4. This will allow the permittee 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, licensed Landscape Architect or other New York State Department of Environmental Conservation 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.

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

## Babylon Stormwater Management Program Plan

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 abandon buildings to stormwater treatment systems. Retrofit of abandon 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 to streams. Upgrade of an existing conveyance system to provide water quality and /or quantity control within the drainage structure. Reforestation.

Small MS4 - MS4 system within an urbanized area or other areas designated by the State. Staff - actual employees of the permittee 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.

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.

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 .

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 permittee.

Permittees 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 BMPs. The measurable goals will help the permittees 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 permittee 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.

MS4 SPDES No. NYR20A043

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When creating the SWMP, the permittee should assess activities already being performed that could help meet, or be modified to meet, permit requirements and be included in the SWMP.

Permittees can create their SWMP individually, with a group of other individual permittees or a coalition of permittees, or through the work of a third party entity.

Stormwater Management Program Plan- The Town of Babylon Stormwater Management Program Plan (SWMPP)-

Used by the Town of Babylon to document developed, planned and implemented SWMP elements. The SWMPP 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 SWMPP plan is a separate document from the NOI and should not be submitted with the NOI or any annual reports unless requested.

The SWMPP plan should include a detailed written explanation of all management practices, activities and other techniques the permittee 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 BMPs or

measurable goals. Permittees can create their SWMPP plan individually, with a group of other individual permittees or a coalition of permittees, 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 SWMPP plan shall be made readily available to the permittee's staff and to the public and regulators, such as Department and EPA staff. Portions of the SWMPP plan, primarily policies and procedures, must be available to the management and staff of a permittee 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 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.

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

## Babylon Stormwater Management Program Plan

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.

**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 water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL stipulates waste load 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.

**Underground Control Injection Wells (Generally as found in Babylon)** All injection wells not included in Classes I-IV. In general, Class V wells inject non-hazardous fluids into or above USDWs and are typically shallow, on-site disposal systems. However, there are some deep Class V wells that inject below USDWs.

**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. The Town of Babylon meets the definition of an urbanized area based on the US Census 2000 data having a population density of 4050 persons per square mile. 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 permittees 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.

**Surface Waters of the State** - shall be construed to include 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. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

**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.

# Babylon Stormwater Management Program Plan

## **ESSENTIAL FRAMEWORK OF THE PROGRAM PLAN: THE SIX MINIMUM CONTROL MEASURES – UNDER TRADITIONAL LAND USE CONTROL IN THE TOWN OF BABYLON**

This Town of Babylon Stormwater Management Program Plan (TOBSWMPP) is based on the six minimum control measures identified by the New York State Department of Environmental Conservation regulations to control stormwater and erosion and sediment control impacts to the greatest extent practicable and to also prevent illicit discharges to the MS4 system in the jurisdiction of the Town of Babylon. These MCMs apply to traditional land use control in the Town of Babylon based on the New York State Department of Environmental Conservation definition. The TOBSWMPP is comprised of the 6 MCMs below (at minimum) and any additional strategies the Town determines that is critical to an effective stormwater program. It should be noted that the Town of Babylon has adopted many additional strategies to control stormwater runoff and non-point source pollution that are not necessarily required by the State regulations. The Town requires mitigation for land development activities for sites under an acre to reduce pollutants and sediment release off site. This Plan identifies how pollutants associated with stormwater runoff will be controlled, reduced and mitigated to the greatest extent practicable in the Town of Babylon. The six MCMs are as follows:

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

The Town has referred to the guidance documents available from New York State Department of Environmental Conservation and the United States Environmental Protection Agency as well as other technical sources such as those created by the Center for Watershed Protection to prepare and periodically update this TOBSWMPP. The Town of Babylon was required by GP-02-02 to develop a SWMPP in accordance with the MCM requirements by January 8, 2008. For each of the MCM components that comprise the plan, the Town of Babylon is required to identify the Departments and Divisions that are responsible for implementing the plan elements and any protocols for coordination among such Departments and Divisions necessary for the implementation of the plan elements.

### **1. Public Education and Outreach - SWMP Development / Implementation**

MS4 SPDES No. NYR20A043

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The Town of Babylon is of the opinion that public education and outreach is a critical component of a comprehensive and cost effective stormwater management program for local government. The outreach program identifies best management practices and also identifies pertinent regulations to control stormwater impacts in the Town's jurisdiction and presents those practices in a form geared towards the public. The underlying goals of the Town's stormwater educational programs, is to strive to make a strong connection between stormwater and its associated pollutants and subsequent impacts on surface waters. In many cases changing human behavior is the determining factor for success. Engaging youth in public outreach is very important because they are our future. Here is the link to the Town's Web Site Link to the Towns Stormwater Program:

**<http://www.townofbabylon.com/DocumentCenter/View/433>**

All of the Town's best management practice flyers are located on the Town of Babylon website.

The Town is faced with significant stormwater issues resulting from intense residential, commercial, industrial and institutional development that occurred Town wide prior to adequate environmental protection regulations. This resulted in substantial areas of impervious surfaces in many portions of the Town that do not have very good ability from a hydrologic perspective to recharge stormwater, capture pollutants and prevent their direct introduction to surface waters. Additional non-structural options to minimize the impacts of pollution from large volumes of stormwater runoff that impact surface waters other than stormwater drainage system retrofits and structural solutions are necessary because of this.

The Town of Babylon estimates that it has 55,000 storm drain inlets, 410 outfalls and 538 miles of hard surface roads in its jurisdiction. This does not include State and County or private roads. A significant portion of the drainage infrastructure in connection with these roadways leads to surface waters. The storm drain inlets create numerous pathways for pollutants to potentially enter the storm drain system and impact surface waters. Notwithstanding, the Town of Babylon Department of Public Works highway improvement programs are integrating stormwater management drainage upgrades in most all of its road projects. But the difficulty and cost to fully mitigate the impacts of this significant volume of stormwater runoff in the Town of Babylon through structural solutions is daunting. In addition, public education is sometimes the only immediate means to address certain stormwater impacts such as pet waste and waterfowl management, illicit discharges and nutrient management. While in most cases public outreach does not reduce the volume of stormwater runoff, it reduces the concentration of pollutants from this type of non-point source pollution. So while the Town cannot significantly reduce the volume of stormwater in the immediate future, the concentrations of pollutants in the stormwater may be reduced.



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Public education and outreach for stormwater education in the Town of Babylon includes a wide variety of programs from the installation of storm drain placards, construction of rain barrels and stenciling (placards have largely replaced stenciling at this point in time) at storm drain inlet locations to events such as the annual Town of Babylon Earth Day celebration, publications and flyers, posters, web posting, talks, classroom training, events and signs.

Implementation Department(s) and or Division(s) and or Official(s): Supervisor of the Town of Babylon, Deputy Supervisor Town of Babylon, Town Board of the Town of Babylon, Town Attorney and Town Attorney's Office, Department of Environmental Control, Supervisor's Office (most importantly Communications), Performance Management, Planning and Development Department, Department of Public Works, Department of Public Works Highway Engineering, Department of Public Works Sign Shop, Information Technology Department and Town Clerks Office. Coordination is necessary between all of these Departments in order to carry out the stormwater education program.

### **Stormwater Issues to Be Addressed through Public Education**

The Pollutants of Concern (POC) identified for this TOBSWMPP are pathogens, nitrogen, phosphorus, silt and sediment, and floatables. Secondary pollutants of concern are petroleum hydrocarbons. The Town believes for example, that public education has reduced the volume of petroleum hydrocarbons introduced to the storm drain system in recent years, but this needs to be quantified.

The Town of Babylon has 10,065 acres of shellfish grounds in its segment of the Great South Bay/South Shore Estuary Reserve (SSER) of which approximately 2035 acres are closed to shellfishing due to bacterial loading from stormwater runoff. In addition, bay beaches including Venetian Shores Park at Lindenhurst and Tanner Park at Copiague are closed periodically for swimming due to bacterial loading from stormwater runoff and increasing resident waterfowl populations. These water quality problems are of great concern to the Town of Babylon from both an environmental and economic perspective. Through its stormwater program, the Town seeks to prevent any additional shellfishing growing waters closures due to bacterial loading (at minimum), reduce beach closures and to the extent possible improve water quality overall. The Town wants to keep the Great South Bay Town Park beaches open for swimming to the greatest extent possible. The Town wants to insure that its Bay beaches remain open for swimming during the entire bathing season if at all possible. The Town has made significant investment and improvements to its Parks for Town residents to enjoy the coastal resources of the Great South Bay/South Shore Estuary Reserve (GSB/SSER). In summary the Town wants to maintain the water quality of the GSB/SSER system as a whole for the environmental and economic benefits to the region.

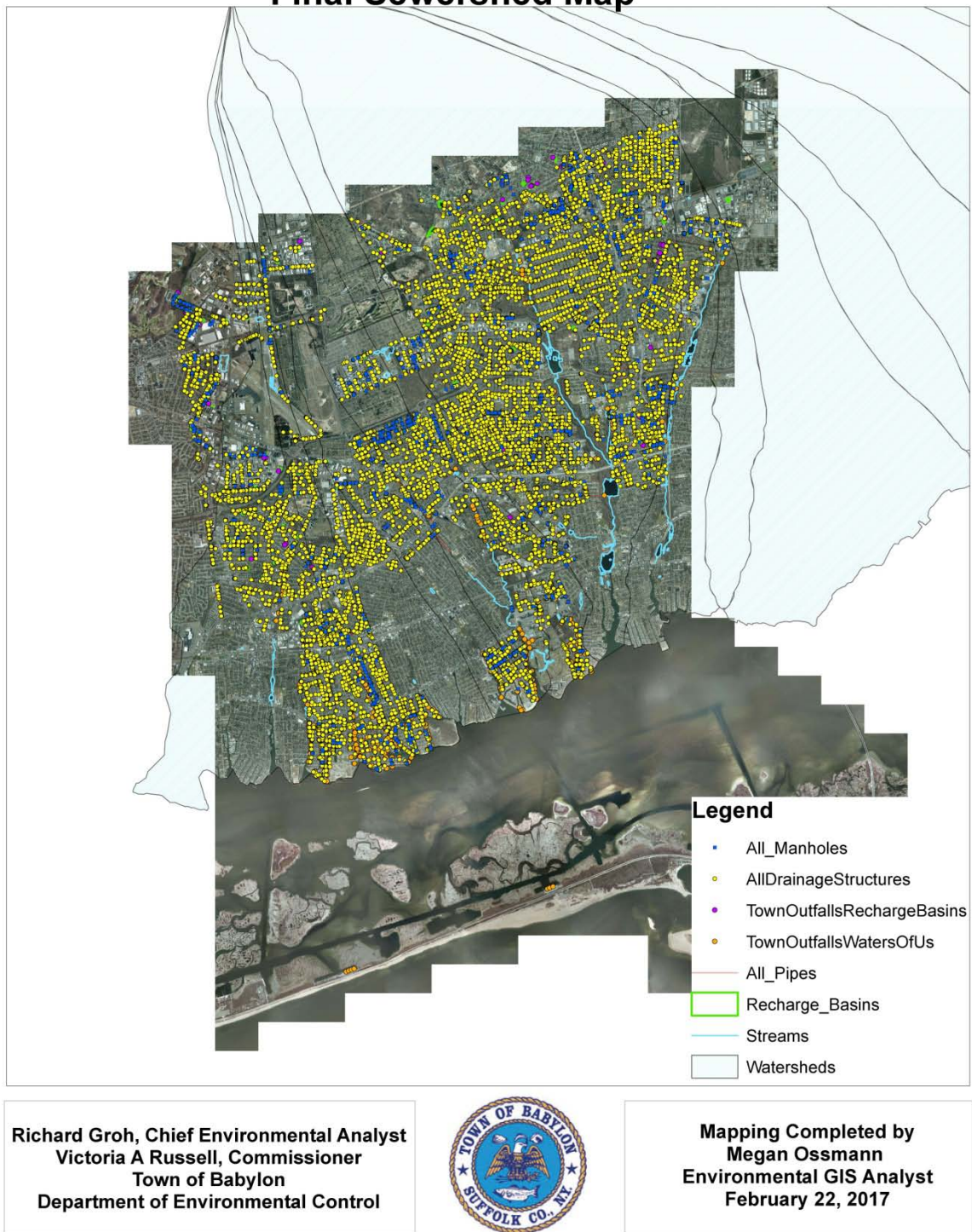
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## Babylon Stormwater Management Program Plan

Brown Tide algal blooms also appear periodically in the Bay negatively impacting shellfish populations due to unknown causes. However it is perceived that complex interactions between nutrients introduced through stormwater runoff and other sources and environmental conditions may play a role in Brown Tide outbreaks. Excess nitrogen from wastewater inputs has been identified as nutrient of concern for Brown tide blooms in area estuaries as well as toxic algal blooms which have recently appeared in Long Island waters. Brown tide is an important issue but not a topic for full discussion in this Stormwater Management Program Plan.

The Town of Babylon surface waters include Great South Bay, lakes and ponds, numerous stream corridors and one significant river system, the Carll's River. These surface waters meet the definition of Waters of the State of New York in the NYSDEC stormwater regulations. The entire Town of Babylon is located within the SSER management boundary. Since most all of the Town of Babylon stormwater infrastructure leads to surface waters and the entire Town lies within the SSER, stormwater management for the purpose of protecting surface water quality is important at all locations within the Town of Babylon. There are very limited segments of the Town of Babylon land area and associated MS4 system that do not eventually discharge to surface waters. Water quality protection is also important outside of the Town's land use MS4 jurisdiction in the three coastal villages of Amityville, Lindenhurst and Babylon. These villages are autonomous with their own mayor and other elected officials and separate MS4s. With the exception of the Carll's River system, the watersheds in the Town all lie entirely within Zone VII of the hydrogeologic zones as identified by Suffolk County, which discharge shallow groundwater to the Great South Bay. The Carll's River system headwaters extend into Zone I into the Half Hollow Hills area. The contributing stormwater drainage area extends into Wheatley Heights on the west and Deer Park to the east. Watershed areas or drainage basins can be defined by examination of the topographic ridges and drainage system maps as indicated on United States Geological Survey Maps. In accordance with the NYSDEC MS4 regulations, the Town of Babylon has mapped these features as sewersheds:

## Final Sewershed Map



The map above provides the storm water drainage watersheds combined with the Town's storm water infrastructure. The watersheds are delineated by the topographical interstream divides.

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Babylon's seven major stream corridors and one major river corridor are listed below:

- Amityville Creek
- Wood's (Ketcham) Creek
- Great Neck Creek
- Strong's Creek
- Neguntatogue Creek
- Santapogue Creek
- Carll's River
- Sumpwams Creek

They are located from the western most portion of the Town to the eastern most portion of the Town, respectively. Within these systems groundwater flows laterally toward each watercourse above the regional groundwater system previously discussed. Each stream corridor is separated by the interstream water table divide. The water table surface elevation may be used to determine the location of the interstream divides. The interstream divides tend to orient north, perpendicular to the water table surface elevation contours. Freshwater wetlands are associated with these watercourses. Closer to Great South Bay, tidal wetlands may be found. Intermingled in these stream corridors is extensive manmade infrastructure, roads commercial residential and institutional development and stormwater drainage systems that in most cases discharge to surface waters. The stream corridors and Carll's River are all extensively impacted by these stormwater discharges.

With the exception of the Carll's River and Sumpwams Creek, all the stream corridors begin below the Southern State Parkway and lie completely within the Southwest Sewer District No. 3. This is of interest in terms of potential land use impacts from sanitary and wastewater discharges to groundwater, which lie within the watershed boundaries of the stream and river corridors and subsequent impacts on surface waters. Extensive high density development occurred by the 1960's in the Town of Babylon. This intensive development, particularly along the coastal zone adjacent to manmade canals, had led to the establishment of a municipal sewer district in Babylon, (for the most part) south of Southern State Parkway. This was to reduce pollutant loadings to groundwater from failing septic systems and subsequently to the watercourses and the Great South Bay. The Town of Babylon constructed a sewer district extension for the Wyandanch Central Business District located within the Hamlet of Wyandanch. The Town of Babylon has completed the Wyandanch sewer project which is a tremendous milestone for the protection of water quality in the Town, especially the Call's River watershed. The project has provided the extension of sewer service to a portion of the commercial and industrial lands in the Hamlet of Wyandanch, Town of Babylon, and County of Suffolk, NY. Geiger Lake Park at Deer Park has also been connected to this sewer system, further reducing nitrogen inputs to groundwater resources. With the exception of the Route 110 Business Corridor and a small section of the Town north of Southern State Parkway along NYS Route 231, only the mainland portion of the Town of Babylon south of the NYS Southern State Parkway is sewered. The sewer district that currently serves a major MS4 SPDES No. NYR20A043



## Babylon Stormwater Management Program Plan

portion of the Town of Babylon is called the Southwest Sewer District 3 and is under the jurisdiction of the County of Suffolk. The Wyandanch Sewer Extension has connected to the Southwest Sewer District. The connection runs along Straight Path from just south of the Southern State Parkway (current sewer district limit) north to the Wyandanch Central Business District (CBD). Connection fees in the designated core redevelopment zones are being waived by Suffolk County.

The objective of the proposed extension was to improve the economic and environmental conditions of the Wyandanch area by reducing non-point source pollution by providing sewers and wastewater treatment at a sewage treatment plant as the means of sanitary wastewater disposal. On-site sanitary wastewater disposal systems have been utilized in the central business district which was problematic because of the high water table that generally characterizes the area. Additionally many of the systems are simply old cesspools and don't have septic tanks or meet current Suffolk County Department of Health Services standards. The good news is that all new construction in the sewered area is being connected to the sewer system and also some of the existing businesses have also been connecting with the result that pollutants and nitrogen being eliminated from wastewater discharges to groundwater resources. The Town had frequently responded to illicit discharges from these businesses in the central business district of Wyandanch.

With the new sewer infrastructure and revitalization efforts, these illicit discharges have been virtually eliminated. On-site sanitary system construction costs are significant in high groundwater areas. The lower cost means of sanitary wastewater disposal is providing economic benefits to the area. As stated above, this area has a high groundwater table which has caused releases of sanitary wastewater to the land surface which may enter the storm drain system.

The sewer project will have beneficial environmental impacts by reducing non-point source pollution, most notably and importantly, nitrogen loading to groundwater resources from sanitary wastewater disposal from on-site systems.

The area of Wyandanch that has new sewer infrastructure is within a sole source aquifer where drinking water is derived only from groundwater resources. The location of the proposed sewer district expansion lies within Zone VII and I of the hydrogeologic area as identified by the Nassau Suffolk Regional Planning Board 208 Study. Zone VII is characterized as a shallow groundwater recharge zone which ultimately discharges to the Great South Bay. Zone I is a deep recharge area which is important to the regional water supply. The project's location is also within the boundaries of the South Shore Estuary Reserve (SSER) system. In fact, topographic land features indicate a groundwater and surface water flow regime from the CBD towards the Carll's River. The reduction of non-point source pollution to the system is consistent with the SSER Comprehensive Management Plan.

Four reports inclusive of the Town of Babylon, the first dating from 1978 -- the 208 Areawide Waste Treatment Study, Long Island Segment of the Nationwide Urban Runoff Program, Nonpoint Source Handbook, and Suffolk County Water Quality Strategy - - concluded that nonpoint source pollution was a priority concern (SSER CMP). Each of MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

these reports sets forth recommendations to control nonpoint source pollution. This sewer initiative was consistent with the recommendations of these plans as well as the SSER CMP. Approximately 1.2 square miles of commercial and industrial properties lie within the proposed new service area. This includes vacant and improved land. The Town of Babylon Solid Waste Management Facilities (TOBSWMFS) were also connected to the Wyandanch Sewer System through the gravity sewer on Straight Path of the service area. Formally all of the ashfill leachate was transported by truck from the TOBSWMFS to the Southwest Sewer District incurring significant costs to the Town of Babylon annually.

It is anticipated that the project would provide economic benefits to the residents of the Hamlet of Wyandanch by improving and revitalizing local businesses and industry and environmental conditions in the area. A significant reduction in nitrogen loading to the Carll's River and subsequently to the South Shore Estuary Reserve would occur from implementation of this project.

The Nature Conservancy issued a report on nitrogen loading to the Great South Bay entitled: Nitrogen loading to Great South Bay: Land use, sources, and transport from land to Bay. The report includes estimates nitrogen loading from various sources into the waters of the Great South Bay. For Carll's River, the total loading of nitrogen per year has been estimated at 93,410 kilograms (kg) per year. Of this total 17% or 16,036 kg of nitrogen per year is estimated to originate from atmospheric sources, 74% or 69,090 kg from wastewater sources, and 8285 kg or 9% from fertilizers. Carll's River ranks as the second highest contributor of nitrogen from a sub watershed to the Great South Bay, with the Connetquot River in Islip as the highest at 126,777 kg per year and the Carmans River at 81,281 kg per year. These rivers all have large contributing water shed areas. The total loading including the three mentioned river systems and the remainder of sub watersheds to the Great South Bay totals 791,138 kg of nitrogen per year. The wastewater component is significant and management practices are necessary to address this impact on water quality. And with the high water table in the CBD water quality impacts are increased over areas with more suitable soil conditions. It is believed that the CBD area is a contributor of nitrogen to the SSER system. While this discussion deviates from traditional stormwater issues, it is believed to be important to this Plan because of the potential impact on surface water runoff from malfunctioning systems. These releases could also enter the Town of Babylon storm drain system through overland runoff or infiltration. Suffolk County is investigating a program to increase the effectiveness of sanitary systems countywide. Because of the difficulty in upgrading existing antiquated systems to meet the Suffolk County Department of Health Services standard of 2'-3' separation from the bottom of the pools to the water table for leaching pools it is believed that the addition of septic tanks to existing cesspools systems would be a technologically feasible, cost effective approach to reduce pollutants to the Carll's River system. This will create a 50% reduction in nitrogen releases to groundwater resources from each upgraded system. Between the sewerage and the upgrade program the Town is hoping for cumulative beneficial impacts on groundwater and surface water resources in the project area over time.



## Babylon Stormwater Management Program Plan

The POC identified in this TOBSWMPP that impacts Town of Babylon watercourses are pathogens, nitrogen, phosphorus, silt and sediment, and floatables. Secondary pollutants of concern are petroleum hydrocarbons.

Stormwater impacts to Town of Babylon surface water bodies vary from moderate to acute. Areas of concern are the 8 watersheds of the Town of Babylon and the Great South Bay. Manmade canals in the coastal zone of the Town are also an area of concern in connection with stormwater management in the Town of Babylon because they are connected to natural surface waters, such as the Great South Bay or creeks or the Carll's River. Two bay front Town Parks; Tanner Park at Copiague and Venetian Shores Park at Lindenhurst are priority areas of concern because of the public bathing beaches located there and the periodic closures due to bacterial loading by the Suffolk County Department of Health Services. The Town Hall Pond is also a focus of attention in connection with waterfowl management. These animals can release large amounts of fecal matter that may find its way into waterways. The Town has established a waterfowl control program to address acute problems with resident Canadian geese at Tanner Park and Town Hall Pond. Recently Venetian Shores Park in Lindenhurst was added to the program. A multifaceted program has been developed to approach the problem using education, a new Town Code that prohibits feeding waterfowl on Town lands, egg oiling and habitat modification. This program is now underway and the Town is realizing success. Already the Town has reduced numbers of Canadian Geese at Tanner Park, the Town Hall Pond and Phelps Lane Park through this program. But the Town still needs to continue to improve the program.

Watershed and shore wide watershed action plans are an important component of the Towns stormwater management program. The Town of Babylon has completed a focused watershed action plan for Ketcham's Creek at Copiague, Town of Babylon and also includes the Village of Amityville entitled the; **Ketcham's Woods Creek Stormwater Management and Stormwater Management and Stream Corridor Restoration Plan.**

This was one of the first watershed plans prepared in Suffolk County. A more generic plan; The Great South Bay Stormwater Plan has also been completed. Essentially this plan addresses stormwater management in the coastal area of the mainland of the Town of Babylon and also the geographic area from Great South Bay north to Sunrise Highway, while the Ketcham's Plan is focused on that particular watershed. The entire Town of Babylon is located within the boundary of the South Shore Estuary Reserve (SSER). With this in mind, considering the 8 tributaries that bisect and flow south in a major portion of the Town, the entire mainland of the Town of Babylon is a valid concern for stormwater management. The Town also recognizes that locations in close proximity to surface waters or certain topographic land features may increase the potential to impact surface waters. Land areas in the coastal zone surrounding manmade canals in most cases generate a significant amount of stormwater runoff since many of these areas are former filled wetlands that do not provide a sufficient depth to groundwater for standard drainage structures. The loss of the wetlands and replacement of these environmental features with impervious structures compounds the impact of stormwater runoff on coastal waters.

# Babylon Stormwater Management Program Plan

## **Outreach Program**

The Town of Babylon has a significant stormwater public outreach program that addresses stormwater impacts on a local level. The South Shore Estuary Reserve Program and the Town stormwater program overlap in their strategies and goals and therefore complement one another. This is because the Town's stormwater efforts are consistent with the recommendations of the South Shore Estuary Reserve Comprehensive Management Plan. In fact any stormwater outreach material produced by the Town of Babylon includes; "Town of Babylon Phase II Program" and "South Shore Estuary Reserve Member, Preserve the Reserve". Tributary signs that identify Babylon's watercourses have been designed and placed along all of Babylon's watercourses at New York State Route 27A. In addition, the design of the signs was endorsed by the SSER Council and placed by various member communities throughout the south shore of Long Island to raise public awareness of the importance of water bodies that connect to the SSER system.

The Town has been proactive in its stormwater public outreach program. The Town's outreach programs strive to make a strong connection or "nexus" between human activity and the POCs. They are also specific to target audiences. The Town has developed five major descriptive visually appealing stormwater flyers that address:

### **Stormwater in General**

### **Town of Babylon Pooper Scooper Program**

### **Floatables and Stormwater**

### **Best Management Practices for Homeowners**

### **Waterfowl Management Flyer**

The five flyers are posted on the Town of Babylon Web Site at [TownofBabylon.com](http://TownofBabylon.com). The Town of Babylon website is an important resource for stormwater education outreach. The Town has also developed an attractive sign to discourage littering at Phelps Lane Park at North Babylon where floatables is impacting the east branch of Carll's River and Elda Lake. This descriptive sign links the action of littering with its impacts to the waterway. This sign also includes young people as part of the target audience and was created accordingly. A Best Management Practices (BMP) pilot was developed at this Park to address floatables. The pilot included waste management, animal management and recycling. The Town has implemented a recycling program for cans and bottles at all its Parks based on the pilot at Phelps Lane. The Town had observed a significant increase in litter from drinking water bottles especially at its Parks and recreational areas. These bottles either enter waterways directly or through the storm drain system. The recent expansion of the bottle bill by the New York State Legislature which creates .05 cent

## Babylon Stormwater Management Program Plan

redemption for water bottles should help address this issue. Outreach products are located on the Stormwater Home Page that can be accessed on the Town of Babylon web site.

### **Waterfowl Program**

The Town of Babylon has experienced an overpopulation of resident Canadian Geese in recent years. To address this water pollution and aesthetic problem the Town has established a waterfowl management program that addresses waterfowl control at five Town parks; Tanner Park, Copiague, Town Hall Park, Lindenhurst, Phelps Lane Park, North Babylon, Venetian Shores Park and Van Borgendien Park. Geiger Lake Park is being phased in and will also be added to the program as the redevelopment of this park with Botanical Gardens progresses and is completed. This problem has been acute at several Town Parks. Their migration patterns have been altered because of local introduction many years ago and the availability of artificial food sources; usually from feeding by residents. This situation has caused a number of negative effects which affects the health of the geese, humans, and the environment. Overpopulation of the species increases erosion and sediment problems from overgrazing, the spread of diseases amongst the geese, and water quality problems due to bacteria and nutrients from the feces. Waterfowl feces can cause beach closures, shellfish growing area contamination, and algal blooms. Waterfowl feces may enter surface waters directly or through the storm drain system. Therefore the Town of Babylon has decided to implement a comprehensive Waterfowl Management Program, to hopefully reduce the number of Canadian Geese in its jurisdiction. The program includes five locations, Tanner Park in Copiague, Phelps Lane Park at North Babylon, Venetian Shores Park at Lindenhurst, Van Borgendien Park, West Babylon and Town Hall Park, in North Lindenhurst. To augment this effort managing the Canadian Geese population, the Town passed a local law banning the feeding of waterfowl on Town of Babylon lands. This law was adopted in October 2008. Under Chapter 106 [Dogs and Other Animals], Article VI [Feeding of Waterfowl] §106-40 states that;

***“No person shall feed or provide food for any domestic or migratory waterfowl on Town property at any time of year”.***

See Appendix II for the actual Town Board resolutions adopting the waterfowl Code. Signs were placed at several Town parks to educate the public with information regarding the negative impacts of feeding waterfowl. Although the Code has penalties, the Town efforts have been focused on public education. The Town believes that the existence of a Code will help discourage feeding. The purpose of this program is to decrease the number of resident geese in the Town’s Parks and therefore improve water quality. Public outreach through the dissemination of literature that includes the negative impacts of feeding by our waterfowl control staff is an important part of this program.

The second part of this effort is the harassment of the geese with dogs. By carefully researching the management programs from other municipalities, it was clear that in order for the program to be effective it would be necessary that dogs be utilized to harass and chase the geese. The Town of Oyster Bay was very helpful in this respect by arranging a site visit to show case its program and providing much needed information. The dog’s main job is to consistently harass and chase the geese until they leave the

## Babylon Stormwater Management Program Plan

parks. Geese also will fly into the water to avoid the dogs. Therefore dogs that are able to swim are essential to the program. The dog handlers are also equipped with informational brochures to provide to the public that are interested in the Town's Program.

The third major aspect in the Waterfowl Management Program is egg-oiling, which will be done in a humane manner. By oiling the eggs and carefully placing them back in the nest, the female geese will not think there is anything wrong, and therefore will not produce any additional viable eggs, which will in turn decrease the population. At the end of the incubation period, the eggs will be removed from the nest. Nest locations are determined by a search method, and also from general information from other Town employees who work at the Parks that have observed their behavior for years.

The ultimate goal of this program is to improve water quality and the general cleanliness of the Town of Babylon Parks. The waterfowl program also includes signs at strategic locations in Town parks to discourage waterfowl feeding by the public. Currently the Town employs 10 part time personnel and their dogs.

### **Target Audiences**

The target audiences for the Town's stormwater program are the general public including residents, businesses, development interests, school groups, volunteer groups, environmental organizations, individuals/businesses suspected of illicit discharges. The Pollutants of Concern (POCs) identified in the flyers in accordance with this TOBSWMPP are pathogens, nitrogen, phosphorus, silt and sediment, and floatables. These flyers can be viewed on [TownofBabylon.com](http://TownofBabylon.com). The Town has submitted several articles on stormwater issues for local publication in magazines.

Participating Groups include:  
South Shore Estuary Reserve Office  
Save the Beaches  
Girl Scouts of America  
Boy Scouts of America

### **Stop Throwing Out Pollutants (STOP)**

The Town of Babylon Recycling Calendar contains important information on the Town's Stop Throwing Out Pollutants (STOP) days. Babylon's full service Recycling Center includes a waste oil and battery drop off and information on the various jurisdictions of roadways within the Town of Babylon. The Town has observed many toxic compounds delivered on its STOP days that could have been potentially dumped down storm drains. Some residents still believe that storm drain inlets may lead to a sewage treatment plant. The STOP program is twice a year, once in the

# Babylon Stormwater Management Program Plan

spring and once in the fall. The Town believes that this program will help prevent illicit discharges to the storm drain system by encouraging proper disposal of household chemicals. Advertising includes the Town calendar, web site and flyers.

# S.T.O.P.

## Stop Throwing Out Pollutants

The Town of Babylon is holding a Stop Throwing Out Pollutants (S.T.O.P.) collection day along with the Spring and Fall Cleanup Days. This program allows residents to bring **household hazardous wastes** to the Town of Babylon Residential Recycling Center for safe disposal. Participation in this program is vital to insure safe drinking water and a healthier environment for the future. **Please label all material.**

**S.T.O.P.**

### Collection Day

**Saturday, April 8, 2017**

**Town of Babylon  
Residential Recycling Center  
57 Field Street  
West Babylon, N.Y. 11704**

8:00 a.m. to 2:30 p.m.

**Proof of residency is required.**

The following are examples of household hazardous wastes accepted by the Town:

- Acids • Aerosols • Antifreeze • Automotive fluids/care products • Chlorine • Cleaning products • Driveway sealer • Fluorescent bulbs • Freon canisters • Full propane cylinders • Gasoline • Granular fertilizer containing insecticide • Herbicides • Mercury containing products • Oil paints and stains • Pesticides/insecticides • Pool Chemicals • Solvents • Thinners and reducers.

The following items will not be accepted under the S.T.O.P. Program but may be brought to the Residential Recycling Center Monday through Friday between 8:00 a.m. and 3:00 p.m.: • Alkaline and rechargeable batteries • Construction and demolition debris • Latex paint • Non-hazardous recyclable materials • Tires.

Ammunition, Asbestos, Explosives and Radioactive Materials are unacceptable under the STOP Program or at the Residential Recycling Center and must be disposed of legally and safely.



For further information or questions regarding acceptable or unacceptable household waste materials, please call the Town of Babylon Residential Recycling Center at (631) 249-9347. For information on proper disposal of the unacceptable items, please contact the NYS Department of Environmental Conservation at (631) 444-0375.

\*\* Automobile batteries, empty propane tanks, and used motor oil may be brought to the Town of Babylon Recycling Center during normal business hours.

**\*\* Kitty Litter or Speedy Dry may be added to old Latex (water-based) paints and thrown out with your regular garbage. (NYSDEC Recommendation.)**

Rich Schaffer, Supervisor

Antonio A. Martinez,  
Danyela Sosa

Deputy Supervisor/Councilman  
Thomas Donnelly, Councilman

Jacqueline A. Gordon, Councilwoman

Lindsay P. Henry, Councilman



**Babylon Town Hall**  
200 East Sunrise Highway  
Lindenhurst, N.Y. 11757  
(631) 957-3072

The S.T.O.P. Collection Program is funded in part by a grant from the NYS Department of Environmental Conservation

## BMP

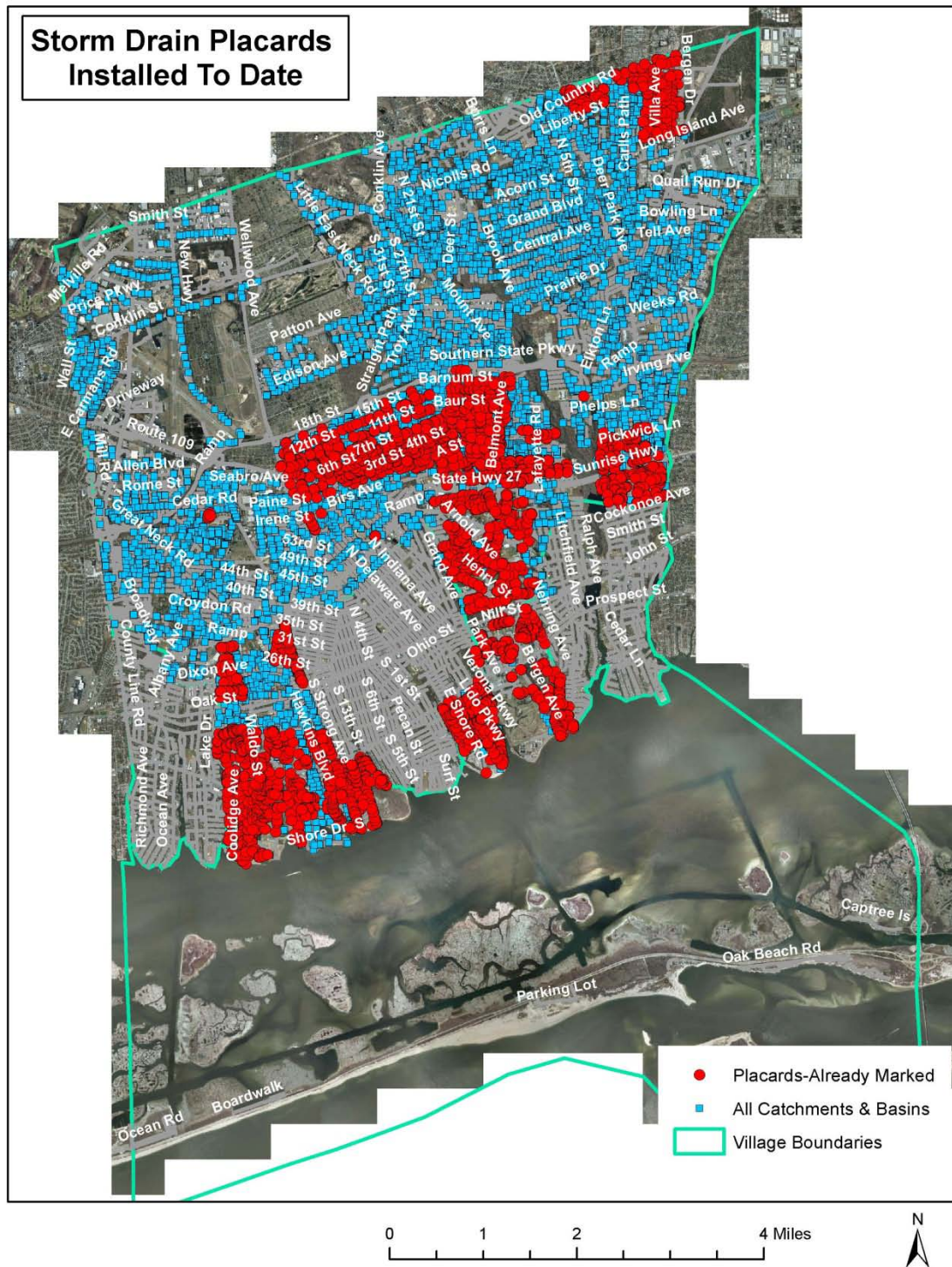
Stop Throwing Out Pollutants (STOP) program flyer.

## Storm Drain Placard and Stenciling

The Town has developed a significant storm drain placard program. The Town completed its first pilot project covering the entire Carll's River watershed. At this time the Town is working on a goal to install placards on every storm drain inlet in the Town of Babylon. The Storm Drain Marker Program has been in place since the summer of 2012.



## Babylon Stormwater Management Program Plan



### BMP

Storm drain placards installed at storm drain inlets to date mapped on geographic information system (GIS) throughout the Town of Babylon.

MS4 SPDES No. NYR20A043



## Babylon Stormwater Management Program Plan

The summer interns for the Department of Environmental Control, were given the daily task of heading out into the field in groups of two to three with a map covering a specific area of the town, which included identification of storm drain locations. The supplies utilized on a daily basis included adhesive, caulking guns, storm drain placards, maps, and handheld Trimble GPS units. The storm drain placards that are utilized for the intern program state:



**“No dumping, drains to waterways.”**

This program was initiated because of the potential impact to water quality presented by illicit discharges. An illicit discharge is essentially any chemical or substance other than stormwater deliberately dumped into the storm drain system. One of the goals through the program was to raise public awareness of this danger due to the dumping of illicit substances down storm drains. Most storm drains in the Town of Babylon lead to local bodies of water. Stormwater runoff is created from a multitude of sources, including fertilizer from residential lawns, animal waste, garbage dumps, and waste from commercial and industrial properties. These sources may introduce nitrogen and phosphorus into natural bodies of water, which leads to an increase in algal blooms and adds to the contamination of drinking water sources, as well as to the endangerment of local aquatic life. These contaminants are an imminent threat to the quality of water on Long Island, including that of local creeks, bays, wetlands, and the Atlantic Ocean.

A vital component of the equipment utilized for the program is the Trimble handheld GPS device. TOBDEC has 3 Trimble GPS units, which enables 3 teams of people go out on a given day. This allows coverage of the town in a shorter period of time. The GPS units are sometimes tricky to operate, but offer the unique advantage of precisely logging the location of the individual placards that are placed on each storm drain. At the end of each day, after installing placards on anywhere from 50 to 100 storm drains, interns are given the task of uploading the data accumulated on the GPS units onto desktop computers in the Intern Office. Uploading the data involves transferring the points onto a program called GPS Pathfinder, correcting the points, exporting them to a program called ArcMap, then organizing the points on a program called ArcCatalog, and finally mapping them on ArcMap.

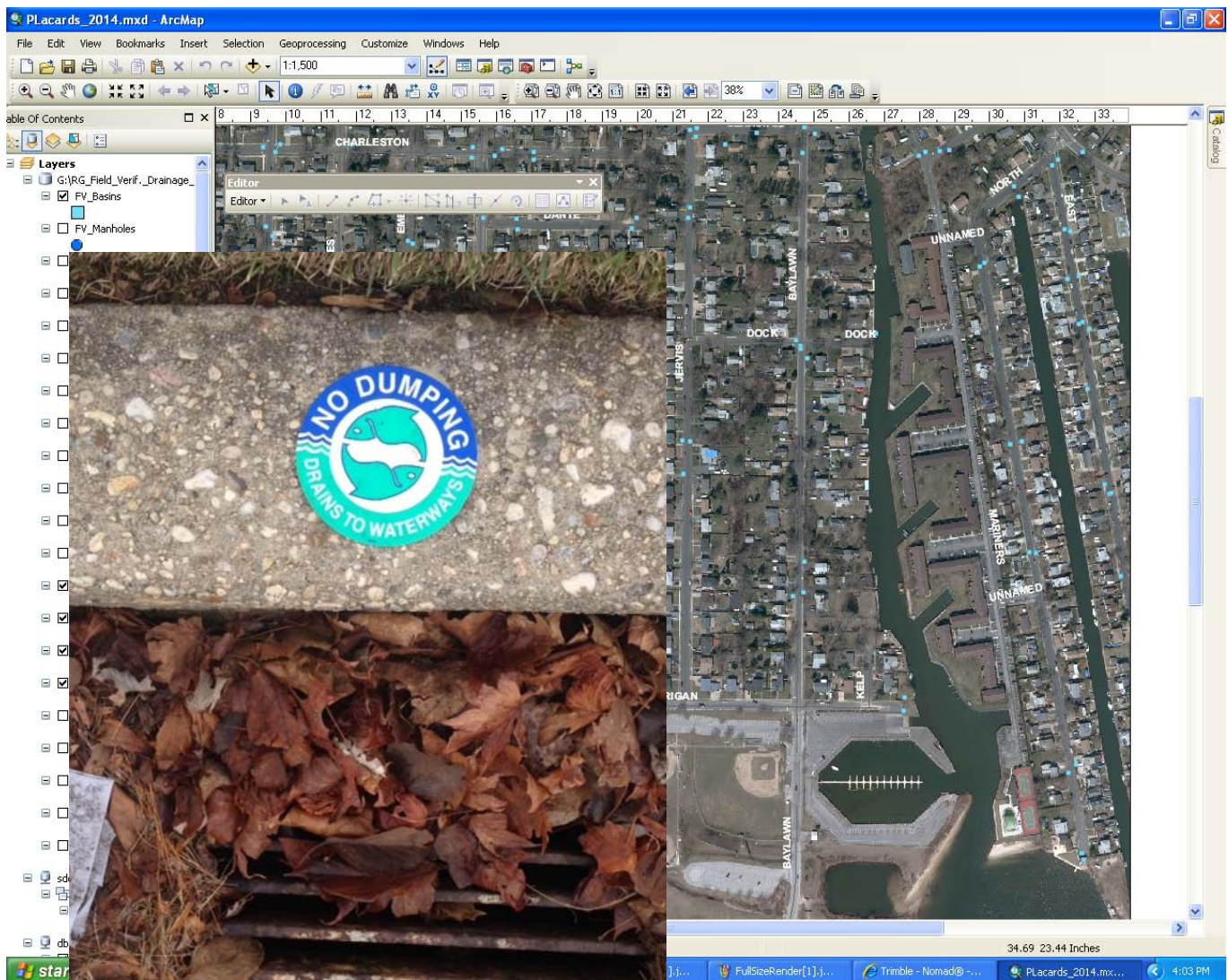
Keeping the storm drain data up-to-date on the Town's network provided useful information for not only staff completing the daily goal of placing placards on the storm drains, but also for the management staff in the DEC who were able to see the progress made by interns every day.

## Babylon Stormwater Management Program Plan

In addition to placing placards on storm drains on a daily basis, interns are given the responsibility of inspecting and relaying any residential, commercial, or industrial illicit discharges to professional staff. For example, if the interns were out in the field and witnessed a pipe leading from a residential lawn to one of the town's storm drains, interns to record the address of the offender and the type of discharge that was entering the drain. This information was recorded in a notebook then phoned in for enforcement.

Overall, the Storm Drain Marker Program was a necessary and vital component to the work the Interns do for the Department of Environmental Control. It promotes public awareness of illicit discharge that is completely and easily preventable, and also educates about the harmfulness of illicit substances draining to local bodies of water.

The placards currently carry one of three messages, No Dumping Drains to Bay, No Dumping Drains to River or Only Rain Down the Storm Drain. The Town has established significant public outreach surrounding this program. Volunteers have also been utilized to carry out the program. The Town uses either placards or stenciling depending on the location of the storm drain inlet. The placards are manufactured by a firm from Florida and applied next to the storm drain inlets with a construction adhesive. A tremendous amount of work has been carried out by Girl Scout Troop 1110 North Babylon in the



## Babylon Stormwater Management Program Plan

Carl's River watershed. Illicit discharges to the storm drain system were discovered during this work which further reinforced the educational value of the program to the volunteers. These volunteers were given awards by the Town of Babylon and South Shore Estuary Reserve Office for their work. The program has been developed to discourage illicit discharges to the Town of Babylon storm drain system and includes floatables as a POC. The Town finds this especially important for its stormwater management program because some residents still believe the storm drain system may lead to a sewage treatment plant. This can lead to illicit discharges to the Town of Babylon storm drain system. The Town believes that the program is working very well and intends to create a localized storm drain placard that includes a blue claw crab. The Town believes many residents can relate to a popular local marine and food species depicted on the logo. The three Town of Babylon Stormwater Flyers have been distributed to residents interested in the placard program by volunteers in the field. Volunteers have been educated on the impacts of stormwater runoff prior to participating in the program and been given awards in recognition of their efforts. The Town of Babylon has also created a number of different signs ranging from South Shore Estuary signs for all the Town's tributaries, watershed protection signs for Ketcham's Creek and the Carl's River and floatable signs for Phelps Lane Park. This program is continuous.

### **Animal Waste: Pooper Scooper Program**



#### **BMP Pooper Scoopers**

The Town has developed the first pooper scooper program of its kind in Suffolk County where the Town provides Pooper Scoopers free of charge to its residents. The POC for this program is pathogens and nutrients. The Town also has a Code Section that addresses dog waste on public land:

***§ 106-10.1. Control of Wastes; penalties for offenses. [Added 7-3-1984 by Res. No. 629]***



## Babylon Stormwater Management Program Plan

### A.

*No person owning, harboring, keeping or in charge of any dog shall cause, suffer or allow such dog to soil, defile, urinate, defecate on or commit any nuisance on any common thoroughfare, sidewalk, passageway, bypath, play area, park or any place where people congregate or walk, or on any public property whatsoever, or on any private property without the permission of the owner of said property. The restriction in this section shall not apply to that portion of street lying between the curblines which shall be used to curb such dog under the following conditions:*

- (1) The person who so curbs such dog shall immediately remove, in a suitable container, all feces deposited by such dog.*
- (2) The feces removed from the aforementioned designated area shall be disposed of in a sanitary manner by the person owning, harboring, keeping or in charge of any dog curbed. Disposal of feces in street storm collection systems is prohibited.*
- (3) The provisions of this section shall not apply to any blind person accompanied by a guide dog.*

### ***B. Any person violating any provision of this section shall be guilty of a violation and, upon conviction thereof, shall be subject to a fine of not less than \$25 but not to exceed \$250 or 10 days in jail, or by both.***

The information flyer is provided along with the free pooper scooper. Pooper Scoopers are provided with adoptions at the Town of Babylon Animal Adoption Center or may be requested by Town residents. They are also given out free of charge at the Town's Annual Environmental Fair. The Town also showcases its environmental programs including stormwater management at this fair.

The Town of Babylon periodically reassesses its goals with regards to stormwater management. One example is the issue of floatables. Floatables have been added to the list of POCs in connection with public education activities. While this has been a problem at public beaches in the past, the Town has recently revisited this issue at a local Park and determined that floatables should be a POC in its stormwater program. In addition the Town has worked with adjacent MS4s on this issue because in many cases stormwater pollution discerns no municipal boundaries.

The Town is undertaking Best Management Practices for Pathogen Control, a POC at these two public beaches. The major segment of this program is a newly launched waterfowl control program utilizing dogs and egg oiling. The program includes public outreach flyers on the basis of the program and also extensive posting of signs to discourage the feeding of waterfowl at Town Parks. The Town of Babylon believes

# Babylon Stormwater Management Program Plan

that it already has caused a significant reduction in waterfowl populations at Town Hall Park at North Lindenhurst and Tanner Park at Copiague. But the program needs to continue and the Town hopes to improve its effectiveness through additional gained experience. The Town of Babylon measurable goals for Public Education and Outreach - SWMP Development / Implementation is progressing very well and most expectations have been fulfilled. Notwithstanding the Town recognizes that there is always a need to self assess, update and refine its stormwater program on a periodic basis.

## **2. Public Involvement / Participation - SWMP Development / Implementation**

Department of Environmental Control

The Town has to the best of its ability reached out to groups both public and private that may be impacted by its stormwater program. The following groups and organization and government agencies have been involved with the Town's Stormwater Program.

Villages of Amityville, Babylon and Lindenhurst

Members of the NYS Sea Grant NEMO Stormwater Discussion Group

Local Volunteer Organizations such as the Girl Scouts of America

South Shore Estuary Reserve Office

Soil Conservation Service

New York State Department of State

New York State Department of Environmental Conservation

United States Environmental Protection Agency

Since the three villages do not have as extensive staffing as the Town, Babylon makes every possible effort to share information and resources. This includes the Town of Babylon Stormwater Management and Erosion and Sediment Control Code; Chapter 189 in electronic format, invitations to any training sessions the Town may be hosting and some technical assistance.

The NYS Sea Grant NEMO Stormwater Discussion Group (list serve) has been very successful since its inception. The discussion group allows for an exchange of information, postings on stormwater events and provides great interaction between the Long Island MS4s and the private sector. Babylon has been provided with a great deal of assistance from members and in turn has also provided much assistance to other members of the group. This assistance has included model codes, information on the Town's stormwater programs and technical assistance.

Local volunteer groups have assisted the Town of Babylon in carrying out its stormwater programs especially the storm drain placard program. With any of the programs the Town provides a strong educational background on why it's doing a particular stormwater program. One group installed placards at all the storm drain inlets in a significant portion of the Carll's River watershed, the Town largest stream corridor. Other programs include



# Babylon Stormwater Management Program Plan

stewardship of the stream corridors such as cleanups and maintenance of wetland restoration and stormwater management sites.

The South Shore Estuary Reserve Office has been a tremendous help to the Town's stormwater program providing support and public outreach. This has included press conferences, web postings and awards for exceptional volunteer activities.

The Soil Conservation Service has recently reached out to the Town to assist in some of educational programs. The SCS recently assisted the Town with its training of its local construction site operators.

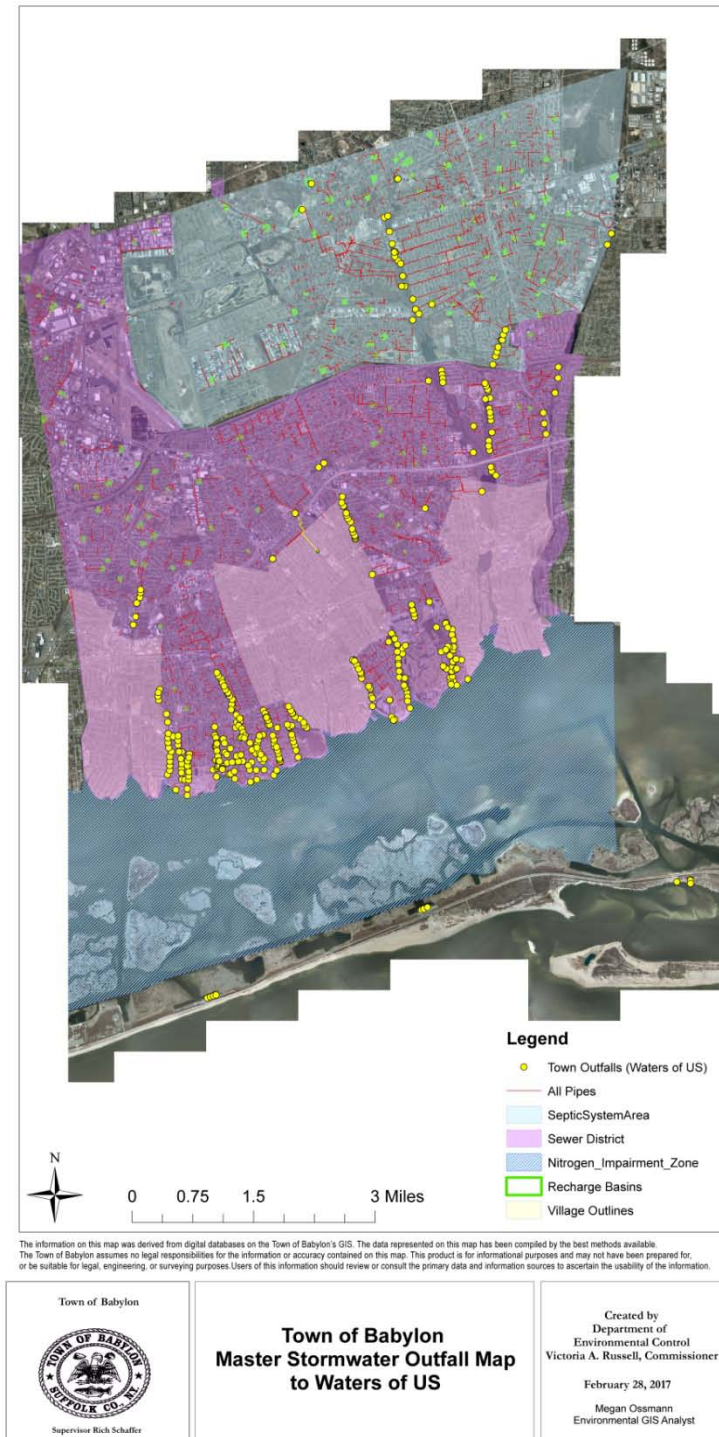
The Town is developed a Stormwater Management Home page to provide greater public access to its Stormwater Management program. The Stormwater Management Home page will include a number to call for information on the stormwater program, a hotline at Citizen Services for illicit discharges, interactive components to evaluate the effectiveness of the program, all of the Towns stormwater management flyers, the Annual Report and information on Chapter 189 Stormwater Management and Erosion and Sediment Control and the proposed Chapter 190 Illicit Discharges. The website will identify a local point of contact for public concerns regarding stormwater management and compliance with this general SPDES 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 NYSDEC. The Home Page will created a central location and site for public interaction of the Town's its stormwater program. The Town hopes that the web site will assist the Town in helping to further develop and implement a public involvement/participation program that identifies key individuals and groups both public and private that are interested in, or affected by the Town's stormwater program. It will also identify types of input the Town of Babylon will seek from the key individuals and groups, public and private, to support development and implementation of the stormwater program.

For the purpose of the MS4 annual report the Town of Babylon has utilized the following procedures: The Town posts the draft and final report on the website for public input. The final report remains on the web site throughout the year.

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

Illicit discharge detection is a very important part of the Town's stormwater program. Releases of chemicals, sediment and petroleum hydrocarbons to the Town of Babylon MS4 system pose a potential serious threat to surface and groundwater resources of the Town. Chapter 190 of the Code of the Town of Babylon Prohibition of Illicit Discharges, Activities and Connections to the Town of Babylon Municipal Separate Stormwater Drainage System (MS4 System) prohibits illicit discharges that may enter the Town's MS4 system. See Appendix II for the adopted Code section.

# Babylon Stormwater Management Program Plan



The map above provides the outfall map of all Town of Babylon Outfalls to Waters of the United States. 410 outfalls are identified by the Town of Babylon by the storm water program. The outfall mapping is a critical component of the illicit discharge program. MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

The following Town of Babylon Departments are involved with illicit discharge detection in the Town of Babylon:

Department of Environmental Control, Department of Public Works Highway and Highway Engineering, Department of Planning And Development Planning Division, Town Attorney's Office, Fire Prevention and Ordinance Enforcement, Department of Performance Management and Department of Information Technology.

The roles vary from environmental analysis utilizing Global Positioning System (GPS) Technology and the Town's Arc Info geographic information system to code enforcement. The following are the different roles that are identified for the various Departments and Divisions:

Illicit discharge detection (IDDE) is an ongoing program for the Town of Babylon. Selected geographic areas are selected annually and field inspected by full time staff and environmental interns.

Performance Management, a Division of the Town's Supervisor's Office receives complaints from residents which are in turn entered into the Townwide complaint system which provides a notification to the appropriate department, which is usually the Department of Environmental Control. Sometimes additional Departments may be simultaneously notified when multiple code violations occur. These additional violations may be related to the illicit discharge; e. g. wastewater overflowing due to illegal occupancy in a dwelling that is overwhelming an older sanitary system. The Town of Babylon Highway Engineering is continuously working out in the field in connection with the management and inspection of Town drainage projects and frequently detects illicit discharges to the storm drain system which the Department of Environmental Control provides prompt inspection response. If the discharge is determined to be non-hazardous and/or not an oil or hydrocarbon discharge the Town will address the corrective action in house. Illegal cross connections are routinely eliminated from the Town's MS4 system. Once discovered, the party is notified of the illegal connection in writing and advised that the pipe must be disconnected and if it is not in the prescribed time frame, the Town will remove the cross connection and assess costs. When discharges by cross connection or discharges that have entered directly into an inlet are believed to be hazardous or comprised of petroleum hydrocarbons the Town of Babylon will contact either the Suffolk County Department of Health Services or the New York State Department of Environmental Conservation. For serious violations, the Town will sometimes contact the District Attorneys Section, Environmental Crime Bureau, Suffolk County Police Department for their assistance. If the discharge is known to be petroleum hydrocarbons the Town will contact the New York State Department of Environmental Conservation Oil Spill Division. Concurrently the Town of Babylon Fire Prevention Office also responds to road spills and works with the New York State Department of Environmental Conservation for remediation of these spills. In some cases the United MS4 SPDES No. NYR20A043

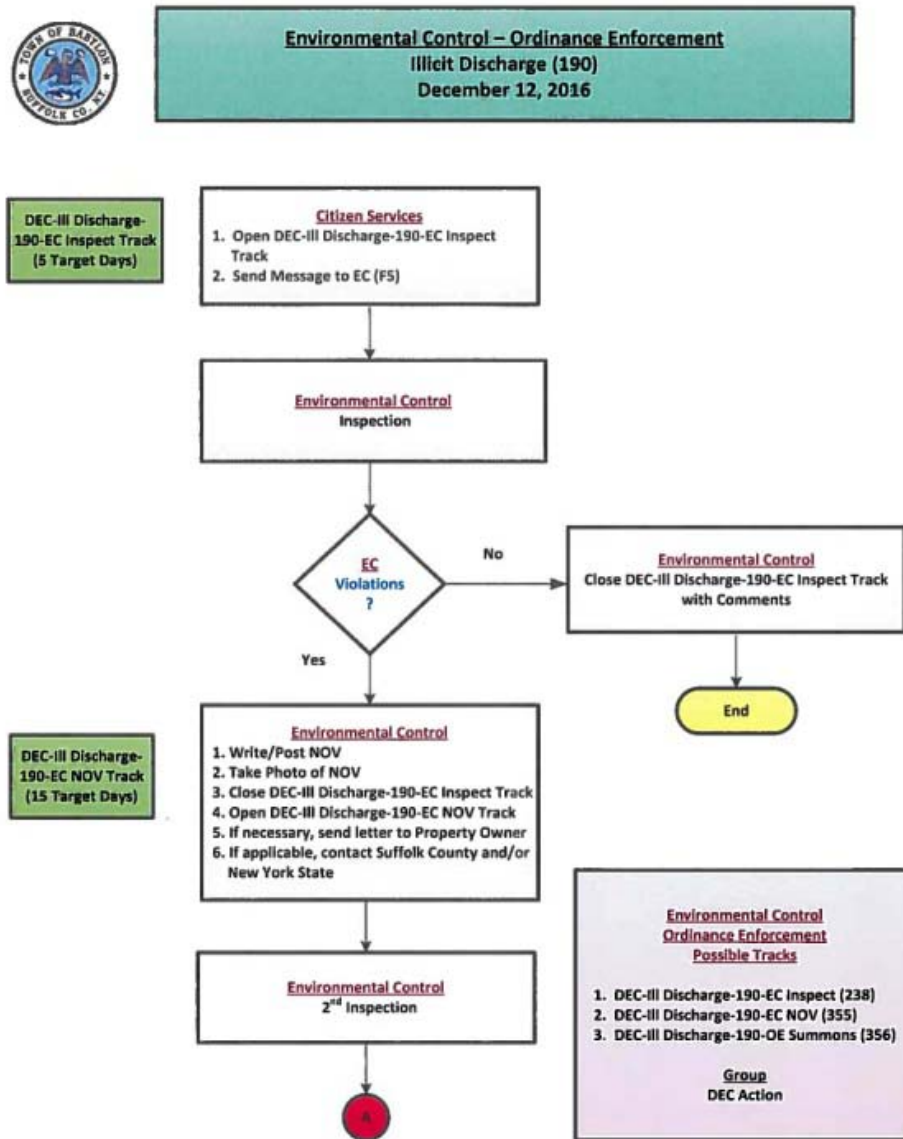
## Babylon Stormwater Management Program Plan

States Coast Guard may be involved. If the Town deems that the cleanup may warrant a temporary shutdown of the business, this course of action may be also undertaken.

The Town conducted a meeting on November 15, 2016 to update and improve its illicit discharge enforcement and work flow procedures. New employees were updated on the procedures and the issuance of summons under Chapter 190 Illicit Discharges was officially assigned to the Ordinance Enforcement Division. A Workflow was created and is now integrated into the Town's complaint procedures. The result of this effort was very positive and roles are clearly defined for various Departments.

Workflow for Illicit Discharges

# Babylon Stormwater Management Program Plan



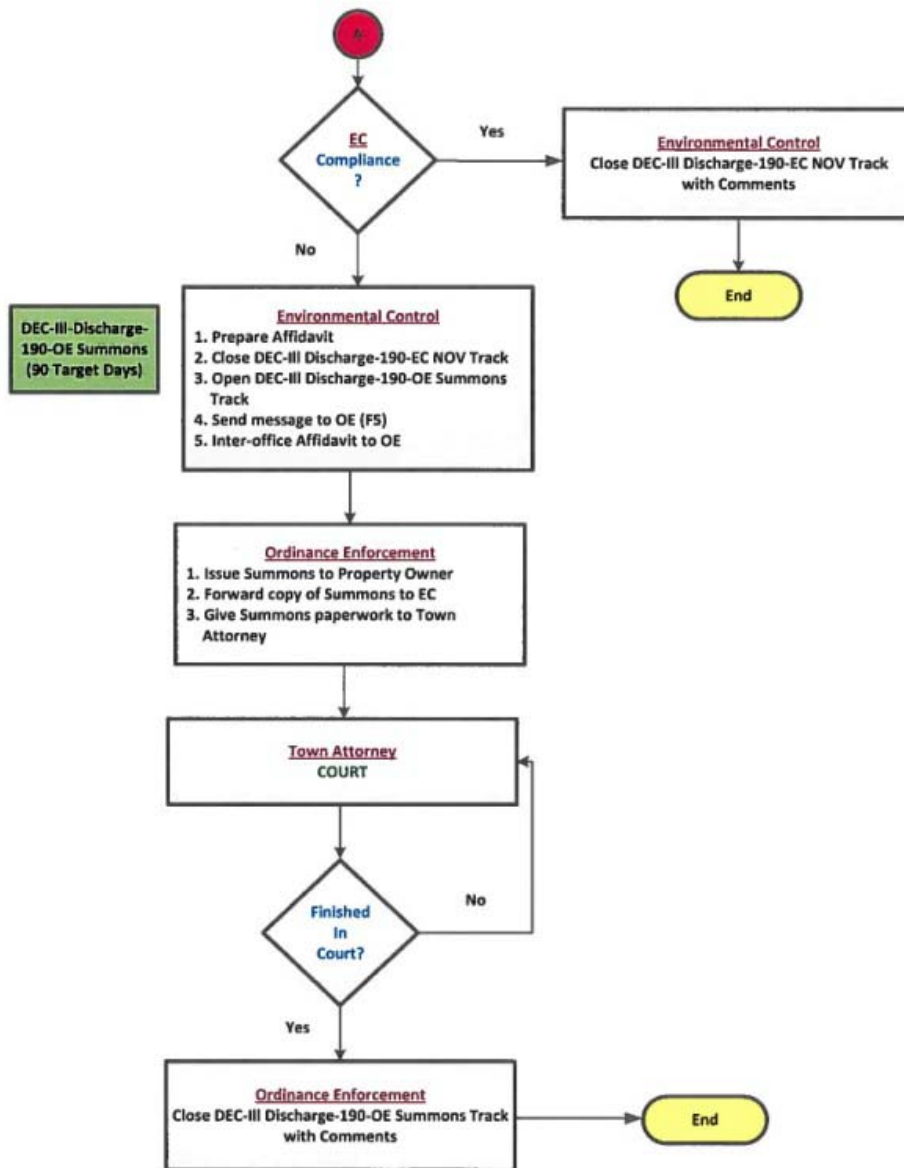
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# Babylon Stormwater Management Program Plan



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Created in 2016 Town of Babylon Supervisor's Office

MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

Section 189-10 of the Town of Babylon Stormwater Management and Erosion and Sediment Control Code also specifically prohibits illicit discharges to the Town of Babylon storm drain system. The specific code language is as follows:

“Illicit discharge prohibited. No person or entity may create or cause an illicit discharge to flow, to infiltrate or in any manner or form to enter into the Town of Babylon storm drainage system in violation of this chapter and/or Suffolk County Department of Health Services and/or the New York State Department of Environmental Conservation and/or the United States Coast Guard and/or the United States Environmental Protection Agency regulations.

Illicit discharges discovered by the Town of Babylon may constitute a violation of this chapter to the limit of authority of the Town of Babylon as provided in § 213-270.1, Water disposal, or shall be referred by the Town of Babylon to the appropriate enforcement agency, such as the Suffolk County Department of Health Services and/or the New York State Department of Environmental Conservation and/or the United States Coast Guard and/or the United States Environmental Protection Agency.”

Notwithstanding the Town’s existing Section 189-10 of Chapter 189 of the Code of the Town of Babylon, Illicit Discharges, the Town has also adopted the “stand alone code” Chapter 190 Prohibition Against Illicit Discharges, Activities And Connections to the Town of Babylon Separate Storm Sewer System that is based on the model State code.

This code has been adopted as a local law. The purpose of this local law Chapter is to provide for the protection of the health, safety, and general welfare of the citizens of the Town of Babylon 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 established additional regulation 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 law are to:

- (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;
- (2) To regulate the contribution of pollutants to the MS4 since such systems are not designed to accept, process or discharge non-stormwater wastes;
- (3) To prohibit Illicit Connections, Activities and Discharges to the MS4;
- (4) To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this law; and
- (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.

## Babylon Stormwater Management Program Plan

The following flow chart shows illicit discharges are generally handled by the Town:

The Town of Babylon has developed and maintained drainage maps within the Town's jurisdiction showing the location of all outfalls and the names and location of all surface waters of the State that receive discharges from those outfalls. Linen maps of the drainage infrastructure along with specific project maps are stored in the Town of Babylon Department of Public Works Highway Engineering Office and cover the entire unincorporated portion of the Town of Babylon. These maps have all been updated in during 2016 and 2017 in GIS. The stormwater drainage area (sewer sheds) have also been mapped for the entire Town and have also been updated in during 2016 and 2017 in GIS. For the Town's annual illicit discharge surveys mentioned previously, the Town relies on Illicit Discharge Detection and Elimination:

### ***A Guidance Manual for Program Development and Technical Assessments created by Center for Watershed Protection***

The Center for Watershed Protection's comprehensive manual outlines practical, low cost, and effective techniques for stormwater program managers and practitioners. This manual provides valuable guidance for communities and others seeking to establish Illicit Discharge Detection and Elimination (IDDE) programs.

For practical matters and as required by the NYSDEC regulations the Town of Babylon will map any relocated/modified outfalls as they are constructed or newly discovered. During 2015 and 2016 the Town has been in the process of updating its outfall map in accordance with the New York State Department of Environmental Conservation mapping guidance manual:

### ***Outfall and System Mapping for Illicit Discharge Detection and Elimination (IDDE) in NY***

Additionally, the Town is taking special care to only include those outfalls discharging to Waters of the United States/Waters of the State of New York as its "official" outfall map. Previously, the Town had included certain recharge basins that did not discharge to Waters of the United States/Waters of the State of New York. This data will not be on the official outfall map, but will remain available as a GIS data layer.

Priority areas of concern for illicit discharges are those areas developed in high groundwater areas and other areas that include older industrial commercial and residential areas that were constructed prior to modern regulations addressing environmental protection and stormwater management. Areas where the MS4 systems discharge directly to surface waters are of special concern. However, the Town is

MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

concerned about illicit discharges throughout the Town because of the Town's extensive MS4 system and the fact that they may occur anywhere in the Town because of human behavior. Geographically, the stream corridors are a priority concern because of the potential rapid direct impact on surface waters of pollutants illegally introduced to the nearby storm drain system. Staffing in the Department of Environmental Control for the Program are the Chief Environmental Analyst, Principal Environmental Analyst, Waterways Management Supervisor, Bay Management Specialist and environmental interns. Funding for the entire stormwater program which includes illicit discharge detection is \$15,000 per year not including staff salaries. Equipment includes seven computers with geographic information system capability, hand held field global positioning units (GPS) and a Department boat and kayak for use in the coastal area. In the coastal area outfalls can be examined for dry weather discharge by boat. In the watershed and inland areas waders and boots may be utilized to walk the streams and Carll's River where locations cannot be inspected on foot. Public outreach materials for residents include flyers, notably the Best Management Practices Flyer for Homeowners and storm drain placards. For commercial and industrial land owners a flyer has also been created which is sent out with the solid waste billing. For illicit discharge activities track down procedures the Town relies on Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments and also the Town's long term experience in dealing with these situations. Recording keeping includes GIS, computers programs such as Excel and hard copy folders. Employee training is provided by the Storm watch Municipal Stormwater Pollution Prevention Video, in house training of interns by professional staff, attendance by staff at various NYSDEC training and internet/literature review by professional staff.

The Town is addressing the categories of non-stormwater discharges or flows listed in Part I.A.2 of the NYSDEC regulations. The Town of Babylon has two sections of code that may address some of these discharges:

213-270. Pool water disposal.

[Amended 9-21-2004 by L.L. No. 29-2004]

All water either overflowing or emptying from a swimming pool shall be disposed of on the lot whereon it is located, and the requisite plans submitted to the Building Department Editor's Note: Local Law No. 15-1976 created the Department of Planning and Development, in which Department the Division of Building replaced the former Building Department. For the text of this local law, see Ch. 49. shall show provisions made for preventing such water from flowing onto the land of any adjoining property owner or into any abutting street

213-270.1 Water disposal. [Added 9-21-2004 by L.L. No. 29-2004]

All water either overflowing, emptying, being pumped or running from any property shall be disposed of on the lot where on the water is located or beginning. Failure to prevent

MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

such water from flowing onto the land of any adjoining or another property or into any abutting street shall be a violation of this section. Nothing in this section shall prohibit the washing of motor vehicles and the watering of lawns, flowers, plants, etc.

§ 213-270.1, Water disposal, or shall be referred by the Town of Babylon to the appropriate enforcement agency, such as the Suffolk County Department of Health Services and/or the New York State Department of Environmental Conservation and/or the United States Coast Guard and/or the United States Environmental Protection Agency.”

The Town has created a flyer:

### ***BEST MANAGEMENT PRACTICES FOR THE DISPOSAL OF CHLORINATED WATER FROM SWIMMING POOLS & HOT TUBS***

that indicates: “water from swimming pools and hot tubs often contain high levels of chlorine. Discharging chlorinated pool/spa water into storm drains (storm sewers), that in many cases lead to waterways is potentially harmful to fish and other aquatic life. This fact sheet was developed by the Town of Babylon, Department of Environmental Control to provide you with information on management practices that will minimize the impact of chlorinated water discharged from swimming pools and hot tubs. The following “Best Management Practices” apply to water discharged from swimming pools.

Chlorinated water from pools and hot tubs may be disposed on the ground or irrigated on your property under the following circumstances:

1. Discharge or irrigate the water on your property and ensure that it does not flow off your property.
2. Discharge or irrigate the water in a manner that will prevent nuisance conditions (such as creation of odors, and fly and mosquito breeding conditions). Nuisance conditions occur when water is ponded for a prolonged period.
3. Discharge or irrigate the water in an area where the water will not flow into a stream or storm drain (storm sewer).
4. If possible prior to disposing or irrigating the water, shut off the chlorination system if you have one, or stop adding chlorine.

Please be aware that pursuant to Chapter 213 of Town of Babylon Code, all water either overflowing or emptying from a swimming pool shall be disposed of on the lot whereon it is located, and shall show provisions made for preventing such water from flowing onto the land of any adjoining property owner or into any abutting street. Failure to prevent such water from flowing onto the land of any adjoining or another property or into any abutting street shall be a violation of this section.

NOTE: Water from back-flushing pool filters should not also be discharged to storm drains sewers, stream, or other waterways.”



# Babylon Stormwater Management Program Plan

## **Additional Information on Illicit Discharge Surveys**

The Department utilizes Environmental Interns that have been trained in illicit discharge detection and global positioning systems (GPS) technology for illicit discharge reconnaissance on an annual basis. This work is carried out in conformance with the United States Environmental Protection Agency publication; Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment.

Outfall locations are overlaid on Arc Info geographic information system map technology to create and update mapping of all discharge points. The Town of Babylon believes that it has mapped 99% of its discharge points to surface waters, approximately 400 outfalls. This mapping was updated in 2016 on GIS. To aid in all facets of its stormwater management program as well as illicit discharge detection, the Town of Babylon in the past applied for and was approved for Environmental Protection Fund monies to map the remainder of its drainage infrastructure on GIS. 100 % of its drainage infrastructure is mapped on GIS due to the Call's River watershed action plan work and the grant. This information is critical to the Town's stormwater management program.

Below are Departments involved with this work:

Department of Environmental Control-Program development and administration, public outreach, geographic information map (GIS) development and funding and global positioning system (GPS) field verification, illicit discharge inspection for illegal discharges and inspection of outfalls.

Department of Public Works Highway and Highway Engineering Divisions Construction, maintenance and inspection of the storm drain system, illicit discharge and cross connection detection, mapping of the storm drain system. These divisions are critical as "eyes" out in the field to find illicit discharges to the Town of Babylon storm drain system.

Department of Planning and Development Planning Division and Ordinance Enforcement, Data management and GIS mapping and updating of the storm drain system. Illicit discharge and cross connection detection, through site plan review.

Department of Performance Management Central Complaint Department for the Town of Babylon. Receives complaints including illicit discharges and refers over to the appropriate Department.

Department of Information Technology. Assists in program development through geographic information map (GIS) development of the stormwater drainage system and funding and global positioning system (GPS) technology purchase assistance/technical support.

# Babylon Stormwater Management Program Plan

Town Attorney's Office Adoption of Local Laws and Code changes and enforcement actions/legal actions against violators as needed

## **4. Construction Site Stormwater Runoff Control - SWMP Development Implementation**

The Town of Babylon at minimum must develop, implement, and enforce a program that provides equivalent regulation to either GP-02-01 or GP-08-001, unless more stringent requirements are contained within this general SPDES permit (GP-(Part VII.A.4.a.) that addresses stormwater runoff to its 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 New York State Department of Environmental Conservation.

The Town of Babylon adopted Local Law No. 10-2006 entitled Chapter 189 Stormwater Management and Erosion and Sediment Control on March 7, 2006. The effective date of the Code was March 15, 2006. See Appendix II for the adopted code. In its findings the Town Board of the Town of Babylon determined that:

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. This stormwater runoff contributes to increased quantities of water-borne pollutants, including siltation of aquatic habitat for fish and other desirable species. The Great South Bay and its tidal tributaries within the Town of Babylon have been placed on the New York State Department of Environmental Conservation (NYSDEC) Priority Water Bodies List. The NYSDEC identified urban runoff and storm drain systems as the major source/contributors to their impairment.
2. Clearing and grading during construction tends to increase soil erosion and add to the loss of native vegetation necessary for terrestrial and aquatic habitat.
3. Improper design and construction of stormwater management practices can increase the velocity of stormwater runoff, thereby increasing stream bank erosion and sedimentation.
4. Impervious surfaces allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream base flow.
5. Substantial economic losses can result from these adverse impacts to the waters of the Town of Babylon.
6. Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activity.

## Babylon Stormwater Management Program Plan

7. 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
8. Regulation of land development activities by means of performance standards governing stormwater management and site design will result in 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.

The Town Board of the Town of Babylon established Chapter 189 to apply to all land development activities within the Town of Babylon to provide reasonable guidance for the regulation of stormwater runoff and erosion and sediment control for the purpose of protecting local water resources from degradation. It was determined that the regulation of stormwater runoff and sediment discharges from land development projects and other construction activities is in the public interest 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 and will prevent threats to public health and safety and enhance and improve the environmental and economic conditions within the Town of Babylon. This Code is consistent with the Comprehensive Management Plan for the South Shore Estuary Reserve to reduce nonpoint source pollution of the estuary and its tributaries.

The Code was a milestone for the Town of Babylon Stormwater Management Program since in addition to standard drainage requirements associated with site development the Town of Babylon would now take a hard look at all development proposals in terms of erosion and sediment control for all land development activities as defined in the Code. A land development activity is defined in Chapter 189 as follows:

***LAND DEVELOPMENT ACTIVITY — Construction activity including clearing, grading, excavating, soil disturbance or placement of fill. [Amended 4-11-2007 by L.L. No. 8-2007]***

The definition is simple and to the point. There are several exemptions to the Code for minor projects that have been determined not to have any significant impact in connection with stormwater or sediment generation. However Chapter 189 is more restrictive than the State minimum requirement to address stormwater management and erosion and sediment impacts from development of sites of one acre in two ways. All projects under an acre that are not exempt are subject to the Code, but can meet the MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

requirements of the regulation through a Construction Activity Agreement (In Appendix). The Town of Babylon, being an intensely developed municipality, (little vacant buildable is available) reviews many projects under an acre on an annual basis. The Town had determined that these small projects, especially single family homes in moderate to high groundwater areas may have major impacts in terms of potential stormwater and sediment releases to waters of the Town of Babylon. The important component to this Code is that these projects may meet the requirements of the law, however if a full stormwater pollution plan is warranted, the Town may request that one be prepared for a site under an acre. The way the code was promulgated is that any land development activity is subject to the Code and it has become an integral part of site plan/building permit review. Although not recited in every portion of the various land use codes as in the State Model Code, it is a standalone requirement that subjects virtually any land development activity to its standards.

Although Chapter 189 is not a mirror image the State “NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control” equivalence was be documented using the NYSDEC Gap Analysis Workbook. Chapter 189 contains requirements for construction site operators to implement erosion and sediment control management practices, imposes sanctions to ensure compliance to the extent allowable by State or local law, 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, describes procedures for SWPPP review that incorporate consideration of potential water quality impacts and review of individual pre-construction SWPPPs to ensure consistency with State and local sediment and erosion control requirements, ensures that the individuals performing the reviews are adequately trained and understand the State and local sediment and erosion control requirements, all SWPPPs are reviewed for sites where the disturbance is one acre or greater, after review of the SWPPPs, the Town utilizes the latest version of the “SWPPP Acceptance Form” created by the NYSDEC and required by the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-08-001) when notifying construction site owner / operators that their plans have been accepted and approved by the permittee. The code includes 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 and the Town of Babylon has ensured 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 NYSDEC Department sponsored or approved training.

The Town conducted a meeting on November 15, 2016 to update and improve its Chapter 189 Stormwater Management and Erosion and Sediment Control enforcement and work flow procedures. New employees were updated on the procedures and the issuance of summons under Chapter 189 Stormwater Management and Erosion and Sediment Control violations. Stormwater Management and Erosion and Sediment Control violations were officially assigned to the Building Department. The reason being is that this storm water MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

code aligns well with land use regulation. A Workflow was created and is now integrated into the Town's complaint procedures. The result of this effort was very positive and roles are clearly defined for various Departments.

The following is a flow chart which shows how enforcement actions are undertaken with regards to Chapter 189:



# Babylon Stormwater Management Program Plan



## Environmental Control – Planning & Development Stormwater Runoff (189) December 12, 2016

DEC-Stormwater-  
189-EC Inspect  
Track  
(5 Target Days)

- Citizen Services
1. Open DEC-Stormwater-189-EC Inspect Track
  2. Send Message to EC (F5)

Environmental Control  
Inspection

EC  
Violations  
?

No

Yes

Environmental Control  
Close DEC-Stormwater-189-EC Inspect Track  
with Comments

End

DEC-Stormwater-  
189-EC NOV Track  
(15 Target Days)

- Environmental Control
1. Write/Post NOV
  2. Take Photo of NOV
  3. Close DEC-Stormwater-189-EC Inspect Track with Comments
  4. Open DEC-Stormwater-189-EC NOV Track
  5. If necessary, send letter to Property Owner
  6. If applicable, contact Suffolk County and/or New York State

EC  
TOBDEC to  
Process & Track  
?

Yes

No

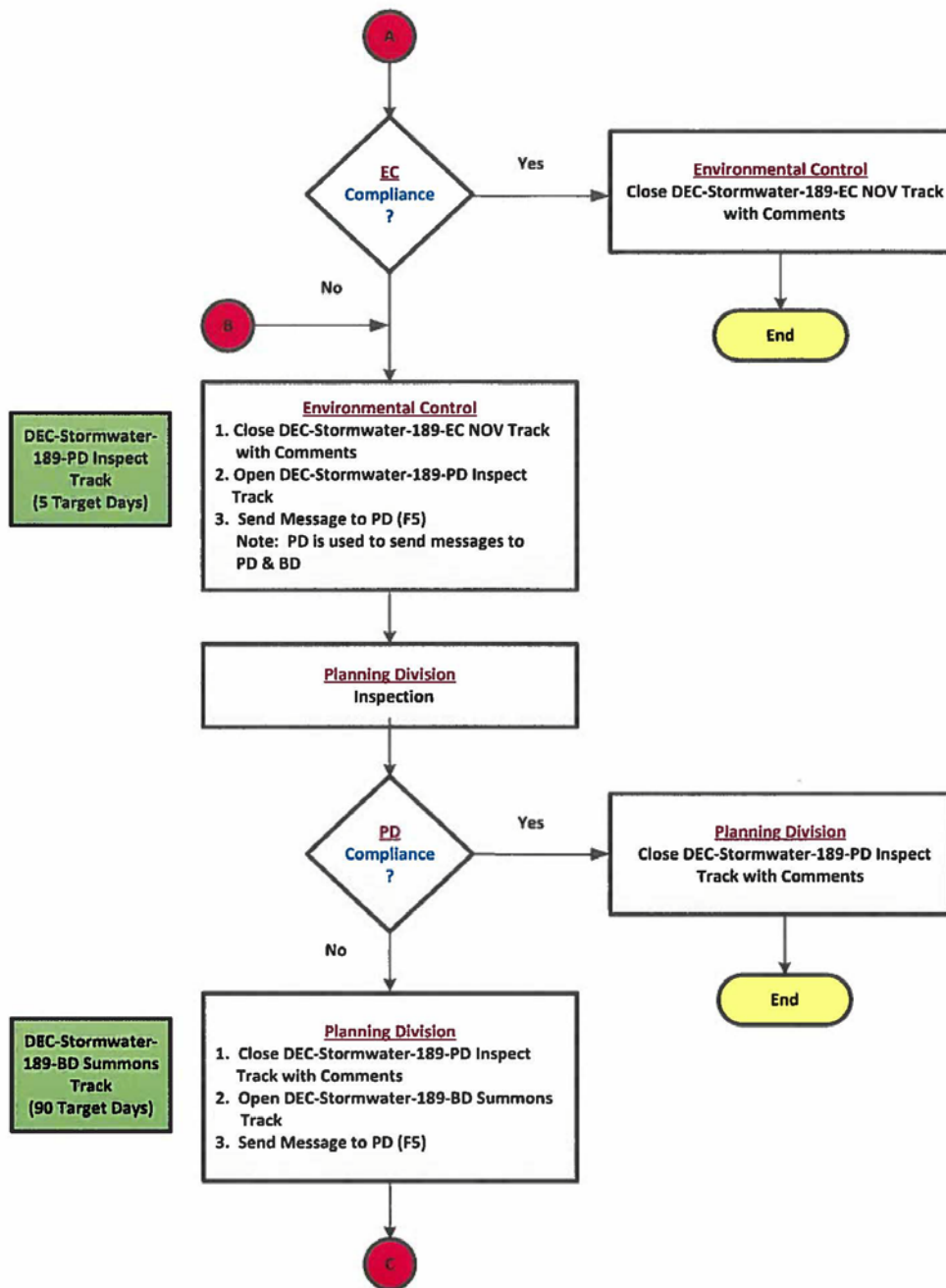
Environmental Control  
2<sup>nd</sup> Inspection



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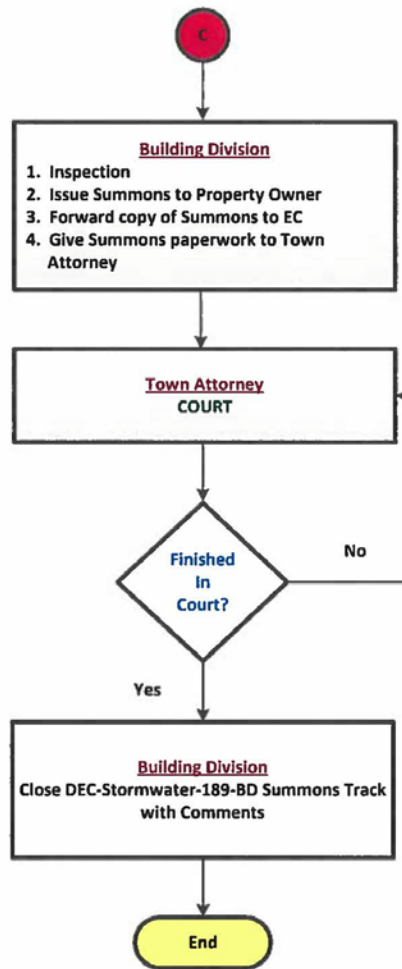
# Babylon Stormwater Management Program Plan



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# Babylon Stormwater Management Program Plan



Created by the Town of Babylon Supervisor's Office 2016

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# Babylon Stormwater Management Program Plan

Additionally, the Town has created a model Stormwater Pollution Prevention Plan (SWPPP) compliance checklist form to assist inspectors with on-site inspections of land development activities that trigger the full requirements of Chapter 189:



## Town of Babylon Chapter 189 Stormwater Pollution Prevention Plan (SWPPP) Construction Site Stormwater Compliance Inspection Report

|                                                                                        |                     |             |
|----------------------------------------------------------------------------------------|---------------------|-------------|
| Project Name and Location:                                                             | Date:               | Page 1 of 4 |
|                                                                                        | Permit# NYR         |             |
| Planning Board Application#                                                            | Entry Time:         | Exit Time:  |
| Municipality: County:                                                                  | Weather Conditions: |             |
| On-site Representative(s) and contact information:                                     |                     |             |
| Name and Address of SPDES Permittee/Title/Phone/Fax Numbers: Contacted: Yes [ ] No [ ] |                     |             |
| Permittee Email Address:                                                               |                     |             |

### Inspection Checklist

#### SPDES Authority

- | Yes No N/A                                                                                                                                                                | Corrective Action Needed |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is there a copy of the MS4 SWPPP acceptance form kept on site?                              | _____                    |
| 2. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is a copy of the Notice of Intent (NOI) posted at the construction site for public viewing? | _____                    |
| 3. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is an up-to-date copy of the signed SWPPP retained at the construction site?                | _____                    |
| 4. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is there a copy of the NYSDEC NOI Acknowledgement letter kept on site?                      | _____                    |

#### SWPPP Content

- | Yes No N/A                                                                                                                                                                 | Corrective Action Needed |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 5. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Does the SWPPP identify the contractor(s) and subcontractor(s) responsible for each measure? | _____                    |
| 6. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Does the SWPPP include all the necessary "CONTRACTOR CERTIFICATION" statements?              | _____                    |
| 7. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is the SWPPP signed/certified by the permittee?                                              | _____                    |

The complete form is provided in Appendix III

## Training

Construction site operator and employee training are crucial to this program. Training must occur at varying technical levels of expertise depending on the position of the employee in the organization. Higher levels of training are required for greater levels of responsibility and technical review. The Town is routinely setting up training as courses are available. Records are kept of all staff training. Training will occur on an annual basis for all employees involved with the Stormwater Program. Some of the training will involve refresher courses for senior employees. All new Town employees will receive training. The NYSDEC 4 hour erosion and sediment training will be conducted every two years by the Town for the local construction industry and appropriate Town employees in cooperation with the Suffolk County Soil Water Conservation District.

Staff is trained in Babylon Town from the following Departments:

Planning and Development and Building,  
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# Babylon Stormwater Management Program Plan

Department of Public Works

Environmental Control

The Town of Babylon also conducts training in house by bringing in experts or utilizing professional staff. Interns are trained annually on illicit discharge detection. For example in accordance with New York SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems Number GP-0-08-002 the Town set up the following training most recently:

Erosion and Sediment Control Construction Activity Training 4 Hour Course in  
accordance with the  
New York State Department of Environmental Conservation  
Requirements

Held October 27, 2016 at the Town of Babylon  
Green Room  
151 Phelps Lane  
North Babylon, New York 11703

This training was sponsored by the Town of Babylon Department of Environmental Control and instructed by the Suffolk County Soil Conservation District, Riverhead, NY. The Town of Babylon Planning Department reached out to local development interests to attend the training.

This course was geared towards contractors who carry out land development activities in the Town of Babylon. Land development activity is defined as construction activity including clearing, grading, excavation, soil disturbance, or placement of fill. The course satisfied the required training in order to comply with the contractors' responsibilities under the New York State Department of Environmental Conservation Construction Activity Permit. Attendees all received a NYSDEC Erosion and Sediment Control Card Certificate. In attendance at the workshop were contractors (primarily from the Town of Babylon), architects, engineers, environmental consultants and design professionals.

In addition, attending were employees who conduct reviews in connection with storm water management from the following Departments:

Planning and Development, Building and Engineering,

Department of Public Works, Highway Engineering

Environmental Control

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## Babylon Stormwater Management Program Plan

The Town will be creating a two year cycle for this NYSDEC approved 4 hour erosion and sediment control training in cooperation with the local Suffolk County Soil Water Conservation District to ensure continuity in training.

The Town of Babylon intends to continue and also improve its educational program in the area of stormwater management and erosion and sediment control for its employees. Additional training is required for new employees at all levels as well as increasing the knowledge for employees who have already undergone training.

### **Stormwater Pollution Prevention Plan Review Procedures**

The program must also include a regulatory mechanism to require a Stormwater Pollution Prevention Plan (SWPPP) for each applicable land disturbing activity that includes erosion and sediment controls that meet the State's most up-to-date technical standards. Chapter 189 meets these State requirements and additionally, the Town significantly strengthened its SWPPP review procedures during 2008, 2015 and 2016. Notice of Intents submitted to the NYSDEC must include a SWPPP Acceptance Form approved by the local municipality also reviewing the land development activity. So in addition to meeting the Town's own Chapter 189, the local MS4 has become responsible for the quality of the SWPPP submitted to the NYSDEC. Town of Babylon procedures involve the distribution of the proposed land development activity to each Department; review by Planning Environmental, Engineering and Highway Engineering and when all Departments have approved the SWPPP it is certified by the Town.

The following are the SWPPP review procedures:

### **Town of Babylon Stormwater Pollution Plan (SWPPP) Procedures**

A SWPPP is required for all land development activities \*one Acre or more in the Town of Babylon

Submit four hard copies of the SWPPP for review to the Town of Babylon Planning Department Planning attention: Denise Manoogian Senior Engineering Aide 957-7457

The SWPPP will then be distributed and reviewed by:

Planning-Denise Manoogian Senior Engineering Aide 957-7457

Planning/Engineering-Angelo Magliocco Assistant Civil Engineer 957- 3063

Department of Public Works (DPW) Highway Engineering –Frank Vaccaro,

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# Babylon Stormwater Management Program Plan

Engineering Supervisor 957-3092

Environmental Control-Richard Groh Chief Environmental Analyst 422-7640

The SWPPP must meet Town of Babylon Chapter 189 requirements as well Planning Board Specifications for drainage requirements and any other requirements imposed by DPW Highway Engineering as well as the most recent version of the New York State Stormwater Design Manual (NYS SWDM).

Link to Chapter 189: <http://ecode360.com/6809618>

Mitigation must be shown on the site plan, examples; location of silt screen, inlet protection, construction entrance, etc. Post construction maintenance and access Covenants and Restrictions required. A 4' separation to groundwater from drainage structures is required. Integrate green infrastructure as part of SWPPP to the greatest extent possible.

New York State Historic Preservation Office (SHPO) clearance is now required and the documentation must be included in the SWPPP. Visit this site for further information: <https://cris.parks.ny.gov/Login.aspx?ReturnUrl=%2f%3ftype%3dPR%26id%3dCHSJERDXETJC&type=PR&id=CHSJERDXETJC>

Water Quality Requirements must be met in accordance with the latest version of the NYS Stormwater Design Manual. The most efficient means to meet this requirement is to simply include the NYSDEC Notice of Intent (NOI) in the Appendix of the SWPPP. Revisions to the draft SWPPP may be done electronically to result in a final hard copy. Once approved by all Divisions three hard copies (or more if requested) and one CD of the final SWPPP are submitted to Environmental Control for Certification by the Town of Babylon. The preparer must also sign a certification on the document that it meets or exceeds Chapter 189 requirements. Environmental Control will retain one original and send one Town certified original to the applicant and Planning. Notice of Termination follows completion of construction and final inspections by Town.

\* In some instances the Town may require a SWPPP for land development activities on less than an acre.

## Employee Education

The Town of Babylon has a very extensive program with regards to educational programs of employees in relation to stormwater management. It is recognized that there is varying levels of education, training and a diversity of duties in connection with employees involved with the stormwater management program. The variety of staff positions from Department of Public Works field workers to building inspectors to planners and staff interns require different areas of stormwater education. Professional staff has received training in Certified Professional in Erosion and Sediment Control on October 27, 2016 through the local Soil Water Conservation District. The Department of Environmental Control administered Town of Babylon Planning Board Training on September 28, 2015. The Department of Environmental Control administered Department of Public Works Stormwater Training on March 30, 2016. Construction site operators training was

## Babylon Stormwater Management Program Plan

sponsored by the Town of Babylon in cooperation with the local Soil and Water Conservation District on October 27, 2016. The Town of Babylon hosted a seminar by Geese Peace on invasive waterfowl problems and control in March 2009. Higher level training for stormwater and erosion and sediment control for professional staff has been continuous on an annual basis. Education for Town of Babylon employees and construction site operator training is a critical and important part of the Town's stormwater management program. The Town has found that in addition to the technical aspects of training, employee awareness and interest in the program in greatly increased by education. This creates a strong supporting base for the program and aids enforcement efforts of Chapter 189 of the Code of the Town of Babylon Stormwater Management and Erosion and Sediment Control. As education events are scheduled by the Town of Babylon, Babylon makes available these programs to the three villages to assist them in their stormwater program and promote inter municipal cooperation. The Town of Babylon Public Works Department provides Annual training for its employees by viewing the video training film **Storm Watch**. This video focuses on municipal employees to utilize pollution prevention/good housekeeping/best management practices for municipal operations. The video was created by Excal Visual, 5721 Arapahoe Avenue, Suite A2 Boulder, CO 80303-1363. The Town has made this video available as a loaner to the three villages in the Town of Babylon: Amityville, Lindenhurst and Babylon.

The Town has ensured that construction site operators have received erosion and sediment control training before they do work within the Town's jurisdiction. Contractor training included posting of the training on the New York State Sea Grant list serve site, posting in the building department and planning department. The Town maintains an inventory of active construction sites that includes the location of the site and owner / operator contact information in its Engineering Division of the Planning Department. In terms of measurable goals regarding its construction site operators the Town will continue to assess the compliance with the Town's Chapter 189 Stormwater Management regulations. The Town's goals in this regard are to attain the highest level of compliance possible for construction operators in the Town of Babylon.

### **Construction Site Best Management Practices**

The Town has developed Best Management Practices (BMPs) for Construction Activity Agreements for land development activities under an acre below:

I agree to comply with the following:

- ✓ I will have available on-site this agreement and related plans during entire construction process. I will explain the requirements to all construction personnel

## Babylon Stormwater Management Program Plan

and subcontractors. I take responsibility for full compliance with this agreement and Chapter 189 regulations for all persons working in the vicinity of the construction site.

- ✓ No vegetation and/or trees may be cleared without first receiving a mark-out or authorization from Planning, Building and/or Engineering Inspectors. Only vegetation, topsoil, and trees specifically in the path of construction activity may be removed.
- ✓ No earth, fill or construction material shall be allowed to migrate off site from this project on to the Town of Babylon roadway and or storm drain system or an adjacent property.
- ✓ No fill shall be brought into a site without the express approval of a Building or Engineering inspector. Fill piles will only be allowed in location designated on plan, or authorized by Building/Engineering Inspector(s). Piles of fill shall be stabilized and/or contained with grass seed, silt fences, hay bales, or other approved methods.
- ✓ At the end of each workday the adjacent roadway and or storm drain system shall be inspected by owner or his/her designee for soil or other matter. All construction sites and adjacent roadways shall be cleared of soil and other material at the end of each day.
- ✓ All construction and demolition debris and materials, including wet concrete, shall be disposed of at an appropriate facility in accordance with all TOB and NYSDEC waste management regulations. Dumping any liquid, semi-liquid, or other materials from a construction site into storm drains, roadways, or vacant property is grounds for a violation.
- ✓ Litter shall be picked up on a daily basis from the site, adjacent properties and/or the road system.
- ✓ Toilet facilities shall be available to all workers on site during the construction period.
- ✓ A temporary stable construction entrance shall be constructed utilizing recycled concrete aggregate (RCA) or a similar material, unless a suitable constructed entrance already exists on the site.
- ✓ All municipal or private drainage inlets adjacent to area of construction shall be protected from dirt/matter/pollutants through the use of products/sponges designed for this purpose.
- ✓ On areas of steep slopes and areas cleared of vegetation, suitable stabilization methods, as shown on approved site plans and stormwater pollution prevention plan (SWPPP), shall be employed to prevent soil migration and stormwater runoff.
- ✓ All exposed expanses of soil shall be stabilized with annual grass seed as soon as areas will no longer be needed for construction staging, or if areas will remain undisturbed for six weeks or longer.

## Babylon Stormwater Management Program Plan

- ✓ Prior to tree, shrub, or other plantings, soil shall be suitably tilled and prepared.

For projects involving a SWPPP the following BMPs are included in SWPPP:

1. All erosion and sediment control measures shall be put in place prior to the start of any ground disturbances. The installation of the temporary control devices will be completed in accordance with both the information and details shown on the SWPPP Erosion and Sedimentation Control Plan ST-8 and civil-site plans for the project.
2. Install in accordance with the Manual of New York Guidelines for Urban Erosion and Sediment Control, any required additional erosion control devices that may be required by the Engineer,.
3. Temporarily stabilize all landscaping areas by seeding and provide silt fencing along the bottom of all slopes.
4. Temporarily stabilize all stockpiled materials by seeding and/or constructing straw bale dikes or silt fences around the base of the stockpiled materials
5. Complete final stabilization of disturbed areas.
6. Maintain all erosion control devices for the duration of the construction work by cleaning, repairing and/or replacing the control measures as may be necessary or as directed by the engineer.
7. Immediately cleanup all materials spilled, dropped, washed or tracked onto any paved surfaces beyond the limits of the project.
8. The applicant or developer or his or her representative shall be on site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all erosion and sediment control practices. Inspection reports shall be completed every seven days and within 24 hours of any storm event producing 0.5 inches of precipitation or more. The reports shall be delivered to the Engineering Division and also copied to the site log book.

## Babylon Stormwater Management Program Plan

9. For purposes of TOB Code compliance, town personnel, including but not limited to Building Inspectors, Ordinance Inspectors, Engineering inspectors, Highway/DPW personnel, Planning personnel, and/or representatives from the Department of Environmental Control, are authorized to access construction site.

10. The SWPPP will be available on-site at all times along with related plans. The project sponsor shall explain the SWPPP requirements to all construction personnel and subcontractors. A sign shall be placed on the site indicating where the SWPPP can be viewed.

11. No vegetation and/or trees may be cleared without first receiving a mark-out from Planning and/or Engineering Inspectors. Existing vegetation and trees shall remain in place until after construction is complete. Only vegetation and trees specifically in the path of construction activity may be removed.

12. No earth, fill or construction material shall be allowed to migrate off site from this project on to the Town of Babylon roadway and or storm drain system or an adjacent property.

13. No fill shall be brought into a site without the express approval of a Building or Engineering inspector. Piles of fill shall be stabilized and/or contained with grass seed, silt fences, hay bales, or other approved methods.

14. At the end of each workday the adjacent roadway and or storm drain system shall be self inspected for material. All construction sites and adjacent roadways shall be cleared of soil and other material at the end of each day.

15. All construction and demolition debris and materials, including wet concrete, shall be disposed of at an appropriate facility in accordance with all TOB and NYSDEC solid waste management regulations. The discharge of any liquid, semi-liquid, or other materials from a construction site into storm drains, roadways, or vacant property is grounds for a violation.

16. Litter shall be picked up on a daily basis from the site, adjacent properties and/or the road system.

17. Toilet facilities (either portable or existing) shall be provided for the workers on the site during the construction period.

18. All municipal or private drainage inlets adjacent to area of construction shall be protected from pollutants through the use of products/sponges designed for this purpose.

19. On areas of steep slopes and areas cleared of vegetation, suitable stabilization methods, as shown on approved site plans and stormwater pollution prevention plan (SWPPP), shall be employed to prevent soil migration and stormwater runoff.

20. All exposed expanses of soil shall be stabilized with annual grass seed as soon as areas will no longer be needed for construction staging, or if areas will remain



## Babylon Stormwater Management Program Plan

undisturbed for six weeks or longer.

21. 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 chapter. Sediment shall be removed from stormwater structures whenever their design capacity has been reduced by 50%. Street sweeping by broom or machine or other suitable means of cleanup shall be conducted daily as necessary for any sediment or material that has inadvertently migrated off site. Litter shall also be removed on a daily basis from the site or off site.

The foregoing BMPs are appropriate to ensure the reduction of all POCs in stormwater discharges to the MEP.

To fulfill the requirements of the regulations and for the stormwater annual report the Town of Babylon has created record keeping procedures for the following:

Number of SWPPPs reviewed

Number and type of enforcement actions

Percent of active construction sites inspected once

Percent of active construction sites inspected more than once

Number of construction sites authorized for disturbances of one acre or more and the development of procedures to determine the effectiveness of the program, BMP and measurable goal assessment.

### **5. Post Construction Stormwater Management**

The Town has developed procedures for Post-Construction Stormwater Management Implementation and inspection. The Town has developed Covenants and Restrictions to be adopted following the approval of SWPPPs that address post construction stormwater management. Language developed for SWPPPs to implement post construction management is as follows:

#### COVENANTS AND RESTRICTIONS FOR ACCESS AND MAINTENANCE

In accordance with Section 189-8 of the Code of the Town of Babylon, Maintenance and Repair of Stormwater Facilities, the following Covenants and Restrictions will be filed:

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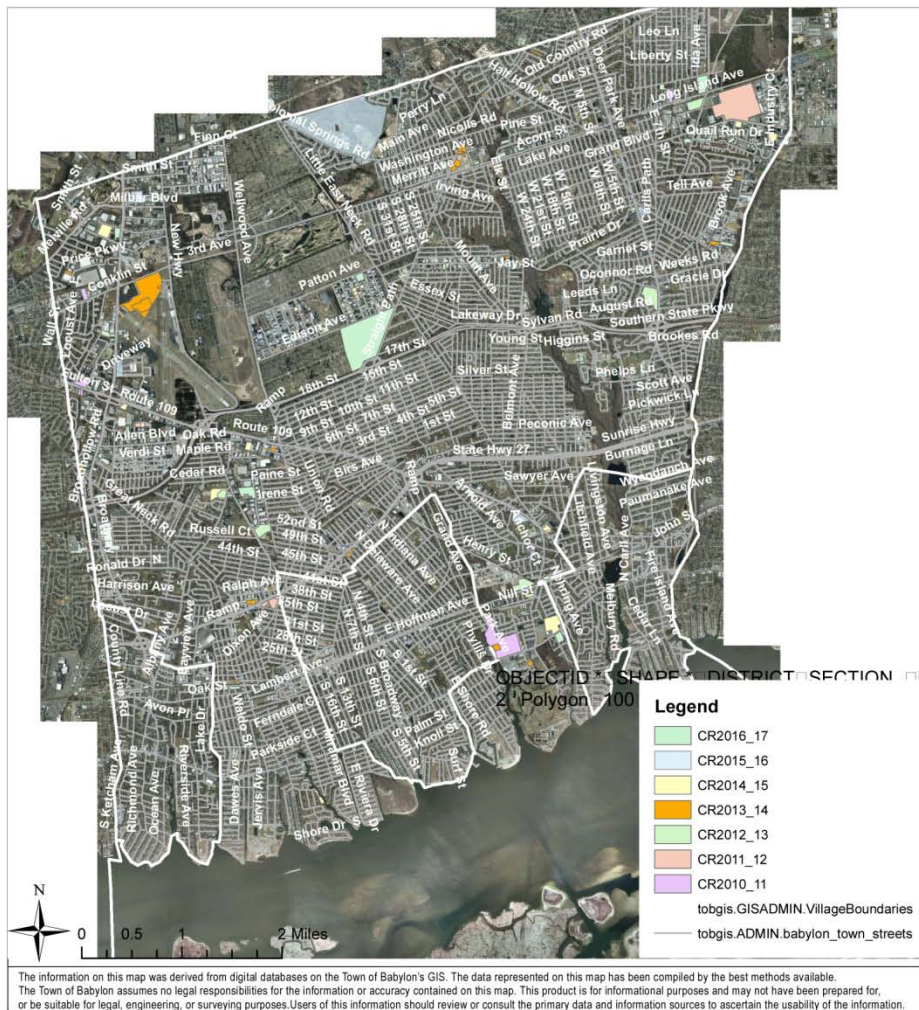
## Babylon Stormwater Management Program Plan

1. Maintenance access. The applicant or developer must execute a maintenance access agreement for the stormwater infrastructure on site that shall be binding on all subsequent landowners. The agreement shall provide for access to the stormwater infrastructure facility at reasonable times for periodic inspection by the Town of Babylon and its officers to ensure that the infrastructure is maintained in proper working condition to meet design standards and any other provisions established by this Chapter 189. The agreement shall be recorded by the grantor in the Office of the Suffolk County Clerk after approval by the Town of Babylon Planning Board.
2. Maintenance after construction. Stormwater management practices installed in accordance with Chapter 189 shall be operated and maintained to ensure that the goals of Chapter 189 are fully achieved. Agreement of the foregoing shall be recorded by the grantor in the Office of the Suffolk County Clerk after approval by the Town of Babylon Planning Board. Proper operation and maintenance includes, as a minimum, the following:
  - A. 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 Chapter 189.
  - B. Written procedures for operation and maintenance and training new maintenance personnel.
  - C. Discharges from the SMPs shall not exceed design criteria or contribute to water quality standard violations in accordance with § 189-8B of the Code of the Town of Babylon.
  - D. Upon completion of construction, any stormwater control structures impacted during construction shall be cleaned by the owner or operator.
    - a. Catch Basins shall be inspected for sediment and litter/solid waste annually.
    - b. Drywells shall be inspected for sediment and litter/solid waste annually.
    - c. Based on the annual inspections, catch basins and drywells shall be cleaned as necessary to insure the proper operation of the infrastructure.
    - d. Street sweeping of the parking lots and access roads shall be conducted no less than four times annually and if conditions warrant, e. g. sediment accumulated on surfaces, additional times as necessary.
  - E. Maintenance agreements. The applicant must submit a formal maintenance agreement for stormwater management facilities binding on all subsequent landowners to be approved by the Town of Babylon Planning Board and recorded by the applicant in the Office of the Suffolk County Clerk as a deed restriction on the property once the final plan is approved or at which time the Town of Babylon Planning Board deems appropriate.

In addition the Town of Babylon requires covenants and restrictions to maintain drainage on virtually all projects that undergo site plan review. The Town has developed an

# Babylon Stormwater Management Program Plan

Inventory of Post Construction Stormwater sites that have undergone site plan review since 2010.



Town of Babylon



Richard Schaffer  
Supervisor

## Town of Babylon Post Construction Stormwater Management Practices Covenants and Restrictions

Created by  
Department of  
Environmental Control  
Victoria A. Russell, Commissioner

February 27, 2017

## Babylon Stormwater Management Program Plan

Geographic Information System Map of all private sites where the Town has caused Post Construction Stormwater Management Covenants and Restrictions (C & Rs) to be adopted. The C & Rs are recorded on the deed of the subject property.

It is noted that the Town requires post construction stormwater management for sites under an acre as well as the acre or more that is mandated by the NYSDEC regulations. The Town inspected all of the post construction stormwater sites that have been inventoried, during 2016. All inspectors were trained prior to going out in the field. A uniform inspection sheet has been developed and is included in Appendix IV.

### **Stormwater Management and Erosion and Sediment Control Code**

The Town of Babylon local regulation is more stringent than required by NYS GP-0-08-002. The Town defines a **LAND DEVELOPMENT ACTIVITY** — Construction activity including clearing, grading, excavating, soil disturbance or placement of fill. [Amended 4-11-2007 by L.L. No. 8-2007]. Most all development projects are subject to Chapter 189. However projects under one acre can meet the requirements of Chapter 189 by meeting certain standards. The Town handles projects less than one acre with a construction activity agreement. The elements of the agreement are included on the site plan for the project and the sponsor also has to sign an agreement indicating that these standards will be followed. However it is discretionary, and the Town has the ability to require a full Stormwater Pollution Prevention Plan (SWPPP) for virtually any project with the potential of generating stormwater runoff and or sediment contributions to waters of the State. The vast majority of development projects reviewed by the Town of Babylon fall under one acre. In light of this, the Town feels that its regulation is highly effective because it addresses stormwater management erosion and sediment control on numerous projects that would not be regulated because they are under an acre. And the Town feels that the conditions contained in the Construction Activity Agreement are reasonable and only incur minimal costs. Inspections of construction activity are conducted by Planning and Development, Planning, Engineering and Building Divisions, Environmental Control and the Department of Public Works Highway Engineering. Post construction management is addressed through the preparation of SWPPPs and the adoption of Covenants and Restrictions. The Town also frequently requires adoption Covenants and Restrictions for maintenance of stormwater drainage infrastructure on private sites. Maintenance of stormwater facilities is essential to long term stormwater management objectives in the Town of Babylon. The Town also did adopt Chapter 190 The pertinent section of Code is as follows. Illicit discharge prohibited. No person or entity may create or cause an illicit discharge to flow, to infiltrate or in any manner or MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

form to enter into the Town of Babylon storm drainage system in violation of this chapter and/or Suffolk County Department of Health Services and/or the New York State Department of Environmental Conservation and/or the United States Coast Guard and/or the United States Environmental Protection Agency regulations. Illicit discharges discovered by the Town of Babylon may constitute a violation of this chapter to the limit of authority of the Town of Babylon as provided in § 213-270.1, Water disposal, or shall be referred by the Town of Babylon to the appropriate enforcement agency, such as the Suffolk County Department of Health Services and/or the New York State Department of Environmental Conservation and/or the United States Coast Guard and/or the United States Environmental Protection Agency.

The Town also included application review fees as a means of supplying revenue to fund the Town of Babylon Stormwater Management Program. This aspect of the Code has been very successful in helping to carry out the program.

The complete Code Chapter 190 may viewed on the Town of Babylon web site at [townofbabylon.com](http://townofbabylon.com) under the Town Code.

The Code also includes a section on Illicit Discharges; Section 189-10 Illicit Discharges

### Technology Standards

The Town of Babylon recognizes that with written notification by the New York State Department of Environmental Conservation, it 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 general SPDES 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.

### Pathogen Impaired Watershed MS4s

Pathogen Impaired Watershed MS4s are mapped in Appendix 6 and 7 of New York State Department of Environmental Conservation Municipal Separate Storm Sewer Systems (MS4s) Permit No. GP-0-08-002 issued pursuant to Article 17 Titles 7, 8 and Article 70 of the Environmental Conservation Law Part IV.) The Town of Babylon is not in a mapped area and therefore not subject to these requirements. However, the Town of Babylon is voluntarily carrying out a number of the requirements to further the effectiveness of its stormwater program and some requirements overlap with other requirements of GP-0-08-002 or are a part of the implementation of a watershed action plan.

The Town of Babylon has two programs that specifically target animal waste, The Pooper Scooper Program and also the Waterfowl Control Program. Both of these programs target MS4 SPDES No. NYR20A043



## Babylon Stormwater Management Program Plan

animal waste as a pollutant of concern. Included in the program are ongoing public education and outreach program designed to describe the impacts of Pathogens (the POC) on waterbodies. The program identifies the potential sources of Pathogens in stormwater runoff and describes 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.

Educational materials addressing the sources of Pathogens in stormwater and pollutant reduction practices have been developed by the Town of Babylon.

### **Nitrogen Watershed MS4s**

Nitrogen Watershed MS4s are mapped in Appendix 8 of New York State Department of Environmental Conservation Municipal Separate Storm Sewer Systems (MS4s) Permit No. GP-0-08-002 issued pursuant to Article 17 Titles 7, 8 and Article 70 of the Environmental Conservation Law Part IV.) The Town of Babylon waters are not included in this mapping at the time of this update. However the Town is fulfilling many of the requirements under this designation voluntarily.

## **6. Pollution Prevention/Good Housekeeping For Municipal Operations – SWMP**

As part of its Stormwater Management Program the Town of Babylon must develop and implement a pollution prevention / good housekeeping program for municipal operations and facilities that addresses municipal operations and facilities that contribute or potentially contribute POCs to the MS4 system. During 2015-2016 the Town of Babylon inventoried all of its facilities. This was a significant undertaking and utilized a substantial amount of staff time. The inventory of Town facilities is included in this document as Appendix A. The Town visited and inventoried all these facilities in 2015 and started conducting annual inspections in 2016. A self inspection of these facilities was part of this 2016 comprehensive inspection initiative. All employees conducting the inspections received training. For critical facilities, the inspections were personally conducted by the Town storm water manager and personnel and or Division Head in charge of the facility. Where deficiencies in operations or practices or BMPs were identified, the Town took prompt corrective action within weeks of the inspections. The Town has significantly expanded its best management for one site, the Town of Babylon Department of Public Works Highway and Building and Grounds Facilities, (a critical facility) and best housekeeping practices being implemented at this site. Due to its importance and significance, this particular Town facility site is the special focus for Best Management Practices and Good Housekeeping Practices. The Town has developed a draft uniform annual inspection form for its facilities:



# Babylon Stormwater Management Program Plan



## Town of Babylon Municipal Facility

### Uniform Annual Stormwater Inspection Data Sheet

Date of Inspection: \_\_\_\_\_  
Inspectors Name: \_\_\_\_\_  
Department: \_\_\_\_\_  
Name of Facility: \_\_\_\_\_  
Type of Facility: \_\_\_\_\_  
Site Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Primary Site Contact: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
E Mail Address: \_\_\_\_\_

#### Drainage Facilities and Parking

Condition of Drainage Structures

Visibly clogged: \_\_\_\_\_

Filled with Sediment: \_\_\_\_\_

Discoloration or Evidence of Petroleum or Chemical Discharge: \_\_\_\_\_

Damaged: \_\_\_\_\_

Odor: \_\_\_\_\_

The full form is included in Appendix V.

The operations and facilities 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 and other areas of concern. The Town of Babylon conducted a self assessment of all its facilities in 2016 and will do a self assessment every three years thereafter. Specific self assessment requirements include:

A. At a minimum frequency of once every three years, the Town of Babylon will perform a self assessment of all municipal operations in accordance with NYSDEC guidance documents for facilities identified by the SWMP to:

1. Determine the sources of pollutants potentially generated by the Town of Babylon operations and facilities; and
2. Identify the municipal operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already;
3. Determines management practices, policies, procedures, etc. that will be developed and implemented to reduce or prevent the discharge of (potential) pollutants.
4. Utilize 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;
5. Prioritize 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 permittee's capabilities;

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## Babylon Stormwater Management Program Plan

6. addresses pollution prevention and good housekeeping priorities;

7. Includes employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;

8. Requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet permit The Town of Babylon Department of Public Works has hired its stormwater drainage consultant; Pavement Services Inc. for Stormwater Pollution Prevention activities. The Town has also implemented Best Management Practices at the Town of Babylon Recycling Center. The Town has purchased two new waste oil tanks for the Town of Babylon Recycling Center during 2008 with full containment and fill protection in accordance with Suffolk County Department of Health Services requirements to replace a dilapidated waste oil tank. The new tanks help prevent surface spills of hydrocarbons at this facility. The Town has also purchased Pig oil spill pads and rolls on an annual basis to contain releases of oils especially hydraulic fluids from heavy equipment. Employees were trained to utilize these absorbent materials.

The Town of Babylon Department of Public Works has eliminated sand as a component of its highway deicing procedures. The Town currently follows Best Management practices originally recommended by the County of Suffolk to minimize the amount of highway deicing materials from an environmental and economic standpoint. One potential beneficial impact of using exclusively salt will be the elimination of large amounts of sediment annually contributed to the area roadways and potentially the stormwater system and surface waters.

## Babylon Stormwater Management Program Plan

### **Focused Best Management Practices (BMP) Program The Town of Babylon Main Highway Yard and Building and Grounds Facilities**

The Town of Babylon Main Highway Yard and Building and Grounds facilities are the most important, critical Department of Public Works facilities managed by the Town of Babylon. This is the base of operations for the Town's public works department and main equipment yard for its trucks, pay loaders, trailers and vehicle maintenance and repair. In times of inclement weather vehicles are deployed from these facilities to help protect the health safety and welfare of Town residents. Additionally, this is one of the primary Departments involved with storm recovery for the municipality.

## Babylon Stormwater Management Program Plan

### **Town of Babylon Highway and Building and Grounds Yard**



In the past several years significant BMPs and efforts to reduce storm water inputs to groundwater and surface waters have been implemented by the Town of Babylon at these facilities. Pollution prevention, good housekeeping and self assessment are included in these efforts. These efforts include but are not limited to the following:

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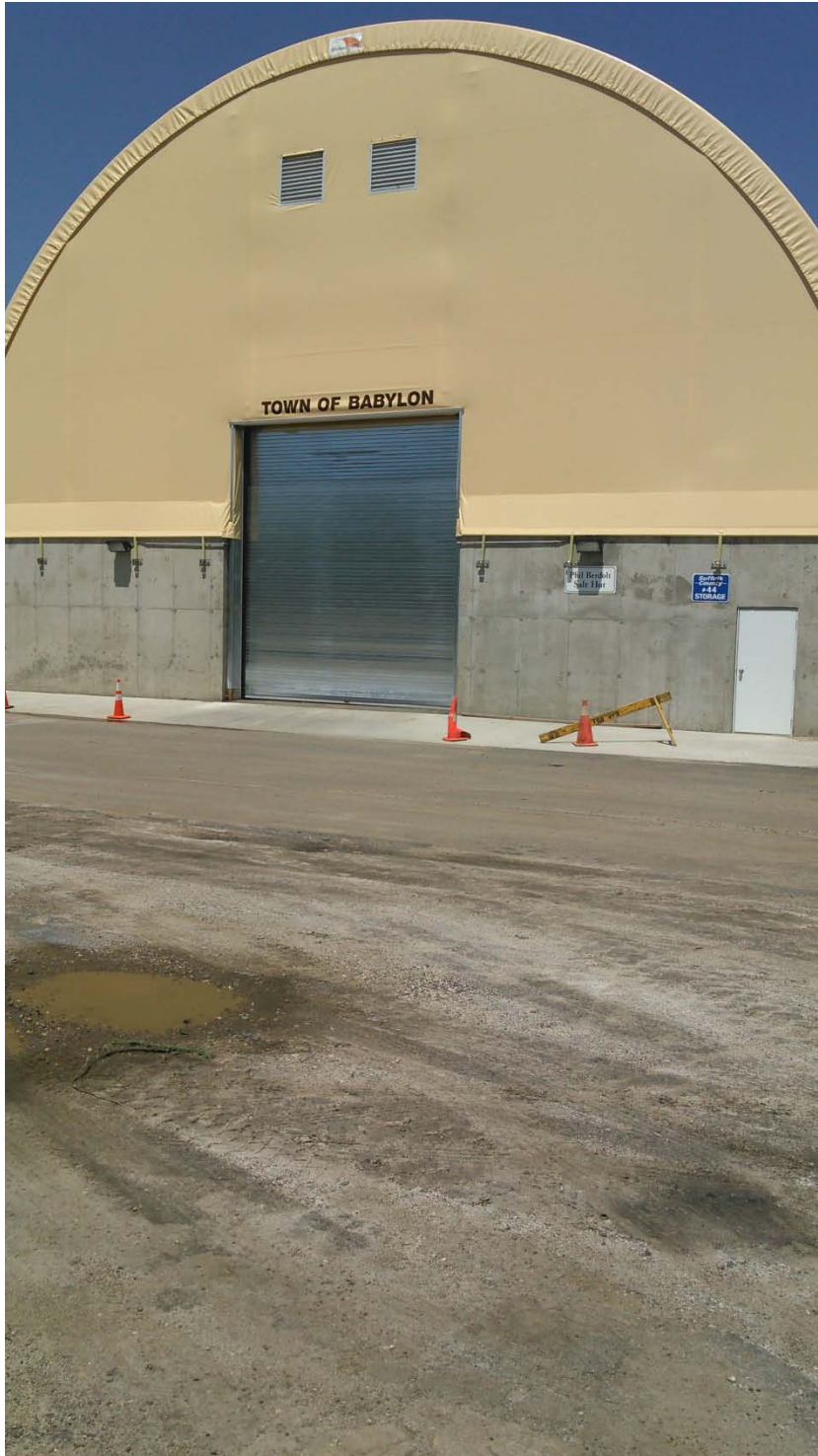
## Babylon Stormwater Management Program Plan

### Significant BMP Milestones Main Highway Yard and Building& Grounds Facilities

|                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elimination and Remediation of Underground Control Injection Wells in the Main and Secondary Vehicle Maintenance Building in accordance with Suffolk County Department of Health Service (SCDHS) requirements. This eliminated a pathway for pollutants to enter groundwater resources. |
| Design of a hold and haul system in the Main and Secondary Vehicle Maintenance Building in accordance with SCDHS requirements for snow melt from vehicles and machinery being serviced during snow emergencies                                                                          |
| Construction of a fully enclosed Salt Storage Building in accordance with Suffolk County Department of Health Service Article 12 Requirements                                                                                                                                           |
| Implementation of full SCDHS Article 12 requirements for all tank and drum storage at the maintenance facilities                                                                                                                                                                        |
| Implementation of full use of absorbents, handling of fluids in the facilities                                                                                                                                                                                                          |
| Completion of NYSDEC approved Underground Storage Tank (UST) Training for entire Town workforce that utilize the Central (and other) Fueling Facility. Implementation of BMPs at facility including signage and emergency response kits at pump islands.                                |
| Annual Stormwater Training for DPW employees                                                                                                                                                                                                                                            |
| Annual Inspection of Facilities and Self Inspection Every 3 years                                                                                                                                                                                                                       |
| The Town secured a \$100,000 Suffolk County Water Quality Grant to implement BMPs at these facilities. The Town is proceeding with this work.                                                                                                                                           |



## Babylon Stormwater Management Program Plan



BMP Materials Management Road Salt The Town constructed a new salt storage facility at the Main Highway Yard in accordance with Suffolk County Department of Health Services requirements. This was a significant and costly undertaking for the Town and resulted in the implementation of an important BMP for handling large quantities of salt used for highway deicing.

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## Babylon Stormwater Management Program Plan



BMP Highway Maintenance Garage Properly contained drum storage in 110% Containment diked area

## Babylon Stormwater Management Program Plan



BMP Absorbent Pads at Highway Maintenance Building for hydrocarbon spill cleanup. Good housekeeping by Town of Babylon DPW garage personnel in connection with liquid waste management. All waste fluids are stored in approved containment areas and tanks and disposed in accordance with applicable regulations.

## Babylon Stormwater Management Program Plan



BMP DPW staff and consultant meeting 2016 on BMP implementation for a new liquid waste hold and haul system for the Highway Maintenance Building

The Town of Babylon conducted a self assessment of the facility (as well as all Town facilities) during 2016 and it was determined that management of the facility was excellent with good housekeeping practices being implemented by employees. Where deficiencies were found, improvements to the operation were immediately implemented. Capital improvements are discussed on page 70.

Annual recordkeeping in connection with municipal operations in the Town of Babylon include 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, pounds of pesticides / herbicides applied as pure product, staff training events and number of staff trained and report on effectiveness of program, BMP and measurable goal assessment. Most of this data is submitted annually in the Town of Babylon Annual Stormwater Report to the NYSDEC.

Implementation Departments include:

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# Babylon Stormwater Management Program Plan

Department of Environmental Control  
Department of Public Works  
Department of Information Technology

Other recent activities at the Town of Babylon Department of Public Works Highway Yard maintainace shop was voluntary remediation of the underground control injection wells (UICs) in accordance with Suffolk County Department of Health Services requirements. Plans for a hold and haul system of tanks for potentially contaminated run off from melt water during vehicle repairs have been approved by the SCDHS. The Town has a local agreement with a car wash for smaller vehicles in its fleet.

The Town has developed conceptual plan to construct a truck/equipment washing facility in its Highway Yard. This facility would be connected to sewers and would be in an enclosed structure. This runoff would be captured by catch basins and would go to a sediment settling basin and then would be discharged to the local sewer district. A conceptual plan is as follows:

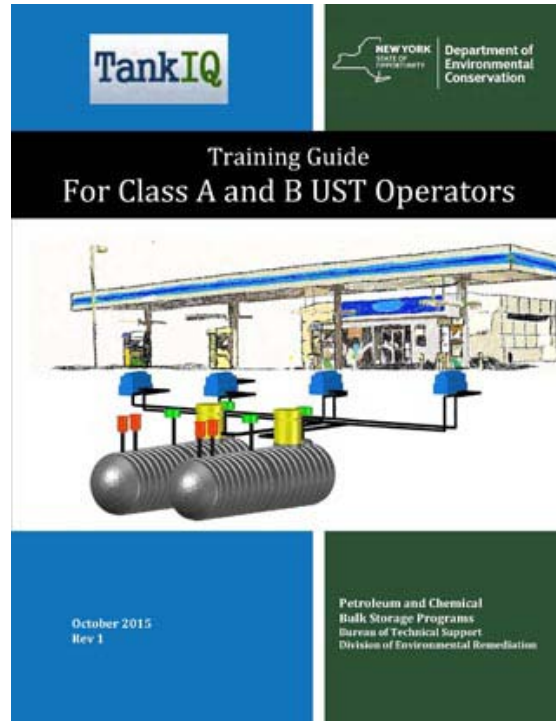


Concept Plan Town of Babylon Truck Wash



## Babylon Stormwater Management Program Plan

### New York State Department of Environmental Conservation Underground Storage Tank Training



### BMP NYSDEC Underground Storage Tank Training

The Town of Babylon complied with the New York State Department of Environmental Conservation new regulations for underground storage tank regulations in 2016. The regulations required testing of key personnel and training of all employees that utilized the Town's fueling facilities including the Central Fuel Facility located with the Town of Babylon Highway Yard. The Town prepared a PowerPoint presentation for the training which was approved by the NYSDEC. This program caused a number of useful additional BMPs to be implemented at the Central Fuel Facility. This training included spill response, notification and also resulted in the installation of spill kits at the facility. Training of new employees will occur on an annual basis. This program is a good example of how other environmental programs compliment the Town's MS4 program. See Appendix VI for the Town of Babylon NYSDEC approved Underground Storage Tank PowerPoint Training Program.

## Babylon Stormwater Management Program Plan



The Town of Babylon Central Fuel Facility Supplies Gasoline, Diesel and Biodiesel to the Towns Fleets and Machinery



## Babylon Stormwater Management Program Plan



BMPs Implemented at the Town of Babylon Central Fuel facility  
Spill Response Kit, Signage and Speedy Dry

## Babylon Stormwater Management Program Plan



BMPs Implemented at the Central Fuel facility  
Speedy Dry and Signage

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## Babylon Stormwater Management Program Plan

BMPs Implemented at the Central Fuel facility



Speedy Dry and Absorbent Pads  
BMPs Implemented at the Central Fuel facility

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# Babylon Stormwater Management Program Plan

## Third Party Certification

Third Party certification applies when the Town of Babylon relies upon any third party entity to develop or implement any portion of its SWMP. Examples include, but are not limited to a non-government, commercial entity that receives payment from the Town of Babylon

for services provided (for example businesses that create policies or procedures for the Town of Babylon to perform illicit discharge identification and track down, maintain roads, remove snow, clean the stormwater drainage system, sweep streets, etc. )

The Town of Babylon 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 Town of Babylon stormwater management program and agree to implement any corrective actions identified by the Town of Babylon or designated representative.

I also understand that the Town of Babylon 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 noncompliance by Town of Babylon will not diminish, eliminate, or lessen my own liability.”\_\_\_\_\_

Dated\_\_\_\_\_

The following information must be included with the Certification:

1. Identify the activities that the third party entity will be responsible for and include the name and title of the person providing the signature;
2. The name, address and telephone number of the third party entity;
3. An identifying description of the location of the work performed; and
4. Per above, the date the certification statement, contract or other agreement

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## Babylon Stormwater Management Program Plan

is signed.

### **Underground Injection Control Well Remediation's**

In some locations, groundwater contamination has also occurred because of discharges of organic chemicals and heavy metals to on-site sanitary systems. The Town has addressed a tremendous number of these situations through its Underground Injection Control Well (UIC) remediation program, by systemically creating work plans, sampling and ultimately remediating these structures at part of property acquisition and demolition.

In other situations the Town has conducted remediation work at existing facilities. The Town has two outside bids to accomplish this work. The program is highly effective. Over 160 UIC structures have been remediated by the Town in accordance with Suffolk County Department of Health Services and New York State Department of Environmental Conservation requirements.

The following is a map of the Wyandanch locations where this work has been accomplished:

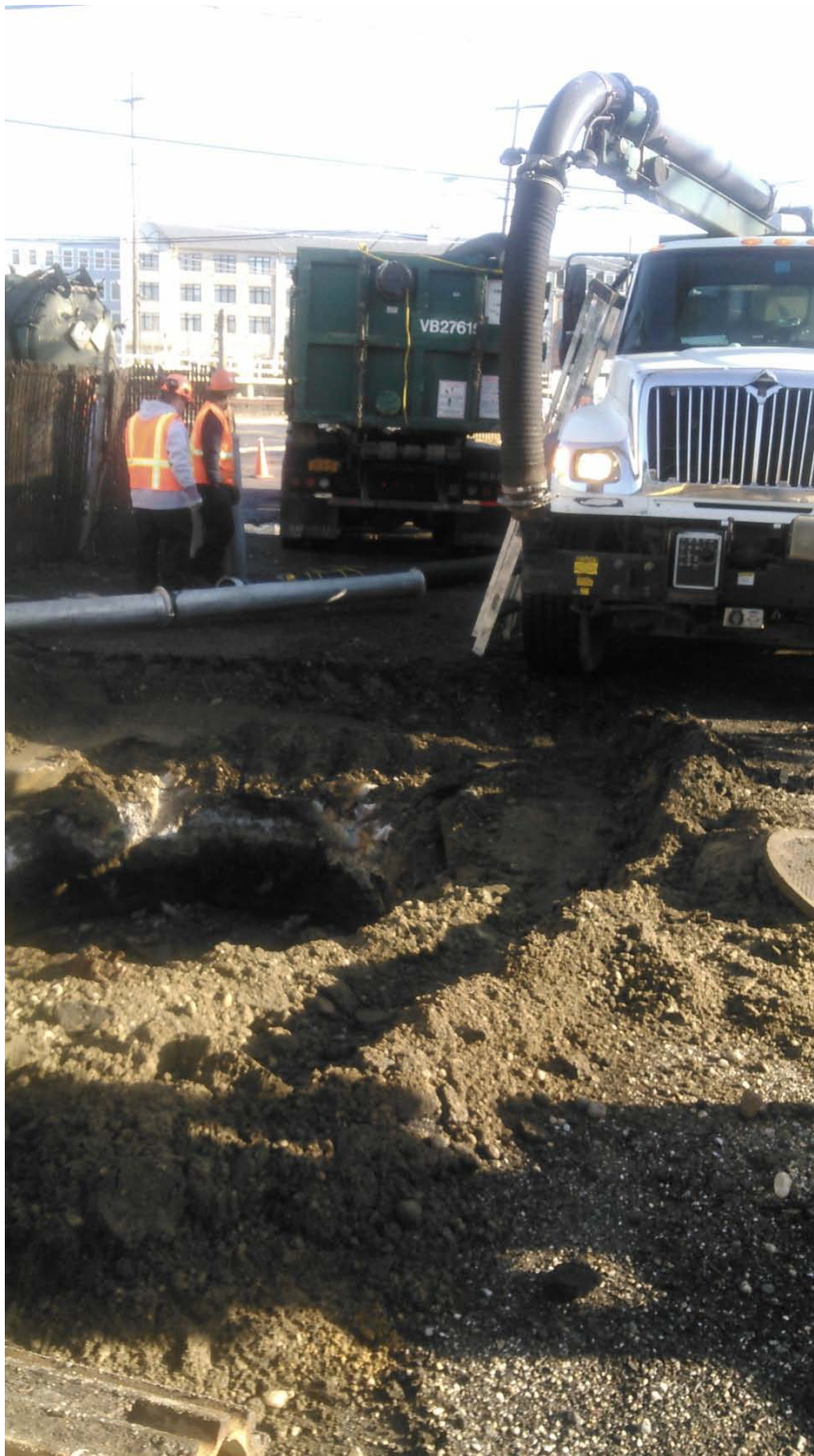


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## Babylon Stormwater Management Program Plan



UIC Remediation at 300 Long Island Avenue Wyandanch, NY

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## Babylon Stormwater Management Program Plan



UIC Remediation at 300 Long Island Avenue Wyandanch, NY

MS4 SPDES No. NYR20A043



## Babylon Stormwater Management Program Plan

The Town has also conducted UIC remediation work at its two North Indiana maintenance facilities sites conducting cleanups and physically removing the systems. All work was done in accordance with Suffolk County Department of Health Services (SCDHS) Office of Pollution Control recommendations resulting in SCDHS letters of not further action. These facilities are in the process of connecting to the South west Sewer District for any incidental runoff as a result of operations.

### **Tank Upgrades**

The Town has over the last few years carried a significant tank upgrade program at its main highway yard and building and grounds yards. In addition, tank upgrades are undertaken at other facilities as appropriate.



Tank removal by the Town of Babylon at a Town facility

This is very important to meet the goals of the MS4 program. This program is to insure

MS4 SPDES No. NYR20A043

## Babylon Stormwater Management Program Plan

that no incidental release of petroleum products or any other regulated chemicals occurs at Town facilities. This has included the upgrades of the drum storage to provide 110% diked containment.



Upgraded Waste Oil Tanks at the Town of Babylon Recycling Center

All of these upgrades were in accordance with SCDHS requirements. Special attention is given to the Central fuel filling facility, considered a “hotspot” under the MS4 regulations. A spill response kit is at the facility and all Town personal are instructed to immediately report any incident in connection with the facility.

# Babylon Stormwater Management Program Plan

## **Appendices**



# Babylon Stormwater Management Program Plan

## **I .....Inventory of Town Facilities**

# Babylon Stormwater Management Program Plan

## **II.....Adopted Town of Babylon Codes**

# Babylon Stormwater Management Program Plan

## **III.....SWPPP Inspection Compliance Report**

# Babylon Stormwater Management Program Plan

## **IV.....Uniform Private Inspection Report Post Construction**

# Babylon Stormwater Management Program Plan

## **V.....Uniform Municipal Inspection Self Inspection Post Construction**



# Babylon Stormwater Management Program Plan

## **VI.....Underground Storage Tank Training Power Point Presentation**

# Babylon Stormwater Management Program Plan

## **VII.....All Mapping Products in Report**

# Babylon Stormwater Management Program Plan

## **VII.....Town Board Designation of Stormwater Coordinator Town of Babylon**