

VILLAGE OF UPPER BROOKVILLE STORMWATER MANAGEMENT PLAN

Village of Upper Brookville
24 Wolver Hollow Road
Glen Head, NY 11545

Prepared By
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Introduction

The Village of Upper Brookville has prepared this Stormwater Management Plan (SWMP) in accordance with the requirements of the New York State Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-24-001 for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s). This document outlines the Village of Upper Brookville's program to develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the respective requirements of the federal and state regulations. The SWMP addresses the six minimum control measures as required by the regulations. A Notice of Intent (NOI) to discharge stormwater has been filed with the New York State Department of Environmental Conservation in accordance with the terms and conditions of the General Permit. A copy of the NOI is included in the Appendix.

The Village is located within the Mill Pond and tributaries to Mill Neck Creek watersheds, which are NOT impaired water bodies listed in the inventory of such by the NYSDEC. It should be noted that the watersheds are not watersheds for which total maximum daily loads (TMDLs) have been established. As such, the NYSDEC General Permit requires that the Village SWMP address the items contained in Parts IV, V, and VI of the General Permit. This SWMP is made available to the NYSDEC as well as the USEPA upon request.

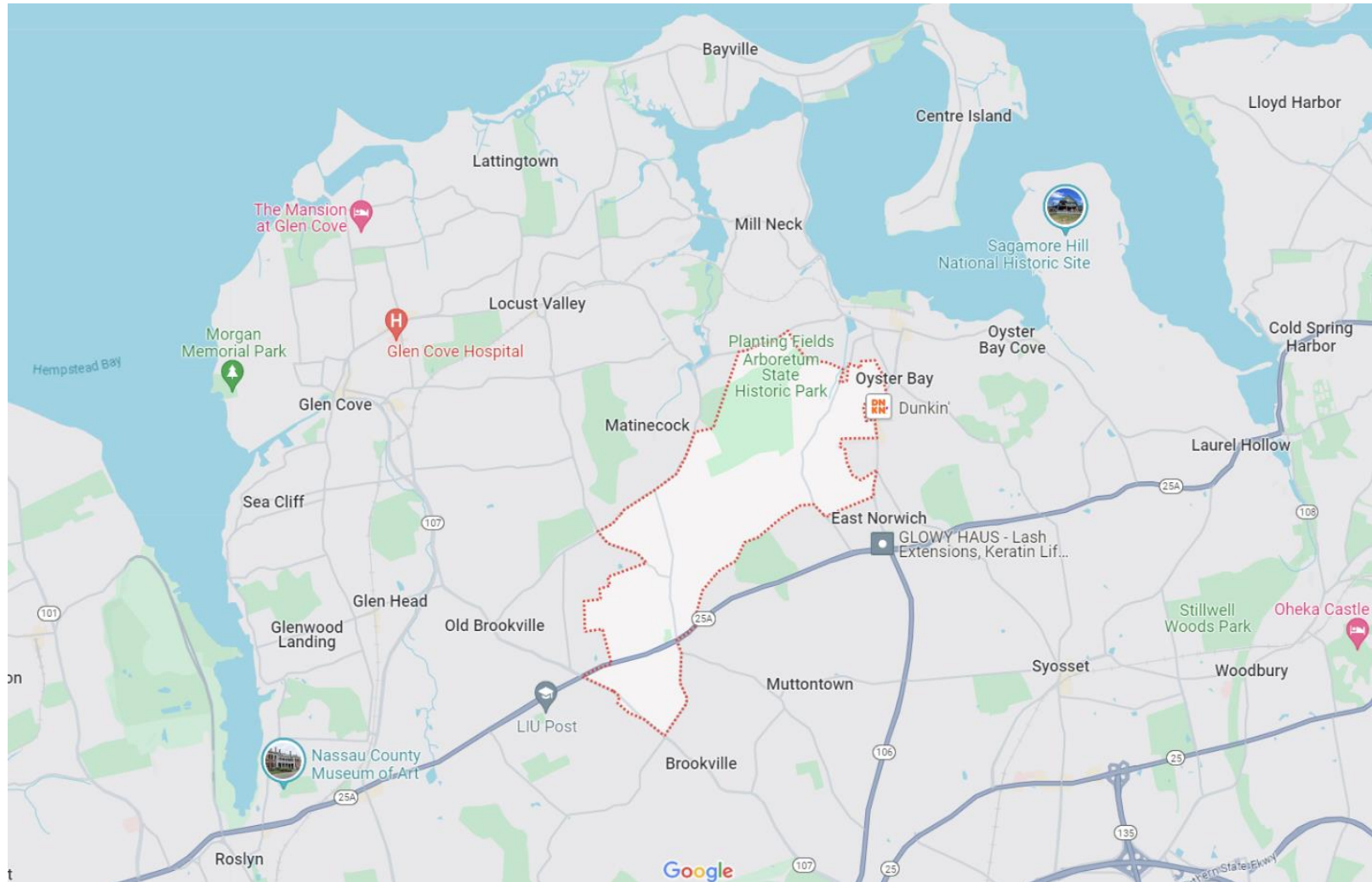
Municipal Setting

The Village of Upper Brookville is a municipality located along the north shore of Long Island in Nassau County, NY. The Village was incorporated in 1932. It is bordered on the north by the Villages of Matinecock and Mill Neck and an unincorporated area of the Town of Oyster Bay, the west by the Village of Old Brookville, the south by the Village of Muttontown, and on the east by the Town of Oyster Bay. The Village is "land locked" and has no waterfront. The topography of the Village ranges from over 200 feet above sea level in the northern portion of the Village to less than 40 feet near Mill River.

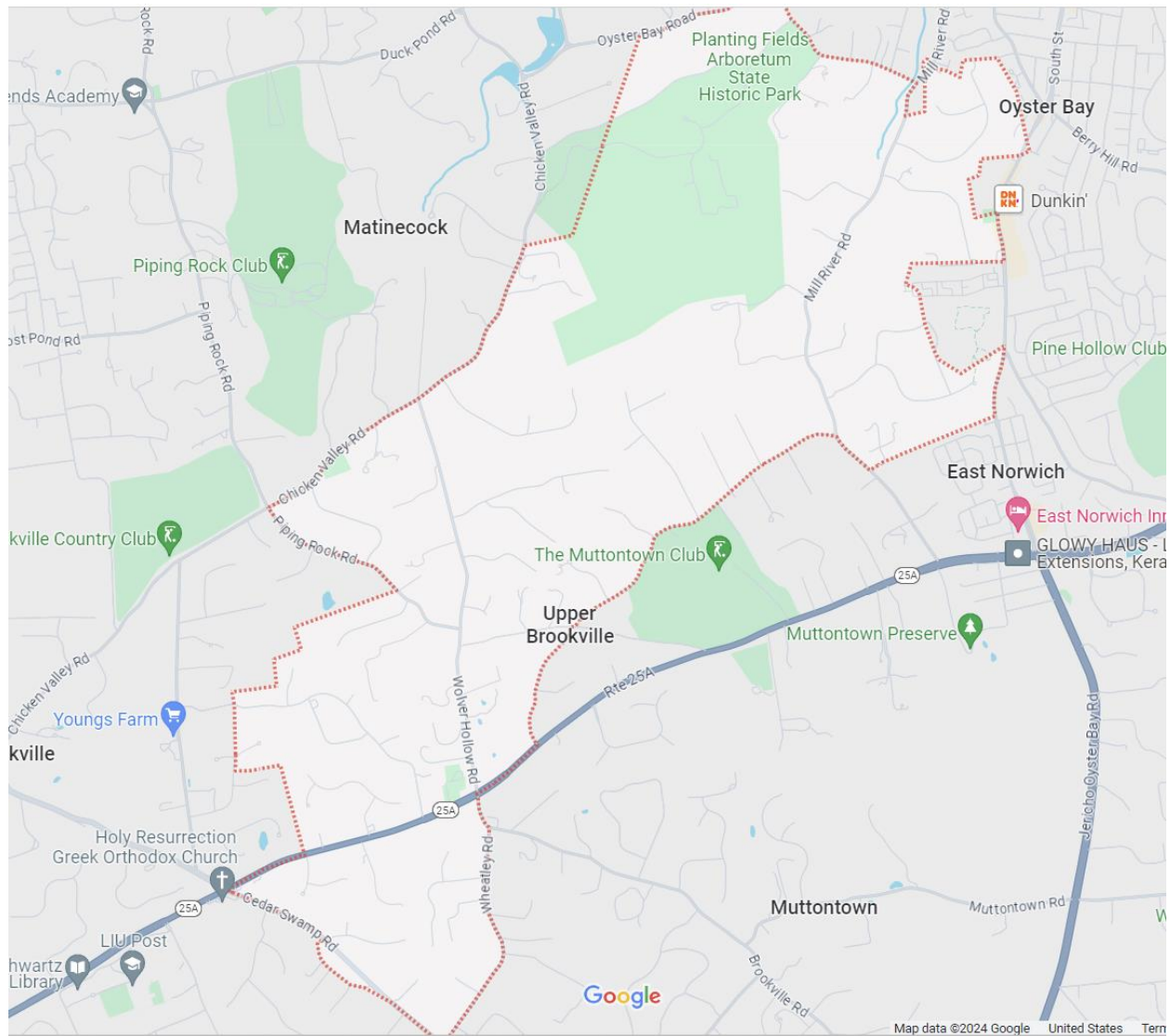
The Village encompasses approximately 4.3 square miles. The Village has a population of approximately 1,800 people, residing in 600 single-family dwellings. The population density is approximately 420 people per square mile. The Village is exclusively zoned single family residential. The minimum required lot size sizes per local zoning are 2 acres and 5 acres. The only land uses in the Village that are not residential are a police station (now vacant), a nursery, a golf course, a gas station, and the Planting Fields Arboretum. The Village has 7.53 center line miles of roads. NYS Route 25A passes through the southern portion of the Village, and Piping Rock Road and Wolver Hollow Road are Nassau County roads in the Village. The remainder of the roads in the Village are privately owned. The following four pages include pertinent Village Maps.

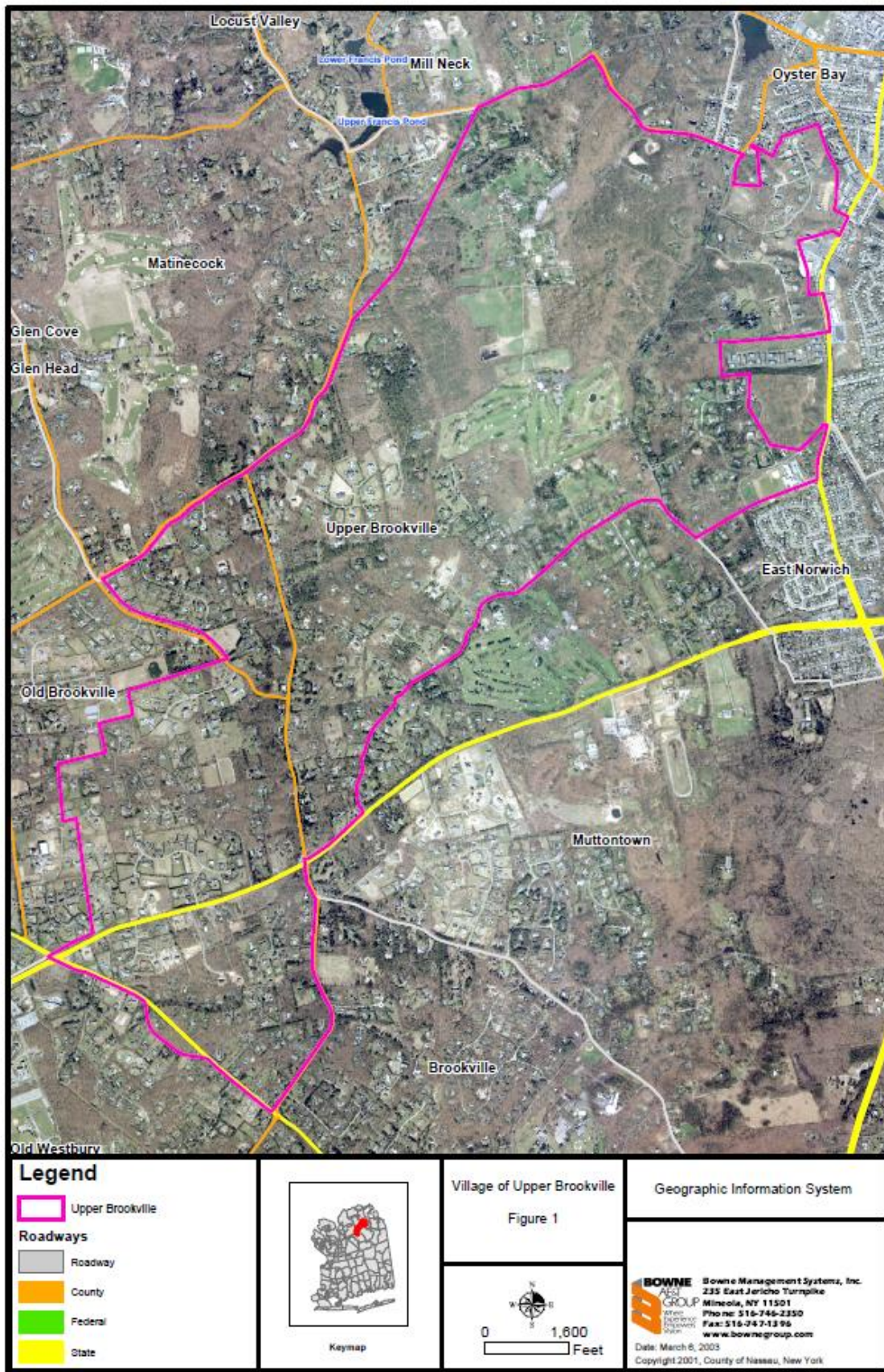
Village Location Map

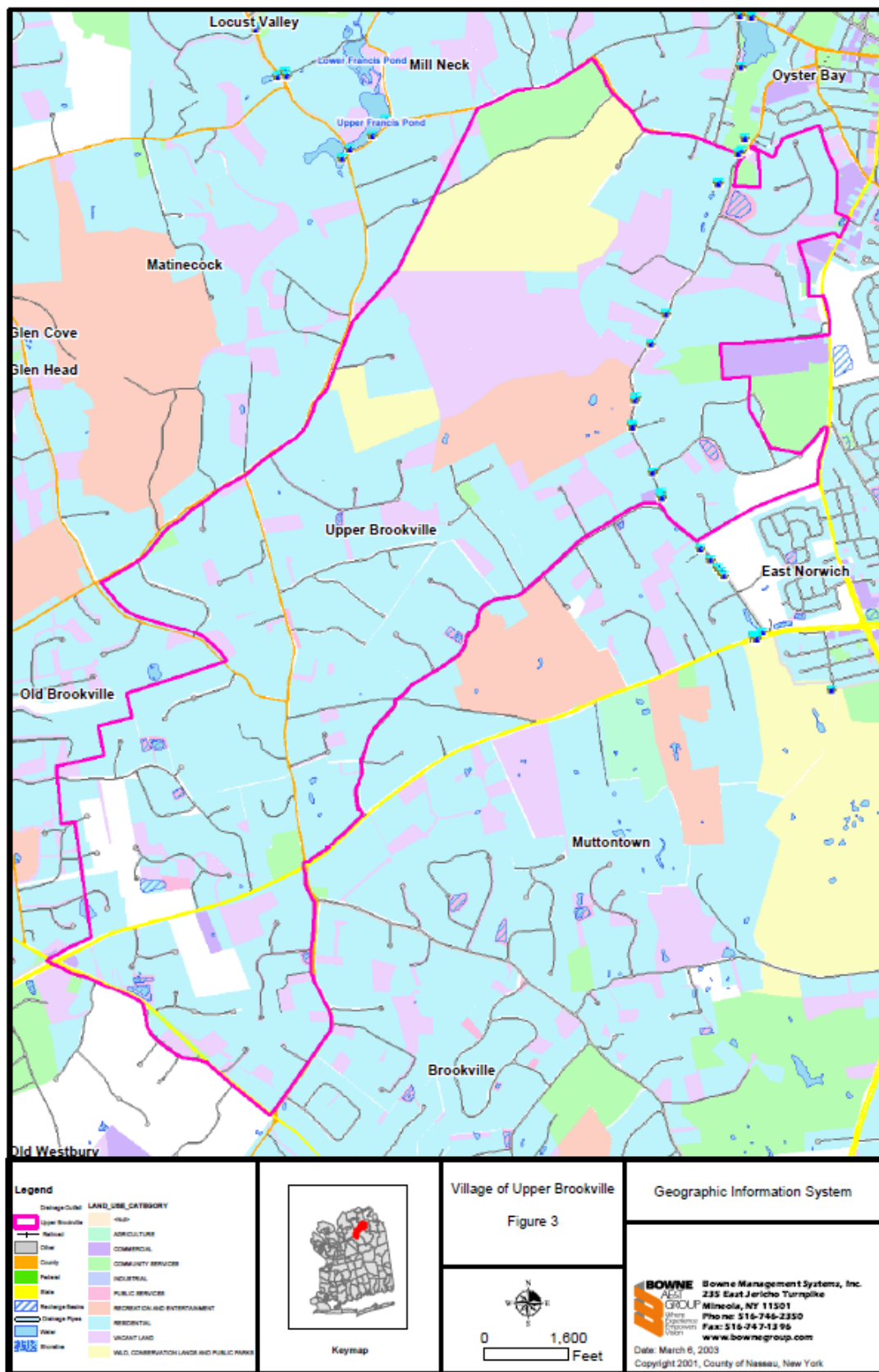
Village of Upper Brookville (shown in white)



Village Map







Village Stormwater System

The Village stormwater system consists of catch basins and Nassau County recharge basins, and outfalls to surface waters. There are 11 outfalls along Mill River Road shown on the Nassau County GIS and 13 outfalls along Mill River Road shown on the watershed maps prepared by Cashin Associates. The outfall locations shown on the maps are pipes under driveways or part of a network of pipes and culverts that convey runoff along private property and are not outfalls. The downstream end of the stream channel of “Mill River” is at Mohawk Drive (a private road), where there is a 36-inch RCP that conveys flow across Mill River Road, to a pipe system that flows northward eventually to a 4-foot diameter pipe that is an inlet to Nassau County Recharge Basin No.600 (designed with the capacity for runoff from an 8-inch storm), located on the north side of Centre View Drive. This was confirmed in the field by NYSDEC officials from the Albany office in 2012.

The outfalls mapped by others on Remsens Lane and Chestnut Hill Drive convey runoff into recharge basins. The catch basin at the bottom of Laurel Woods Drive at Chicken Valley Road collects runoff from a private road.

There are two paved sluices located at the bottom of Friendly Road, which convey runoff from the road gutters to a stream located along Wolver Hollow Road. There is one sluice on each side of the road.

Village Stormwater Program Implementation

To implement the SWMP, the Village has developed the following staffing plan/organization chart. The Village has a small staff of road/street maintenance workers. The Village has a Village Clerk/Treasurer, a Deputy Clerk, and a part-time Building Inspector who is a contract employee. The Village office is open on weekdays.

<u>Name</u>	<u>Title</u>	<u>Responsibility</u>
Elliot Conway	Mayor	Ranking official, provides information to residents, decides on infrastructure projects with the Village Board of Trustees
Tracy Lynch	Village Clerk-Treasurer	SWMP Coordinator, Village contact with NYSDEC, coordinates documents among the Village Building Department, Board of Trustees and Village consultants, preparation of information to residents, maintenance of Village website
Colleen O'Toole	Building Department Clerk	Receiver of building permit applications and related plans, and coordinates with Village Building Inspector and Village consultants
Sergio Tedesco	Building Inspector/Code Enforcer	Review of building permit materials, conducts field inspections for building codes and permit compliance, issues violation notices, summonses and work stop orders
Vacant	Road Commissioner	Responsible for maintenance of Village infrastructure
Margaret M. Grady	Court Clerk	Implementation of Village court matters
Beverly Bell Edward Dolido	Village Justice	Adjudicator of Village court matters
Paul Stevens	Village Engineer (Consultant)	Advises the Building Department for site engineering matters, provides professional services to the Village for public works projects including drainage improvements

Illicit Discharge and Construction Site Local Laws

In 2006, the Village adopted local laws which were part of the first General Permit issued by the NYSDEC, GP-02-02. The laws pertain to the detection and elimination of illicit stormwater discharges to the Village storm system, and the requirement for the preparation of a Stormwater Pollution Prevention Plan (SWPPP) for construction projects that disturb an acre or more of land. The local laws are cited as follows and are found in the Village Code.

Chapter 174: Storm Sewers, and

Chapter 175: Stormwater Management and Erosion and Sediment Control.

The Village's illicit discharge local law prohibits illicit discharges, spills and other releases of pollutants, as stipulated in §170-5A. Illicit connections to the Village storm sewer system are prohibited as stipulated in §170-5B. The local law at §174-8 requires the installation and maintenance of post construction best management practices (BMPs).

Mechanisms for the Village to receive and collect information related to the introduction of pollutants to the storm system, as well as site access for monitoring, are included in §174-11. The Village office may be called (516-624-7715), where a recorded message may be left during off-hours. Nassau County also includes an illicit discharge hotline at 516-571-7535. Additionally, all petroleum spills that occur within New York State (NYS) must be reported to the NYS Spill Hotline (1-800-457-7362) within 2 hours of discovery, except spills which meet **all of the following criteria:**

The quantity is known to be less than 5 gallons; and

The spill is contained and under the control of the spiller; and

The spill has not and will not reach the State's water or any land; and

The spill is cleaned up within 2 hours of discovery.

A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable.

Enforcement actions for illicit discharges are addressed in §174-13 of the Village Code.

The Village Code in Chapter 175-6 requires the preparation of a SWPPP for land disturbances greater than one acre. This section of the Code also requires the inspection, maintenance and repair of erosion control and stormwater management measures as they pertain to the SWPPP sites. The latest version of the NYS Stormwater Management Design Manual is specified for design criteria and maintenance for stormwater structures in the Village Code at §175-10.

An Enforcement Response Plan is included in the Appendix.

Record Keeping

The Village intends to keep records pertaining to its stormwater system and construction activities as required by the NYSDEC General Permit for a period of 5 years. If requested by the NYSDEC, the Village intends on sharing information and records, as applicable, and the Village intends on cooperating with the NYSDEC.

SWMP Evaluation

The SWMP will be evaluated at least every 5 years and updated as applicable.

NYSDEC General Permit Requirements

As part of an amendment to the federal Clean Water Act, the Village has been required to file an annual stormwater report with the New York State Department of Environmental Conservation (NYSDEC) each year since 2003, under the NYSDEC's General Permit for Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as a publicly owned stormwater conveyance system which discharges to state waters. The Clean Water Act amendments regulate stormwater discharges to surface waters and is applicable to certain municipalities. The Village is required to comply with 6 minimum control measures. As part of the Village's stormwater program, the Village is a coalition member with Nassau County, and the Village is an active member of the Oyster Bay-Cold Spring Harbor Protection Committee. The Village shares in the efforts made by the County and Harbor Protection Committee.

Minimum Control Measure 1: Public Education and Outreach

The Village provides education materials through its coalition membership with Nassau County and the Oyster Bay-Cold Spring Harbor Protection Committee, as well as stormwater related posts on the Village website, including recycling/trash/yard waste information, water usage, irrigation, water quality and water supply information to the residents.

The Village is not within an impaired watershed designated by the NYSDEC. There is a listed impairment for the Oyster Bay Harbor water body, located downstream of the Village watershed. The listed impairment is fecal coliform/pathogens. Pathogens are organisms which may cause disease. Pathogens include viruses, bacteria, parasites, and fungi. The Village efforts in education and outreach should target sources of pathogens. Typical sources of pathogens are pet and animal waste, leaking sewer pipes, discharges from septic systems, and other illicit connections to the storm system.

The target audience for information pertaining to pathogens in stormwater would be the Villages residents, who are best reached on the Village website and by way of a Mayor's Letter. Further topics and information may be developed as information is collected and observations are made. The NYSDEC requires that the Village evaluate its education and outreach strategy annually and updates the SWMP as applicable.

Minimum Control Measure 2: Public Involvement/Participation

The Village provides opportunities for public participation through its coalition membership with Nassau County and the Oyster Bay-Cold Spring Harbor Protection Committee and by supporting and promoting the committees' efforts and events. The Village invites the public to various Board meetings where land development issues are discussed. The Village also holds annual meetings to solicit public participation in the development and implementation of its stormwater program, including the SWMP, and its annual report to the NYSDEC. The Village posts its draft annual report on the Village website for public comment.

The Village will receive information from the public regarding the SWMP through the Village Clerk, who is available by phone at 516-624-7715, or email at villageclerk@upperbrookville.gov.

Minimum Control Measure 3: Illicit Discharge Detection and Elimination

As a tool to detect illicit discharges, the Village will monitor outfalls and/or key stormwater structures annually during dry weather as a screening tool. The Village uses the dry weather flow monitoring to detect potential illicit discharges to its storm system. If dry weather flow is found, the Village will investigate further to find its source. The following information pertains to the would be collected from a site with a suspected illicit discharge and recorded on the Monitoring Location Inspection and Sampling Field Sheet forms (2 pages) found in the Appendix.

Background data, date, location, date, setting

Description of material, dimensions

Flow quantity, temperature, pH, color, odor, appearance

Evaluate whether laboratory analysis is needed

Records of dry weather flow monitoring would be documented, and records would be kept, regardless of dry weather flow results. All illicit (non-stormwater) discharges to the Village storm system and documentation thereof will be included in each update of the SWMP and kept in a designated section of the SWMP.

Illicit discharges to the Village storm system may be reported to the Village office (516-624-7715), where a recorded message may be left during off-hours. Nassau County also includes an illicit discharge hotline at 516-571-7535. Additionally, all petroleum spills that occur within New York State (NYS) must be reported to the NYS Spill Hotline (1-800-457-7362).

Monitoring locations are as follows.

Two paved sluices located on Friendly Road near Wolver Hollow Road

The monitoring points were evaluated and assessed for priority status as defined in the NYSDEC General Permit for municipal stormwater discharges (GP-0-24-001). A high priority for monitoring would be a suspected illicit discharge that occurs in impaired water body watershed. An additional criterion for a high priority monitoring location is where there are 3 or more confirmed citizen complaints of an illicit discharge within a 12-month period. Since there are no Village outfalls in the impaired water body watersheds as designated by the NYSDEC (priority water body list) within the Village system, this would not apply. However, the Village will continue to monitor their storm system on an annual basis.

The NYSDEC General Permit includes criteria for the prioritization of municipal facilities. High priority municipal facilities include municipal facilities that have one or more of the following on site and exposed to stormwater:

- i) Storage of chemicals, salt, petroleum, pesticides, fertilizers, antifreeze, lead-acid batteries, tires, waste/debris;
- ii) Storage of chemicals, salt, petroleum, pesticides, fertilizers, antifreeze, lead-acid batteries, tires, waste/debris
- iii) Fueling stations; and/or
- iv) Vehicle or equipment maintenance/repair.

None of the above occur in the Village.

If dry weather flow is found and the source of a discharge has the potential of being an illicit discharge, the Village would sample the flow. Samples may be screened for water quality using field test kits or field instruments which may detect pH, color, chlorine, ammonia, phosphorus, nitrates, and temperature. Each of these test parameters help to identify the potential source of the discharge. The field test is the initial step in the tracking of an illicit discharge.

Once an illicit discharge is found, additional inspection and possible sampling on a more frequent time frame, at least within 30 days, would be done, with the goal of eliminating the illicit discharge.

The NYSDEC General Permit for stormwater discharges includes a requirement for illicit discharge detection (IDDE) and elimination training for municipal personnel. The Village has no public works, highway/roads or maintenance personnel. The Village uses a consultant to conduct IDDE activities.

The Village reviews and updates the monitoring locations and sampling procedures annually. Based on the monitoring and inspection results, trends, and patterns, as well as common problems would be documented in the SWMP.

Tracking down illicit discharges will be done as information is found and evaluated. The Village will use escalating enforcement and tracking procedures to eliminate illicit discharges. The Village will document findings for each inspection, and confirmation of corrective actions and the elimination of an illicit discharge.

The tracking of illicit discharges in the Village will consider the fact that the Village relies on individual on-lot sewage disposal systems.

Time frames for the Village to track illicit discharges are as follows:

- within 24 hours of discovery for flowing monitoring locations with obvious illicit stormwater discharges;
- within 2 hours of discovery, for illicit discharges of sanitary wastewater that would affect bathing areas during the bathing season, shellfish areas, public water supply intakes and a report will be made to the following:

NYSDEC, Region 1, SUNY Stony Brook
50 Circle Road
Stony Brook, NY 11790-3409
ATTN: Regional Water Engineer
516-444-0405

And

Nassau County Department of Health
200 County Seat Drive
Mineola, NY 11501
ATTN: Division of Environmental Health
516-227-9697

- within 5 days for suspect illicit discharges.

Once an illicit discharge is found, there are several methods to track the discharge to its source. The location and type of discharge at the point of initial discovery of an illicit discharge offers

many clues to the source of the discharge, so the location and other characteristics of the discharge would be documented on the inspection and monitoring forms found in the Appendix. Tracking may be done by additional monitoring/sampling/testing, visual inspection either with or without the use of a video camera, dye testing, smoke testing, property owner surveys and investigations, surface inspections, and/or the study of infrared photography. The tracking of the storm system or discharge stream, as applicable, is typically done by working from downstream to upstream. Additional details for the tracking of illicit stormwater system discharges are found in the Illicit Discharge Detection and Elimination guidance manual prepared by the Center for Watershed Protection.

Time frames for the elimination of illicit discharges are as follows:

within 24 hours of the identification of the illicit discharge that has a reasonable likelihood of adversely affecting human health or the environment; or
within 5 days of the identification of an illicit discharge that does not have a reasonable likelihood of adversely affecting human health or the environment.

If it is not possible to eliminate the illicit discharge within the above specified time frames the NYSDEC Regional Water Engineer will be notified.

The stormwater outfall locations in the Village are monitored during dry weather flow, and most recently on February 12, 2021, March 3, 2021, April 18, 2023, March 10, 2025, and March 19, 2026. No dry weather flow has been found.

Minimum Control Measure 4: Erosion Control for Construction Activities

The Village requires erosion control measures for all land development projects. The NYSDEC requires additional erosion control and pollution control measures for land disturbance projects of an acre or more, as they require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) which the Village must review, approve, and oversee. All building permit applications which proposed to disturb an acre or more, are reviewed by the Village engineering consultant. The Village requires that all SWPPP sites are monitored and inspected by a professional engineer trained in stormwater management and erosion control.

The Village office phone number at 516-624-7715 is equipped with a recording device whereby residents and concerned citizens may report construction-related complaints which will be followed up by the Village Building Department. The Village will document the information on the Construction Site Complaint Form, as provided with the SWMP. All complaints contain the date, location, nature of the complaint and information pertaining to follow-up and inspection outcomes.

The Village construction oversight program applies to the control of stormwater runoff and erosion and sedimentation is applicable to construction sites that disturb an acre or more of land surface area. As such, the Village requires that a Stormwater Pollution Prevention Plan (SWPPP) be submitted to the Village Building Department in conformance with Chapter 175 of the Village Code. The Village Code at §175-9 specifies the required contents of a SWPPP as well as the procedures for the submission of a SWPPP. The Village has procedures in place applicable for the review of a SWPPP submission, found at §175-7 of the Village Code. All SWPPPs will be reviewed by the Village Engineer.

Each SWPPP review will ensure on behalf of the Village that erosion and sediment control measures conform to the NYS Erosion & Sedimentation Control manual of 2016 (or later version), or equivalent. Each SWPPP would be reviewed to ensure conformance with the NYS Stormwater Management Design Manual of 2015 (or later version), or equivalent. All post construction Stormwater Management Practices (SMPs) must meet the sizing criteria given in the NYS General Permit for Stormwater Discharges from Construction Activity. Any deviations from the NYS manuals must demonstrate equivalence. Additionally, every SWPPP must include an operation and maintenance plan (O&M) that includes maintenance schedules and actions to ensure continuous and effective operation of each erosion and sedimentation control measure, as well as every post construction stormwater management practice.

The SWMP will include documentation of each SWPPP review, and particular reference to the requirements contained in the NYS General Permit for Stormwater Discharges from Construction Activity. The SWMP will also include the priority category for each new construction activity.

Upon completion of the review of the SWPPP, the Village will notify the construction site owner/operator that the SWPPP has been accepted by the MS4, by issuing the appropriate SWPPP Acceptance Form, as included in the Appendix of the SWMP.

Prior to groundbreaking for any SWPPP site, the Village requires a preconstruction meeting to ensure that the NYSDEC (and Village) requirements of the SWPPP are met. The meeting shall be

documented and included in the Village SWMP. The documentation of the preconstruction meeting must include the following:

Date of the meeting

Attendees, including the owner/operator (Village representative), the contractors responsible for the implementation of the SWPPP, and the qualified inspector as specified by Part VI.D.8 of the NYSDEC General Permit.

Confirmation that the approved project has received or will receive coverage under the General Permit

Verification of qualified individuals for inspection and implementation of the SWPPP

Review of the Village's oversight program.

The Village oversight program will consist of periodic site inspections, using the SWPPP Site Inspection Form, and the frequency of the Village inspections would be determined by the sensitivity of the activity and/or construction site location and the project length or duration, and linked to project milestones during construction.

The Village would prioritize construction sites as high or low priority. A construction site would be a high priority if any of the following were true.

If there is a direct conveyance to a surface water that is:

listed by the NYSDEC as an impaired water body with silt/sediment., phosphorus or nitrogen as the pollutant of concern;

classified as AA-S, AA or A waters (none in the Village); or

classified as a trout stream or trout spawning stream (none in the Village)

If the area of land disturbance is greater than 5 acres at one time;

If the area of land disturbance is within 100 feet of a lake or pond listed as a priority water body by the NYSDEC (none in the Village)

If the area of land disturbance is within 50 feet of a river or stream listed as a priority water body by the NYSDEC (none in the Village).

Other construction sites are considered low priority.

The Village will conduct a final construction site inspection once all land disturbance has been stabilized. The Village will document the inspection in the SWMP. If the site conditions are acceptable, the Village would sign and issue the Notice of Termination form, which is included in the appendix.

The following is intended to help the Village and contractors to comply with the intent of the SWMP. The Village requires an as-built survey of the drainage system for all SWPPP sites. Additional information for contractors is included in the appendix.

Contractor's Responsibilities

For SWPPP Sites

For all construction activities that result in a land disturbance of an acre or more, the Contractor shall be familiar with and implement stormwater control measures in accordance with the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit of Stormwater Discharges from Construction Activities, Permit No. GP-0-10-001. The Contractor shall also comply with the provisions of the Stormwater Pollution Prevention Plan (SWPPP) prepared for the project.

The contractor shall sign the SWPPP Certifications for conformance to the NYSDEC SPDES (State Pollutant Discharge Elimination System) that certifies that said contractor will implement the erosion control measures and stormwater quality and quantity measures, as applicable, in conformance with the approved Notice of Intent and SWPPP. Contractors and subcontractors (if any) must comply with the terms and conditions of the General Permit and shall not take any action or fail to take action that may result in the owner or municipality being held in violation of the General Permit.

Work performed by the Contractors shall not result in the discharge of anything other than uncontaminated runoff to any nearby catch basin or any part of the municipal storm system, or a conveyance to a surface water. Runoff from the construction site shall be free of floatables, sediment and other materials. Work performed by the Contractor shall not cause an illicit discharge to the storm system or surface water, as defined by the NYSDEC. Additionally, work performed by said Contractor shall not result in an unauthorized direct or indirect connection, pipe, hose or other conveyance to a catch basin drain, trench, etc., which would allow a non-stormwater discharge to enter any nearby catch basin or any part of the municipal storm system, or a conveyance to a surface water.

The Contractor shall be responsible for the required inspections of their work site pursuant to the SWPPP. They shall be responsible for ensuring that the site is in conformance with the conditions of the General Permit and the appropriate inspection form.

Minimum Control Measure 5: Post Construction Stormwater Management

The Village requires post development stormwater management for land development projects for land disturbances of an acre or more. The intent is that the Village promotes the long-term performance of post construction stormwater management practices to remove pollutants from stormwater runoff.

Post construction stormwater management practices include catch basins, surface inlets, trench drains, storm collection pipes, and stormwater storage structures (drywells) which function as a below grade stormwater infiltration system. Catch basins are box-like structures and trench drains are rectangular structures designed to capture runoff as an inlet to the stormwater system. A surface inlet includes the open grate top of a dry well, as well as a yard drain. A stormwater storage structure is a subsurface storage structure that receives and temporarily stores stormwater runoff. The discharge from a stormwater storage structure occurs through infiltration into subsurface soil. A stormwater storage structure reduces the total runoff volume from a water quality design storm.

Catch basins, trench drains, surface inlets and stormwater storage structures shall be protected during construction so that debris, silt and sediment does not get into the structures and cause clogging that would compromise the functioning of the stormwater system. Once the construction site achieves final stabilization, the catch basins and stormwater storage structures shall be inspected by the contractor to ensure they are functioning as designed.

The Village will keep an inventory of stormwater management practices that have been installed since March 10, 2003. The inventory will be updated in the SWMP annually. The inventory will include the following information.

Street address/tax parcel number

Type of stormwater management practice

Receiving water body name and status per NYSDEC

Date of installation of the stormwater management practice

Ownership of the stormwater management practice

Responsible party for maintenance with contact information

Location of the stormwater management practice

Frequency of inspection

Reason for installation

Date of each inspection

Results of inspections/ corrective actions as applicable

The Village will ensure that individuals conducting inspections of stormwater management practices would be appropriately trained. The individuals trained will be included in the SWMP.

Maintenance items for catch basins include:

Initial inspection and removal of sediment from construction activities

Monitoring drainage inlets

Keeping the surface clear of debris

Removing debris from the surface of the inlet and its surrounding area

Clearing debris from catch basin boxes, trench drain and storm pipes

Clearing overflow passageways

Repairing surface erosion and making sure that seeded and landscaped areas are maintained to ensure coverage

Stormwater storage structures maintenance items include:

Initial inspection and removal of sediment from construction activities

Performance shall be monitored after rainfall events to ensure that they drain properly

Inspection of the bottom of the stormwater storage structure to make sure it is not clogged with debris

Ensure that the stormwater storage structure capacity is not compromised with excess sediment

Leaves, trash, sediment, silt and debris that clog inlets, pipe components and stormwater storage structures shall be removed and disposed of at a suitable location, in compliance with local, state and federal regulations.

The Village would initiate follow-up actions within 30 days of an inspection if the results of the inspection are not satisfactory. The Village would initiate enforcement within 60 days of the inspection if follow-up actions are not complete.

Minimum Control Measure 6: Good Housekeeping for Municipal Activities

The Village has a small maintenance facility and a three person staff responsible for road maintenance.

The Village has standards for good housekeeping and pollution prevention for municipal activities, included in the appendix.

Appendix

Village Notice of Intent
Stormwater Outfall Monitoring Location Inspection and Sampling Field Sheet Form
Records of Outfall Monitoring
SWPPP Acceptance Form
SWPPP Notice of Termination Form
SWPPP Construction Site Inspection Form
SWPPP Site Inventory
Erosion and Sediment Control Principles
Construction Site Procedures
Good Housekeeping for Construction Sites
Construction Site Operations and Areas of Concern
Potential Pollutants from Construction
Construction Site Complaint Form
Spill Prevention Plan
Installation and Maintenance Schedule for Erosion and Sedimentation Control Measures
Enforcement Response Plan
Best Management Practices for Municipal Facilities and Operations
Municipal Good Housekeeping and Pollution Prevention Policy and Procedures
Cach Basin Inspection/Maintenance Form
EPAs Stormwater Management Preferred Practices
Best Management Practices (BMPs) for Impaired Watersheds

MS4 Notice of Intent

version 1.0

(Submission #: HQ1-3AWS-52AMS, version 1)

Details

Submitted 2/5/2024 (0 days ago) by Tracy Lynch

Alternate Identifier NYR20A442

Submission ID HQ1-3AWS-52AMS

Status Submitted

Form Input

MS4 Operator Information

Is this NOI for an MS4 Operator continuing coverage?

Yes

Permit ID #:

NYR20A442

MS4 Operator Type

Traditional land use control

Traditional Land Use Control

Traditional land use control MS4 Operator requirements are found in Part VI of the MS4 General Permit.

Municipality Name or Legal Entity Name

VILLAGE OF UPPER BROOKVILLE

Legal Municipal/Entity Mailing address

24 WOLVER HOLLOW RD
GLEN HEAD, NY 11545
NASSAU

Ranking Official

Official Title	First and Last Name	Phone	Email
Mayor	ELLIOT CONWAY	5166247715	MAYOR@UPPERBROOKVILLE.GOV

NOI Preparer

NOI Preparer Title	First and Last Name	Phone	Email
Stormwater Program Coordinator	TRACY LYNCH	5166247715	VILLAGECLERK@UPPERBROOKVILL E.GOV

NAICS Codes

Federal, State or Local Government - 924110
Military Bases - 928110
Highway, road or other thoroughfare system - 237310
Large Hospitals - 622110
Public Colleges and Universities - 611310
Correctional Institutions - 922140
[NAICS Code Lookup](#)

NAICS Code

924110

Is the MS4 Operator working with other MS4 Operators to implement the Stormwater Management Program?

No

Does the MS4 Operator have any facilities that need to obtain MSGP coverage under MSGP permit?

No

MS4 Location Information

MS4 Facility Name

VILLAGE OF UPPER BROOKVILLE

On the map below, place the pin at the center of the MS4 Operator. This can be either the geographic center or the population center.

Central point of the MS4 Operator

40.83842112001469,-73.56557690156157

Waterbody Information (1 of 4)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.

[Stormwater Interactive Map](#)

Waterbody name and segment receiving MS4 Operator discharges

Beaver Lake - 1702-0152

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?

Yes

An MS4 discharging to a waterbody listed in Appendix C must meet the requirements of Part VIII. for the pollutant(s) of concern listed in Appendix C.

For which pollutant(s) of concern is the waterbody impaired?

Phosphorus

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?

No

Waterbody Information (2 of 4)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.

[Stormwater Interactive Map](#)

Waterbody name and segment receiving MS4 Operator discharges

Mill River and tribs - 1702-0137

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?

Yes

An MS4 discharging to a waterbody listed in Appendix C must meet the requirements of Part VIII. for the pollutant(s) of concern listed in Appendix C.

For which pollutant(s) of concern is the waterbody impaired?

Pathogens

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?

No

Waterbody Information (3 of 4)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.

[Stormwater Interactive Map](#)

Waterbody name and segment receiving MS4 Operator discharges

Lower/Upper Francis Ponds - 1702-0154

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?

Yes

An MS4 discharging to a waterbody listed in Appendix C must meet the requirements of Part VIII. for the pollutant(s) of concern listed in Appendix C.

For which pollutant(s) of concern is the waterbody impaired?

Pathogens

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?

No

Waterbody Information (4 of 4)

If the MS4 Operator discharges to multiple waterbodies, all waterbodies must be listed. Use the 'Duplicate Waterbody Information' or 'Add New Waterbody Information' buttons to add as many waterbodies as necessary.

To find the names of waterbodies, including any impaired waterbodies, use the DEC's Stormwater Interactive Map. Under the Permit Related Layers check the box for the Impaired Waterbodies for MS4GP and the box for Waterbody Inventory/Priority Waterbodies List.

[Stormwater Interactive Map](#)

Waterbody name and segment receiving MS4 Operator discharges

Oyster Bay Harbor - 1702-0016

Is this waterbody segment listed in Appendix C (List of Impaired Waters) of the MS4 General Permit?

Yes

An MS4 discharging to a waterbody listed in Appendix C must meet the requirements of Part VIII. for the pollutant(s) of concern listed in Appendix C.

For which pollutant(s) of concern is the waterbody impaired?

Pathogens

Is this waterbody segment listed in Table 3 (Approved TMDL Watersheds with MS4 Contribution) of the MS4 General Permit?

No

CERTIFICATION

The MS4 Operator has read and understands the SPDES MS4 General Permit, GP-0-24-001, as it pertains to permit requirements as well as the timeframes for compliance set forth in the permit.

Yes

I am the ranking elected official or Principal Executive Officer for the MS4 Operator and will be signing the form electronically.

Yes

As the Ranking Elected Official or Principal Executive Officer, please download the certification form from the link below. Complete and sign the certification. Then upload the certification form to this NOI.

This certification form must be signed and uploaded every time the NOI is submitted. [Certification Form](#)

Attach completed certification form.

MS4 CERT FORM.pdf - 02/05/2024 04:31 PM

Comment

NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
2/5/2024 4:31 PM	MS4 CERT FORM.pdf	Attachment	Tracy Lynch

Status History

	User	Processing Status
2/1/2024 1:54:19 PM	Tracy Lynch	Draft
2/5/2024 4:32:05 PM	Tracy Lynch	Submitting
2/5/2024 4:32:16 PM	Tracy Lynch	Submitted

Processing Steps

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Tracy Lynch	2/5/2024 4:32:16 PM

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water

625 Broadway, Albany, New York 12233-3500

P: (518) 402-8233 | F: (518) 402-9029

www.dec.ny.gov

MS4 Operator Certification Form for eReports

**SPDES General Permit for
Stormwater Discharges From
Municipal Separate Storm Sewer Systems (GP-0-24-001)**

Instructions

Please review Part X.J. of GP-0-24-001 before signing this form. A signature by an unauthorized person will delay permit coverage.

This form must be signed by one of the following:

1. For a corporation: by a responsible corporate officer
2. For a partnership: by a general partner
3. For a sole proprietorship: by the proprietor
4. For a municipality, state, federal or other public agency: by a principal executive officer or ranking elected official

MS4 Operator Name: Village of Upper Brookville

eReport Submission Number: HQ1-3AWS-52AMS

MS4 Operator Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Elliot Conway
Name (please print or type)



Mayor
Title

02/05/2024
Date

Village
Organization

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

3/6/2024

Re: Acknowledgement of Notice of Intent for Coverage under SPDES General Permit for Municipal Separate Storm Sewer Systems (GP-0-24-001)

Dear VILLAGE OF UPPER BROOKVILLE,

This is to acknowledge that the New York State Department of Environmental Conservation (DEC) received a complete electronic Notice of Intent (eNOI) for the MS4 Operator:

VILLAGE OF UPPER BROOKVILLE

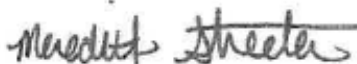
Pursuant to 6 NYCRR 750-1.21(d) and Part II of the SPDES MS4 GP, GP-0-24-001, VILLAGE OF UPPER BROOKVILLE is authorized to discharge stormwater under the terms and conditions of the SPDES MS4 GP, GP-0-24-001, starting on the effective date of **01/03/2024**. VILLAGE OF UPPER BROOKVILLE must comply with all requirements contained in the MS4 GP, GP-0-24-001.

The following SPDES ID No. should be included in all correspondences with the DEC:

SPDES ID No: NYR20A442

Should you have any questions regarding any aspect of the requirements in the MS4 GP, GP-0-24-001, please contact MS4GP@dec.ny.gov or (518) 402-8111.

Sincerely,



Meredith Streeter, P.E.
Chief, Central Section
Bureau of Water Permit



Department of
Environmental
Conservation

Monitoring Locations Inspection and Sampling Field Sheet

Section 1: Background Data

Subwatershed:		Monitoring Location ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours:	Last 48 hours:
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
☐ Industrial ☐ Ultra-Urban Residential ☐ Suburban Residential ☐ Commercial		☐ Open Space ☐ Institutional Other: _____ Known Industries: _____	
Notes (e.g., origin, if known):			

Section 2: Monitoring Location Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
☐ Closed Pipe	☐ RCP ☐ CMP	☐ Circular ☐ Single	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
	☐ PVC ☐ HDPE	☐ Elliptical ☐ Double		
	☐ Steel	☐ Box ☐ Triple		
	☐ Other: _____	☐ Other: _____ ☐ Other: _____		
☐ Open drainage	☐ Concrete ☐ Earthen ☐ Rip-Rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
☐ In-Stream	{applicable when collecting samples}			
Flow Present?	☐ Yes ☐ No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING MONITORING LOCATIONS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
☐ Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐ Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stopwatch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Monitoring Locations Inspection and Sampling Field Sheet

Section 4: Physical Indicators for Flowing Monitoring Locations Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 - Faint	☐ 2 - Easily detected	☐ 3 - Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 - Faint colors in sample bottle	☐ 2 - Clearly visible in sample bottle	☐ 3 - Clearly visible in flow
Turbidity	☐	See severity	☐ 1 - Slight cloudiness	☐ 2 - Cloudy	☐ 3 - Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 - Few/slight; origin not obvious	☐ 2 - Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Monitoring Locations

Are physical indicators that are not related to flow present? ☐ Yes ☐ No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Monitoring Location Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Monitoring Location Characterization

☐ Unlikely
 ☐ Potential (presence of two or more indicators)
 ☐ Suspect (one or more indicators with a severity of 3)
 ☐ Obvious

Section 7: Data Collection

1. Sample for the lab?	☐ Yes ☐ No
2. If yes, collected from:	☐ Flow ☐ Pool
3. Intermittent flow trap set?	☐ Yes ☐ No If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



Department of
Environmental
Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

**MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance
Form**

**for
Construction Activities Seeking Authorization Under SPDES General Permit**

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Contact Person:

14. Street Address:

15. City/State/Zip:

16. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).
Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

New York State Department of Environmental Conservation

Division of Water

625 Broadway, 4th Floor

Albany, New York 12233-3505

(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized
under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR _____

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. ☐ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. ☐ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR _____
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. ☐ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? ☐ yes ☐ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? ☐ yes ☐ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? ☐ yes ☐ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- ☐ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- ☐ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- ☐ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
- ☐ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____
(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? ☐ yes
☐ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name: _____

Title/Position: _____

Signature: _____

Date: _____

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

SWPPP Construction Site Inspection Checklist

Project Name and Location: _____

Date: _____ **Time:** _____ **Weather:** _____

Yes **No** **N/A**

Authority

Is there a copy of the NOI kept at the construction site?

Is there a copy of the approved SWPPP on site?

Is there a copy of the MS4 SWPPP Acceptance Form kept on site?

Is there a copy of the NYSDEC NOI Acknowledgement Letter kept on site?

Record Keeping

Are inspections being performed as required?

Is there at least one trained contractor on site each day during soil disturbance?

Are the site inspections being performed by a qualified professional?

Are the inspection reports signed by the qualified professional?

Observations

The limits of disturbance are marked and not being trespassed?

Have all ESC measures shown on the SWPPP been installed and constructed?

All ESC measures are being maintained properly?

Are there more the 5 acres of disturbed soil without written approval?

Have stabilization measures been initiated in inactive areas?

Are materials and equipment properly stored to prevent spills & leaks?

Are trash and construction refuse properly stored in appropriate containers?

Are portable toilet facilities on site and properly maintained?

Have permanent SW control measures (drywells, DRAs) been installed & protected?

Is there evidence of an off-site discharge?

Is there evidence of turbidity, sediment, or oil reaching the receiving water?

Provide digital photographs of items that require corrective actions?

Description of condition of runoff at all points of discharge _____

Identification of ESC practices requiring maintenance, repair, replacement or installation

Description of disturbance or stabilization since last inspection _____

Current phase of construction of all post-construction SW practices _____

Identification of construction not in conformance with SWPPP and technical standards

Corrective actions that must be taken to install, repair, replace or maintain ESC and SW practices

Name and Title of Inspector (print)

Signature

Village of Upper Brookville
Stormwater Pollution Prevention Plan Inventory

<u>Owner</u>	<u>Location</u>	<u>Date of SWPPP approval</u>	<u>Date of Inspections</u>	<u>Date of NOT</u>
Basra House	162 Linden Lane	2-13-2020		
Majewski House	1075 Wolver Hollow Road	1-10-2013		1-9-2015
Casimano House	353 Juniper Drive	5-21-2012		

Erosion and Sediment Control Principles

1. Minimize the area of disturbance and protect natural features and soil

- The potential for erosion and stormwater pollution is greatly reduced by reducing the amount of area of soil disturbed; limit the disturbed areas to those necessary for the construction of the project.
- Protect and preserve topsoil as a management practice
- Soil layers below the topsoil are much more susceptible to erosion and have less infiltration capacity; keeping natural soil in place aids infiltration of stormwater

2. Phase construction activities

- Minimize soil disturbance by scheduling or sequencing construction activities
- Limit the disturbances to areas where construction is active
- Stabilize areas as soon as possible as a management practice

3. Establish stabilized construction entrances and exits

- Install crushed rock at the construction entrance to help knock off mud, soil, silt and sediment from vehicle tires to prevent tracking onto nearby roads
- The nature of the Development may warrant the construction of multiple construction entrances throughout the site and/or the potential to relocate these entrances during the course of construction

4. Control stormwater flowing onto the construction site

- Analyze topographic and other features for the potential for stormwater runoff to flow onto the construction area
- Take measures to control the volume and velocity of runoff flowing onto or through the site

5. Stabilize soils promptly

- Stabilize soils where construction activities have ceased to minimize erosion. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. It should be noted that “temporary” is defined as 14 calendar days, according to the General Permit (GP-0-15-002).
- Provide temporary or permanent vegetative or structural cover to protect exposed soils. Temporary covers include seeding, mulch, blankets, mats and binders.
- Permanent cover includes seeding, sodding, planting, channel stabilization, vegetative buffers and impervious cover such as paving, concrete, bricks, stone and decking

6. Protect slopes

- Protect all slopes with erosion control measures

- Steep slopes, long slopes and erodible soils require more complex measures to control erosion, which include blankets, turf mats and fiber matrices

7. Soil Stockpiles

- Stockpile locations should be relatively level, dry and stable
- Maximum stockpile slopes shall be 2 on 1, and maximum height shall be limited to 20 feet
- Stockpiles shall be protected with silt fence around the perimeter to prevent soil transport
- Inactive stockpiles shall be seeded with a temporary cover

8. Protect storm drain inlets

- Prior to soil disturbance protect inlets that could receive stormwater from the project (on-site and off-site) until final stabilization. Inlet protection is to be removed after the completion of construction and stabilization

9. Establish perimeter controls

- Maintain natural areas using silt fence or fiber rolls around the perimeter of the area to be disturbed (especially the downslope perimeter)

10. Retain sediment on-site and control dewatering practices

- Use a temporary sediment trap with a volume of 3600 cubic feet per acre of the contributing watershed

Construction Site Procedures

During the construction of the project the contractor will adhere to the following general conditions:

- Land grading will be scheduled so as to minimize the areas of ground disturbance and the length of time that the areas are unstable;
- Sediment will be trapped on the site using such temporary structural erosion control measures such as silt fencing, straw bale dikes, etc.;
- Sweeping of site areas and adjacent roadways will be done periodically to remove sediment from the pavement surfaces; and
- On-site protection of construction materials and debris will be provided by best management practices (BMPs), as appropriate. Litter receptacles provided by the contractor will be provided for disposal of garbage and other such normal litter. These receptacles will be checked daily and emptied at least once per week.

The proposed construction sequence is as follows.

Prior to any construction/demolition:

1. Install perimeter silt fences
2. Protect existing catch basin inlets within site areas and along roadways adjacent to site where applicable.
3. Construct stabilized construction entrances
4. Install temporary sanitary facilities and trash receptacles

During Construction:

1. Create construction staging area
2. Begin clearing and demolition operations
3. Strip and store topsoil in stockpiles; provide stabilization and erosion control measures for any/all stockpiles
4. Prepare rough grading
5. Install proposed drainage facilities; install inlet protection as necessary for installed drainage
6. Prepare proposed grades
7. Install proposed curb, sidewalks, etc.
8. Install below grade utilities including:
 - a. Water service lines, hydrants, valves etc.
 - b. Electrical utilities, site lighting, etc.
 - c. Telecommunication utility services
 - d. Sanitary sewer facilities
9. Construct building pads
10. Install base paving course
11. Construct buildings
12. Install final paving sections
13. Install proposed landscaping

14. Remove erosion control measures as site achieves required stabilization

Completion of Site Work:

1. Monitor stabilized areas
2. File Notice of Termination once criteria of the permit are met.

Litter, construction chemicals and construction debris would be prevented from becoming a pollutant source by the implementation of good housekeeping and proper management practices, as follows.

- Keeping stormwater catch basins clean and free of material that may clog the inlet is a priority.
- Provide a perimeter fence of suitable material (such as chain link or orange construction fence) to contain litter on the site.
- Providing sturdy, watertight containers for litter and other trash within the construction area, convenient for workers where they may congregate for breaks.
- The trash containers shall be maintained and emptied appropriately as required, and must not be cleaned, or hosed out on site.
- Receptacles for trash and litter shall not be allowed to overflow, and they should remain covered.
- Litter shall not be allowed to be discarded on site, in or buried in utility trenches or in the roadway or in other excavations.
- Construction debris larger than containers that is too heavy or too large to be carried or deposited by the elements shall be retrieved and removed by the contractor.
- Trucks and containers for debris shall not be overloaded.
- Tarps should be used to cover truck beds that are full of debris to prevent spillage.
- The contractor shall make every effort to prevent dumping, throwing, disposal, depositing, dropping or otherwise discarding waste litter and debris onto private or public property.
- Chemicals such as insecticides, rodenticides, herbicides and fertilizers must be used according to applicable laws and by qualified personnel. Appropriate application rates shall be adhered to, and the contractor must take precautions to protect the areas of application from people and the environment.
- Construction chemical releases shall be cleaned up as soon as possible so that they do not become a pollutant in the stormwater system.
- Recycling should be encouraged.

Demolition and construction wastes include brick, mortar, concrete, broken asphalt pavement, wood, lumber, sawdust, scrap metal, pipe, packaging materials, wooden pallets, plastic, glass, sanitary wastes, equipment and vehicle maintenance materials, soil, tree stumps, brush and rubble. The following practices shall be used to minimize the exposure of materials to stormwater.

- All waste materials shall be collected by the contractor and disposed of properly, and in accordance with applicable federal, state and local regulations and guidelines.
- Any material of a potentially hazardous nature, such as oil filters, petroleum products (including gasoline, kerosene, diesel fuel, lubricating oil and grease), equipment fluids, cleaning solvents and acids, curing compounds and paint shall be sealed in an appropriate container and clearly labeled, and segregated from other waste materials.
- Secondary containment shall be provided for hazardous liquid storage and transport.

- Providing sturdy, watertight containers for waste materials and other trash within the construction area, convenient to workers depending on the work activity.
- The trash containers shall be maintained and emptied appropriately as required and must not be cleaned with a hose on site.
- Demolition and construction equipment and maintenance materials would be stored at staging areas and would be kept away from the stormwater system by using covers (either under a roof or within containers) as applicable.
- Vehicle maintenance shall take place offsite, away from the construction zone, and in an area protected from potential exposure to surface waters.
- Any chemical spill will be cleaned up immediately upon discovery. Absorbent materials will be placed in a container for proper disposal. Spill kits will be kept and maintained on site. A materials inventory, and material safety data sheets for materials contained in the inventory, will be kept at staging areas, as well as emergency contact information.
- Temporary sanitary facilities (portable toilets) will be provided at the construction site.

Temporary measures for erosion control include the use of diversion devices to keep runoff from entering the work trench and soil storage areas. Portable booms or other suitable containment devices will be used to prevent excavated soil from being transported by runoff. If soil were stockpiled for a period of more than 5 days, it would be seeded with a fast growing vegetative cover. Catch basin inlets will be protected in accordance with the details shown on the plans. Trenches will be promptly backfilled to grade to minimize exposure time to the elements.

The contractor is responsible for the implementation of the SWPPP, including the installation and maintenance of management practices, waste and chemical handling, housekeeping and means and methods of construction. A regular maintenance schedule will be implemented for the maintenance of the erosion control measures.

According to Part IV of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002), the owner or operator must ensure that all erosion and sedimentation control practices and post construction stormwater management practices identified in the Stormwater Pollution Prevention Plan are always maintained and effective. This includes the following:

- Daily checking to ensure that all measures are intact and functioning, by trained personnel
- Inspections by a qualified inspector on (at least) a weekly basis (and after a 0.5-inch rainfall), to ensure that sediment barriers, erosion control measures, site stabilization measures, etc., are effective and functioning.
- Inspections by a qualified inspector on (at least) a weekly basis (and after a 0.5-inch rainfall), of sediment accumulation in stormwater structures and devices, including catch basins, stormwater storage facilities, drains and construction entrances, and to ensure removal of sediment as necessary.
- Inspections by a qualified inspector on (at least) a weekly basis (and after a 0.5-inch rainfall), of unstabilized, disturbed areas, staging areas, to take corrective actions if areas are susceptible to erosion.
- Inspections by a qualified inspector on (at least) a weekly basis (and after a 0.5-inch rainfall), to ensure that materials storage areas are sufficiently protected and not contributing pollutants to surrounding areas.

Good Housekeeping at Construction Sites

1. Provide for waste management

- Prevent or reduce the potential for the discharge of pollutants to stormwater from solid or liquid wastes by disposing of trash, proper material handling, recycling and cleanup
- Designate trash and bulk waste disposal areas on-site
- Recycle materials whenever possible
- Segregate, label and provide proper disposal for hazardous materials and wastes
- Collect litter from the site daily
- Provide well maintained, stable and properly located toilet facilities (away from storm drains), and use according to Health Department regulations
- Provide secondary containment for spills from collection and sanitary facilities
- Educate employees regarding waste handling on site

2. Establish proper materials handling staging areas

- Paints, solvents, pesticides, fuels, oils and other hazardous materials should be stored indoors or under cover, not exposed to elements
- Designate staging areas for fueling, mixing paint, plaster, mortar, and other materials, as applicable
- Train employees pertaining to the proper handling of materials used at the site

3. Designate paint and concrete washout areas

- Concrete contractors should be encouraged to use washout facilities at their plant
- Washout areas on-site should be designated, and located away from streams, ponds, storm drains, streets or gutters
- Provide adequate containment for wash water
- Inspect washout facilities daily to look for leaks, tears, and breaches in the system, as applicable

4. Establish proper equipment/vehicle fueling and maintenance practices

- Encourage fueling and vehicle/equipment maintenance off-site
- Designate vehicle/equipment fueling and maintenance areas, and locate them away from wash areas, runoff, streams, ponds, storm drains, streets or gutters. Use drip pans, drip cloths and/or absorbent pads for fluid replacement, and keep a spill kit nearby. Provide secondary containment.
- Inspect the fueling and maintenance area daily to look for leaks, and breaches in the system, as applicable
- Collect spent fluids, store in labeled containers away from the elements and dispose of or recycle appropriately
- Train employees pertaining to the proper use of the fueling and maintenance area

5. Control equipment washing and allowable stormwater discharges

- Designate vehicle/equipment washing areas, and locate them away from runoff, streams, ponds, storm drains, streets or gutters. Provide secondary containment.
- Use high pressure water spray without detergents
- Train employees pertaining to the proper washing procedures

6. Develop a spill prevention and response plan

Follow the plan included in the SWPPP

Construction Site Operations and Areas of Concern

<u>Activity</u>	<u>Potential pollutant</u>	<u>Controls</u>
Demolition	sediment, trash, debris	Maintain erosion control measures, wind screening
Clearing, grading & excavating	sediment, trash, debris	Maintain erosion control measures, wind screening
Concrete work & washout	metals, pH, trash, debris	Specify a controlled washout area with contained/filtered runoff
Paving	sediment, trash, debris	Maintain erosion control measures
Materials delivery & storage	sediment, trash, debris	Maintain erosion control measures, wind screening and specify locations for handling
Dewatering	sediment, nutrients	Maintain erosion control measures
Landscaping operations	sediment, nutrients, trash, debris	Maintain erosion control measures, use chemicals according to labels, laws and by qualified applicators
Solid waste	trash, debris, other chemicals	Use receptacles, wind screening and litter patrol
Sanitary system	nutrients, pH, bacteria, other chemicals	Use on-site portable facility
Vehicle fueling & maintenance	oil, grease, other chemicals	Do not perform on-site

Potential Pollutants from Construction Sites

<u>Material</u>	<u>Pollutant</u>	<u>Controls to Minimize Stormwater Impacts</u>
Silt/sediment	Suspended solids, pathogens	• Adhere to erosion control plan
Gasoline	BTEX, MTBE	• Proper labeling of all containers • Proper covered storage of materials • Keep containers above the ground • Keep lids tightly fastened • Provide means of secondary containment • Establish staging areas away from stream corridors • Limit handling to staging areas • Do not overfill equipment • Dispose of wastes appropriately • Use caution to avoid spills
Diesel fuel	Petroleum hydrocarbons	
Oil	Petroleum hydrocarbons	
Kerosene	Petroleum hydrocarbons	
Hydraulic fluids	Petroleum hydrocarbons	
Lubricating oil	Petroleum hydrocarbons	
Grease	Petroleum hydrocarbons	
Antifreeze	Ethylene glycol, metals	
Cleaning solvents	VOCs, naphtha	
Adhesives	VOCs, polymers, epoxies, ammonia, acids	• Proper labeling of all containers • Proper storage of materials • Keep lids tightly fastened • Keep materials covered from weather • Limit use where needed • Dispose of wastes appropriately • Use caution to avoid spills
Paint	VOCs, metals, epoxies	
Wood preservatives	Petroleum hydrocarbons, VOCs, resins, metals	
Curing compounds	VOCs, resins, phenols, naphthalene	
Joint compounds	Asbestos	
Plaster/spackle	Asbestos, calcium oxides	
Asphalt	Petroleum hydrocarbons	• Specify controlled concrete truck washout area • Isolate construction materials storage areas • Use good housekeeping procedures on site • Dispose of waste materials properly
Asphaltic cement	Petroleum hydrocarbons	
Concrete/mortar	Acids, ketones	
Construction debris	Solid waste	• Isolate construction materials storage areas • Use good housekeeping procedures on site • Provide covered trash receptacles on site • Do not overfill receptacles • Pick up litter daily
Litter/paper	Solid waste	
Food waste	Solid waste	
Cardboard/packaging	Solid waste	
Demolition debris	Solid waste	
Trees/shrubs	Solid waste	

<u>Material</u>	<u>Pollutant</u>	<u>Controls to Minimize Stormwater Impacts</u>
Insecticides	Pesticides	• Store in areas protected from the elements • Proper labeling of all containers • Proper storage of materials • Keep lids tightly fastened • Use sparingly and according to instructions • For use by qualified individuals
Rodenticides	Pesticides	
Herbicides	Pesticides	
Lawn chemicals	Pesticides	
Fertilizer	Nitrogen, phosphorus	
Sanitary wastes	Bacteria, pathogens	• Provide on-site sanitary facilities

Construction Site Complaint Form

Date: _____

Person Filing Complaint Name: _____

Address: _____

Location of Construction Site: _____

Nature of Complaint: _____

Follow-up Action: _____

Inspection Outcome: _____

Spill Prevention/Response Plan

The personnel at the site must be aware of the locations of chemical storage areas, including the types and quantities of hazardous materials stored at the site. All materials should be stored in appropriate containers and must be labeled. Additionally, anything that is susceptible to spillage or leakage must be handled with care to minimize the potential of a chemical or materials release.

All materials shall be stored in their original containers, and labels must be prominently displayed. The contractor is responsible for maintaining the Material Safety Data Sheets (MSDS) for each chemical used or stored on the site, in a convenient location. The MSDS contains valuable information pertaining to the chemical and physical properties of the materials, and indicates handling advice, recommendations for chemical neutralization and precautions for chemical incompatibilities. Individuals who undertake a supervisory role in site operations should be familiar with the chemicals stored and used on the site, and their properties as provided in the MSDS.

The personnel who handle potentially polluting materials should recognize the potential flow path of a spill. The flow path may be determined by knowing how the area storm system functions, knowing the flow direction of a spill and/or analyzing the area topography. The personnel must be aware of the location of existing storm drains, tributary drainage areas (watershed areas), and surface waters, as applicable. Based on this information, secondary containment and barriers to inhibit or stop flow should be used.

Spill prevention procedures shall be posted at the construction site and persons trained in spill handling shall be on site or on call at all times. Spill kits approved by OSHA and materials for cleaning spills shall be kept on site and shall be easily accessible for emergencies and shall be kept near the chemical storage areas. Personnel must be trained to use the spill kit properly and effectively.

The chemical storage area must be inspected periodically and after heavy rains to ensure that the storage area remains dry. Any spills or accumulated rainwater within the storage area shall be collected and placed into storage drums, to be disposed of properly, and not on site. Any liquid collected from the chemical storage area must be handled as hazardous waste.

Spills shall be cleaned as soon as possible upon discovery and all contaminated materials must be disposed of properly. Spills shall not be washed with water, hosed down or buried. If a spill is exposed to rainfall, it shall be covered using tarps or similar methods.

The following are general guidelines for spill response:

- Immediately alert a supervisor and personnel in the area of the spill
- In the case of a fire, explosivity or if medical attention is needed, call 911
- If the spill involves a chemical release with possible contamination, contaminated clothing must be removed and the skin must be flushed with water (if compatible)
- If the spill involves a volatile or flammable material, warn site personnel, clear the area, control ignition sources and ventilate the area, as applicable
- Employ the use of appropriate personal protection equipment, per MSDS information

The basic procedures for the prevention of spilled chemicals from reaching surface waters include the following:

- Stop the source of the spill
- Contain any liquid release, protect floor drains, the storm system, drainage ways or other means of conveyance or transport of the spill, using booms, dikes, covers or similar methods

- Cover the spill with absorbent material
- Collect the absorbed material and place it in a suitable container and label it accordingly
- Dispose of the absorbent properly

The following notifications shall be made in the event of a chemical, petroleum product or hazardous spill:

- NYS Department of Environmental Conservation, chemical or oil spill release

Hotline: 1-800-457-7362

NYSDEC, Region 1 Hotline, Stony Brook, (631) 444-0322

- Nassau County Department of Health Services, (516) 227-9697 or 516-742-6154
- Fire: 911
- Police: 911

Suspected spills must be reported to the department's Spill Hotline (800-457-7362) within 2 hours after discovery for any of the following conditions:

- the discovery of hazardous substance outside of a container at the facility or in the surrounding area (e.g., the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water);
- unusual operating conditions observed (e.g., the erratic behavior of hazardous substance dispensing equipment, the sudden loss of hazardous substance from the container, an unexplained presence of water in the container, or water in the interstitial space of secondarily contained components), unless the container component is found to be defective but not leaking, and is immediately repaired or replaced;
- any other conditions or indications of a suspected spill. Where a spill of any hazardous substance has occurred or is suspected, the department may order the owner to inspect any container, location, and/or associated equipment which might be the source of the actual or suspected spill and to test for tightness and structural soundness.

Any spill of a hazardous substance must be reported in accordance with 6 NYCRR 597.4. Any spill of petroleum must be reported in accordance with 6 NYCRR 613.6 or 17 NYCRR 32.3.

After a spill occurs, municipal personnel must evaluate the adequacy of the best management practices which are in place. If the management practices are inadequate, new best management practices must be implemented and the applicable plan (e.g., SWPPP, SWMP) must be updated. The intent of the new practices is the prevention of the reoccurrence of a spill and to improve emergency response to a release.

The cleaning up of a spill or leak must comply with must be consistent with applicable petroleum bulk storage, chemical bulk storage, or hazardous waste management regulations at 6 NYCRR Parts 596 through 599, 613, and 370 through 373.

Installation and Maintenance Schedule
Erosion Control and Stormwater Management Facilities
(as applicable for each erosion control measure)

Straw Bales:

Straw bales may be used alone, or they may be placed flush against the upstream (upslope) side of silt fence. The straw bales shall be installed prior to groundbreaking within areas of site work, and along the perimeter of soil storage stockpiles immediately upon establishment, as applicable and according to the plans. The straw bales shall be inspected at least once each week, and after heavy rains. Straw bales that are not installed properly (embedded a minimum of 4 inches into the soil), or that are no longer intact shall be replaced. There should be no gaps in the straw bale barrier. Sediment that accumulates more to a depth of half of the straw bale height must be removed and disposed of so that it would not erode. Straw bales should be replaced annually, or when they are no longer functional, as the life expectancy is several months.

Silt Fence:

Silt fence may be used alone, or they may be placed flush against the downstream (down slope) side of straw bales. The silt fence shall be installed prior to groundbreaking within areas of site work and after establishment of soil storage stockpiles immediately upon establishment, as applicable and according to the plans. The silt fence shall be inspected at least once each week and after heavy rains. Silt fence that is not installed properly, securely fastened or not properly set into the ground (6 inches), should be reinstalled. Silt fence that is torn, stressed, stretched, weathered or weak shall be replaced. Accumulated sediment shall be removed and disposed of so that it would not erode. Silt fence should be replaced every six months, or when it is no longer functional.

Storm Drain Inlet Protection:

Storm drain inlet protection shall be used as specified on the plans and detail sheets, and in areas where construction activities may cause soil or sediment to enter the storm system. Inlet protection shall be installed prior to groundbreaking, and it shall remain in place until disturbed soils have been stabilized. Inlet protection shall be inspected daily, and it shall be reinstalled or replaced if not installed properly or is no longer functional. Accumulated soil, sediment, debris and other potential impediments to the functioning of the stormwater system shall be removed and disposed of properly.

Portable Sediment Tank, or Sump Pit:

The portable sediment tank or the sump pit (option) shall be used to trap sediment from dewatering operations. The sediment tank or sump pit shall be inspected daily for clogging and other problems that may cause the system to malfunction. Accumulated soil, sediment, debris and other potential impediments to the functioning of the stormwater system shall be removed and disposed of properly.

Stabilized Construction Entrance:

A stabilized construction entrance is a pad of aggregate on a geotextile located where there is construction traffic to (or from) an access point. The entrance shall be maintained to prevent tracking of sediment from construction sites. Maintenance includes top dressing of additional aggregate material (e.g., stone). Sediment that has reached a point beyond the stabilized entrance shall be immediately removed. The stone pad may be washed or rinsed, but only if the sediment washed from the stone is contained on site.

Check Dams:

Check dams are small barriers made of stone, bagged sand or gravel, or other durable material, placed across a drainage way. Check dams should be inspected after each rainfall event. Accumulated sediment should be removed, and stone (or other material) should be replenished to maintain the original design shape.

Stabilization with Mulch:

Mulching is used to stabilize areas of new plantings or on soils subject to erosion. Mulching also lowers runoff amounts from surfaces. Mulch should be inspected regularly to ensure adequate coverage. Additional mulch should be added if mulch has washed away, biodegraded or become buried or worked into the soil underneath.

Stabilization with Sod:

Installation of sod is applicable to areas where the goal is to establish lawn areas for a long term. Sod should be carefully watered daily and inspected to ensure adequate coverage, without gaps, and to ensure that it is green and healthy, and that moisture is reaching through the root zone (to 4 inches). Pieces of sod that are not thriving shall be replaced. Sod should not be mowed until the roots are firmly established.

Sediment Basin:

A sediment basin is a temporary barrier or dam constructed in a low area or in a drainage way to intercept sediment laden runoff and trap soil particles (silt and sediment). Sediment basins should be inspected daily, and erosion and other damage should be immediately repaired. Sediment shall be removed prior to reaching 50% of the basin capacity.

Enforcement Response Plan

The following outlines the Village's procedure for enforcement as it relates to the protection of the Village's stormwater system.

The Village is required to develop and implement adequate enforcement authority for construction activities with land disturbance of an acre or more, as well as illicit discharges to the Village's storm sewer system. The purpose of this Enforcement Response Plan is to communicate how the enforcement tools available to the Village will be used to achieve compliance. The Enforcement Response Plan also specifies criteria by which the Village can determine the enforcement action most appropriate to instances of non-compliance.

The procedures are developed with the following objectives in mind:

- Prevent pollutants from entering the MS4 and causing environmental harm.
- Ensure that violators return to compliance in a timely manner.
- Communicate definitions for non-compliance.
- Penalize those responsible for non-compliant discharges or construction site operators for violations.
- Provide equitable and consistent enforcement actions to the extent possible.
- Deter non-compliance through education and compliance assistance and/or possible penalties.
- Recover costs incurred by the Village due to non-compliance.

The Village enforcement responses and actions would consider the type of issue, the magnitude of the issue, the duration of the situation, the potential impact on public health and welfare, the impact on the storm system, impact on a water body, the compliance history of the operator and good faith efforts regarding compliance, as well as any other pertinent circumstances contributing to the situation. The Village tracks enforcement by conducting follow-up investigations at a frequency depending on the above listed criteria and further evaluation.

Referral to other agencies is based on other jurisdictions, which may be County, State or federal.

Each site inspection should include a recommendation of a follow up inspection. Time frames for compliance and/or reinspection should consider the type and magnitude of the issue or violation, giving a reasonable time frame for compliance. Typical time frames would be between 24 hours and 2 weeks.

Fines for violations would be determined according to applicable sections of the Village Code.

Site Construction and Illicit Discharge Enforcement Procedure

<u>Issue</u>	<u>Enforcement Action</u>	<u>Responsibility</u>
Reported illicit discharges or construction site violations which are determined to comply with applicable standards	No Action	Village Building Department/ Village Engineering Consultant
Failure to prepare or maintain a Stormwater Pollution Prevention Plan (SWPPP)	Written Warning	Village Building Department
Failure to perform required inspections or record keeping documentation	Written Warning	Village Building Department
Erosion control measures not adequately installed or maintained or ineffective	Verbal Warning	Village Building Department
Failure to use Best Management Practices (BMPs)	Verbal Warning	Village Building Department/ Village Engineering Consultant
Illicit discharge to storm system	Written Violation Notice and notice to remedy	Village Building Department
Construction site erosion confined to site	Verbal Warning	Village Building Department/ Village Engineering Consultant
Sediment/stormwater discharge from construction site beyond erosion control measures but not beyond property line	Written Violation Notice and notice to remedy	Village Building Department
Illicit discharge to surface water of the State	Summons/Appearence Ticket and notice to remedy/ Referral to other agencies	Village Building Department/ Village Police/ Other agencies
Sediment/stormwater discharge from construction site beyond erosion control measures beyond property line	Summons/Appearence Ticket and notice to remedy/ Referral to other agencies	Village Building Department/ Village Police/ Other agencies
Repeated violations on construction sites	Stop Work Order until remedy completed	Village Building Department/ Village Police
Failure to maintain post construction stormwater facilities	Written Violation Notice and notice to remedy	Village Building Department

ENFORCEMENT RESPONSE DOCUMENTATION FORM

Personnel Involved

Date

Description of Violation

Location of Violation (address)

() -

Responsible Party

Telephone

Street

City

Zip

Description of Violation:

Level of Response

Selected Remedy

Date for Follow-Up

Additional Notes:

Best Management Practices for Municipal Facilities and Operations

The following best management practices (BMPs) shall be taken by the Village to control potential pollutants from entering the municipal storm system.

1. Minimize exposure of potentially polluting materials to rain, snow, snowmelt and runoff, including the protection of areas of loading, unloading, storage, disposal, cleaning, maintenance, and fueling operations, as applicable. The following are considered best management practices.
 - Locate materials and activities inside, or protect them with storm resistant cover
 - Use grading, berming, or curbing as containment features to prevent runoff of contaminated flows and create a diversion away from stormwater inlets and locate materials, equipment and activities (including cleaning of vehicles and equipment) so that leaks and spills would be within the containment area
 - Clean up spills and leaks promptly using dry methods such as absorbents to prevent the discharge of pollutants
 - Store leaky vehicles and equipment indoors, and use drip pans and absorbents
 - Use spill/overflow protection, such as a secondary containment system
 - Inspect unused equipment monthly for leaks
 - Minimize the use of chemicals and replace them with less toxic alternatives and non-hazardous cleaners and other items, as applicable
2. Follow a preventative maintenance program that includes routine inspection, testing, maintenance, and repair of all fueling areas, vehicles and equipment and systems to prevent leaks, spills and other releases, including
 - Performing inspections and preventive maintenance of storm drainage systems, source control systems or devices, treatment systems, and plant equipment
 - Maintain spill response supplies, containment measures, and coverings (including buildings), and maintain personnel training, as applicable
 - Wash vehicles and equipment such that washwater would not be discharged to surface waters
 - Routinely maintain best management practices, to ensure that the measures are effective and ready for the next storm event
 - Use temporary measures to minimize discharges of pollutants during times of repair or replacement of permanent measures, including the cleaning up of contaminated surfaces to eliminate a potential discharge
3. Spill prevention and response procedures shall follow what is included in the appendix.
4. Implementation of erosion and sediment control measures to include stabilization of exposed area to control runoff using structural and/or non-structural control found in the NYSDEC Erosion & Sedimentation Control manual.

5. Management of vegetated areas and open space on municipal property
6. Proper storage of salt storage, which does not apply to the Village, as the Village has no maintenance facility.
7. The Village keeps all dumpsters closed when not in use. Exposed areas will be free of waste, garbage and debris.

The Village storm system consists of a series of catch basins which are piped to either dry wells or groundwater recharge basins. The catch basins collect runoff from the roads, and they function as inlets to the storm system. Each catch basin has a recessed sump which serves as a storage area for debris, so it does not enter the piping system. It is important to keep the sumps clean because if they are full, the debris may enter the piping system and it would clog the Village drainage system. The Village maintains its catch basins by periodically having an outside contractor clean them. There is a catch basin inspection and maintenance form in the appendix. The inspection form includes the following information.

- Date of inspection
- Depth of structure
- Depth of sump
- Approximate level of trash, sediment, debris relative to the depth of the sump in the structure.
- Date of cleaning, as applicable

Based on the results of the inspection of the catch basins, the Village cleans its catch basins according to the following schedule

- Within 6 months of the inspection where the debris level had exceeded 50% of the depth of the sump
- Within 1 year of the inspection where the debris level was less than 50% of the depth of the sump

The Village or its contractor must use care when cleaning catch basins and other storm system components so that:

- Water or materials removed from the catch basin are prevented from entering the storm system or waters of the State; and
- materials removed from the catch basin are disposed of in accordance with applicable environmental laws and regulations.

The Village has a contractor clean or sweep the Village roads at least every other year either during the spring after winter sanding operations have been completed or in the fall when leaves are on the road surface.

The following are best management practices (BMPs) for road maintenance.

- Perform paving, patching and sealing during dry weather
- Stage the paving and patching activities to reduce the potential discharge of pollutants to the Village storm system or to waters of the State
- Restrict the use of herbicides/pesticides on roadsides
- Contain pollutants associated with road maintenance activities

- Routinely calibrate equipment for the appropriate application of sand/salt
- Ensure that snow removal and disposal activities comply with NYS guidance on snow disposal, including
 - the upland disposal/storage in areas least likely to cause runoff to waters of the State,
 - trap solids or remove solids from stockpiles snow as it melts to prevent them from entering the storm system or waters of the State,
 - establishment and maintenance of a buffer (minimum recommended distances range from 50 to 100 feet) between disposal site and surface water,
 - avoidance of wellhead protection areas of a public water supply or within 300 feet of a private well
 - avoidance of areas serving as onsite sewage system leaching fields; and
 - as applicable, the use of proper controls such as inlet protection for catch basins.

Municipal Good Housekeeping and Pollution Prevention Policy and Procedures

It is the policy of the Village to conduct its municipal operations and maintenance in a safe and environmentally sound manner and in compliance with applicable safety and environmental rules and regulations. To that end, the Village has prepared this policy and procedures document to safeguard human health and the environment.

Street Maintenance:

Note that the Village does not have any bridges or sidewalks.

The Village policy pertaining to road/street maintenance is as follows.

- To inspect all streets and parking areas on a weekly basis
- To sweep all streets at least annually and as needed
- To provide training to all maintenance employees annually, as applicable to personnel
- To ensure that all third party contracts for street and bridge maintenance require the vendor to comply with Village policy and environmental regulations by including a certification in the contract.

Winter Road Maintenance:

- To plow and apply salt/sand adequate to safeguard the traveling public
- To use no more salt/sand than is needed to safeguard the traveling public

If a contractor is used for winter road maintenance, the above certification is required.

Drainage System Maintenance:

- To inspect 25% of the catch basins per year and record the depth of the accumulate sediment
- To inspect 25% for the Village owned diffusion (dry) wells per year and record the depth of sediment
- To inspect all structural BMP treatment devices each year and develop a history of material accumulation.
- To inspect Village owned ditches, open channels, and waterways (as applicable) for sedimentation and erosion monthly and stabilize the banks as required.
- To inspect a minimum of 20% of the Village outfalls (as applicable) once per year during dry weather and record whether there is any non-groundwater flow
- To clean, replace expendable components and otherwise maintain structural BMP treatment devices so they function as designed
- To trace dry weather non-groundwater discharges from Village outfalls to determine if an illicit discharge is occurring in coordination with the Village Stormwater Management Officer (SMO).
- To provide training to all drain maintenance employees annually

Vehicle and Fleet Maintenance (as applicable):

Note that the Village does not have a vehicle maintenance facility

Parks and Open Space Maintenance

- To follow an integrated pest management program (IPM) approach to control pests on Village properties.
- To require that pesticides only be applied by a NYS Certified Applicator
- To use slow release fertilizers in cases where a decision has been made to use fertilizers.
- To strive to reduce the use of fertilizers on Village properties.
- To store pool chemicals in secure enclosures
- If the pool is drained, to assure that the chlorine has dissipated before discharging.
- To promote pet waste clean up on Village properties and public streets
- Discourage flocking birds such as geese and pigeons from permanently residing on Village properties and facilities.
- To provide training to all ground maintenance employees annually
- To ensure that all third party contracts for landscaping and grounds maintenance require the vendor to comply with Village policy and environmental regulations by including a certification in the contract.

Municipal Building Maintenance:

- To ensure that underground heating oil tanks are in compliance with environmental regulations.
- To inspect on-site septic systems annually and take have the systems cleaned as required
- To explore and use alternative cleaning products (“green products”) for building maintenance
- To recycle paper, glass, plastics, and metal containers
- To use diffusion wells or infiltration devices to recharge roof water and site runoff
- To properly store pesticides, cleaning solutions and other chemicals in a closed area.
- To ensure that all third party contracts for building maintenance require the vendor to comply with Village policy and environmental regulations by including a certification in the contract.

Solid Waste Management:

The Village does not pick up or remove solid waste

- To ensure that all third party contracts for building maintenance require the vendor to comply with Village policy and environmental regulations by including a certification in the contract.

Catch Basin Inspection and Maintenance Form

[illegible]

Environmental Protection Agency (EPA) Stormwater Management Preferred Practices

Bioretention Cells



A bioretention cell or rain garden is a depressed area with porous backfill (material used to refill an excavation) under a vegetated surface. These areas often have an underdrain to encourage filtration and infiltration, especially in clayey soils. Bioretention cells provide groundwater recharge, pollutant removal, and runoff detention. Bioretention cells are an effective solution in parking lots or urban areas where green space is limited.

Curb and Gutter Elimination

Curbs and gutters transport flow as quickly as possible to a stormwater drain without allowing for infiltration or pollutant removal. Eliminating curbs and gutters can increase sheet flow and reduce runoff volumes. Sheet flow, the form runoff takes when it is uniformly dispersed across a surface, can be established and maintained in an area that does not naturally concentrate flow, such as parking lots. Maintaining sheet flow by eliminating curbs and gutters and directing runoff into vegetated swales or bioretention basins helps to prevent erosion and more closely replicate predevelopment hydraulic conditions. A level spreader, which is an outlet designed to convert concentrated runoff to sheet flow and disperse it uniformly across a slope, may also be incorporated to prevent erosion.

Grassed Swales



Grassed swales are shallow grass-covered hydraulic conveyance channels that help to slow runoff and facilitate infiltration. The suitability of grassed swales depends on land use, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the grassed swale system. In general, grassed swales can be used to manage runoff from drainage areas that are less than 4 hectares (10 acres) in size, with slopes no greater than 5 percent. Use of natural, low-lying areas is encouraged, and natural drainage courses should be preserved and utilized.

Green Parking Design



Green parking refers to several techniques that, applied together, reduce the contribution of parking lots to total impervious cover. Green parking lot techniques include: setting maximums for the number of parking lots created; minimizing the dimensions of parking lot spaces; utilizing alternative pavers in overflow parking areas; using bioretention areas to treat stormwater; encouraging shared parking; and providing economic incentives for structured parking.

Infiltration Trenches



Infiltration trenches are rock-filled ditches with no outlets. These trenches collect runoff during a storm event and release it into the soil by infiltration (the process through which stormwater runoff penetrates into soil from the ground surface). Infiltration trenches may be used in conjunction with another stormwater management device, such as a grassed swale, to provide both water quality control and peak flow attenuation. Runoff that contains high levels of sediments or hydrocarbons (for example, oil and grease) that may clog the trench are often pretreated with other techniques such as water quality inlets (series of chambers that promote sedimentation of coarse materials and separation of free oil from storm water), inlet protection devices, grassed swales, and vegetated filter strips.

Inlet Protection Devices



Inlet protection devices, also known as hydrodynamic separators, are flow-through structures with a settling or separation unit to remove sediments, oil and grease, trash, and other stormwater pollutants. This technology may be used as pre-treatment for other stormwater management devices. Inlet protection devices are commonly used in potential stormwater “hot spots”—areas where higher concentrations of pollutants are more likely to occur, such as gas stations.

Permeable Pavement



Permeable pavement is an alternative to asphalt or concrete surfaces that allows stormwater to drain through the porous surface to a stone reservoir underneath. The reservoir temporarily stores surface runoff before infiltrating it into the subsoil. The appearance of the alternative surface is often similar to asphalt or concrete, but it is manufactured without fine materials and instead incorporates void spaces that allow for storage and infiltration. Underdrains may also be used below the stone reservoir if soil conditions are not conducive to complete infiltration of runoff.

Permeable Pavers



Permeable pavers promote groundwater recharge. Permeable interlocking concrete pavements (PICP) are concrete block pavers that create voids on the corners of the pavers (pictured to the right). Concrete grid paver (CGP) systems are composed of concrete blocks made porous by eliminating finer particles in the concrete which creates voids inside the blocks; additionally, the blocks are arranged to create voids between blocks. Plastic turf reinforcing grids (PTRG) are plastic grids that add structural support to the topsoil and reduce compaction to maintain permeability. Grass is encouraged to grow in PTRG, so the roots will help improve permeability due to their root channels.

Rain Barrels and Cisterns



Rain barrels and cisterns harvest rainwater for reuse. Rain barrels are placed outside a building at roof downspouts to store rooftop runoff for later reuse in lawn and garden watering. Cisterns store rainwater in significantly larger volumes in manufactured tanks or underground storage areas. Rainwater collected in cisterns may also be used in non-potable water applications such as toilet flushing. Both cisterns and rain barrels can be implemented without the use of pumping devices by relying on gravity flow instead. Rain barrels and cisterns are low-cost water conservation devices that reduce runoff volume and, for very small storm events, delay and reduce the peak runoff flow rates. Both rain barrels and cisterns can provide a source of chemically untreated “soft water” for gardens and compost, free of most sediment and dissolved salts.

Riparian Buffers



A riparian, or forested, buffer is an area along a shoreline, wetland, or stream where development is restricted or prohibited. The primary function of aquatic buffers is to

physically protect and separate a stream, lake, or wetland from future disturbance or encroachment. If properly designed, a buffer can provide stormwater management and can act as a right-of-way during floods, sustaining the integrity of stream ecosystems and habitats.

Sand and Organic Filters

Sand and organic filters direct stormwater runoff through a sand bed to remove floatables, particulate metals, and pollutants. Sand and organic filters provide water quality treatment, reducing sediment, biochemical oxygen demand (BOD), and fecal coliform bacteria, although dissolved metal and nutrient removal through sand filters is often low. Sand and organic filters are typically used as a component of a treatment train to remove pollution from stormwater before discharge to receiving waters, to groundwater, or for collection and reuse. Variations on the traditional surface sand filter (such as the underground sand filter, perimeter sand filter, organic media filter, and multi-chamber treatment train) can be made to fit sand filters into more challenging design sites or to improve pollutant removal.

Stormwater Planters



Stormwater planters are small landscaped stormwater treatment devices that can be placed above or below ground and can be designed as infiltration or filtering practices. Stormwater planters use soil infiltration and biogeochemical processes to decrease stormwater quantity and improve water quality, similar to rain gardens and green roofs but smaller in size—stormwater planters are typically a few square feet of surface area compared to hundreds or thousands of square feet for rain gardens and green roofs. Types of stormwater planters include contained planters, infiltration planters, and flow-through planters.

Vegetated Roofs



Green roofs consist of an impermeable roof membrane overlaid with a lightweight planting mix with a high infiltration rate and vegetated with plants tolerant of heat, drought, and periodic inundations. In addition to reducing runoff volume and frequency and improving runoff water quality, a green roof can reduce the effects of atmospheric pollution, reduce energy costs, and create an attractive environment. They have reduced replacement and maintenance costs and longer life cycles compared to traditional roofs.

Tree Box Filters



Tree box filters are in-ground containers used to control runoff water quality and provide some detention capacity. Often premanufactured, tree box filters contain street trees, vegetation, and soil that help filter runoff before it enters a catch basin or is released from the site. Tree box filters can help meet a variety of stormwater management goals, satisfy regulatory requirements for new development, protect and restore streams, control combined sewer overflows (CSOs), retrofit existing urban areas, and protect reservoir watersheds. The compact size of tree box filters allows volume and water quality control to be tailored to specific site characteristics. Tree box filters provide the added value of aesthetics while making efficient use of available land for stormwater management. Typical landscape plants (for example, shrubs, ornamental grasses, trees and flowers) are an integral part of the bioretention system. Ideally, plants should be selected that can withstand alternating inundation and drought conditions and that do not have invasive root systems, which may reduce the soil's filtering capacity.

Vegetated Filter Strips



Filter strips are bands of dense vegetation planted downstream of a runoff source. The use of natural or engineered filter strips is limited to gently sloping areas where vegetative cover can be established and channelized flow is not likely to develop. Filter strips are well suited for treating runoff from roads and highways, roof downspouts, very small parking lots, and impervious surfaces. They are also ideal components for the fringe of a stream buffer, or as pretreatment for a structural practice.

Best Management Practices (BMPs) for Impaired Watersheds

Impairment: Pathogens/Fecal Coliform/Bacteria

BMP reductions of bacteria loadings to surface waters may be achieved through either direct BMP reduction in concentration levels between influent and effluent or through volume reduction. There are, for example, BMPs that have little bacteria removal but may have significant volume reduction which in effect will reduce the bacteria loadings. The following will address BMPs that reduce bacteria concentration and volumes.

Bacteria Concentration Reductions for Selected BMPs are given below.

Buffer Strips 43% – 57%
 Constructed Wetlands 78% – 90%
 Sand Filters 36%-83%
 Wet Ponds 44% – 99%

The following are methods of reducing the volume of runoff.

Subsurface disposal through dry wells
 Bioretention
 Green Roofs
 Porous Pavement
 Vegetated Swales
 Surface Sand Filter
 Retention Pond
 Gravel Wetland

Summary of BMPs Considered by Capture and Land Use

Land Use	Existing Development			New Development	
	Low Capture	Medium Capture	High Capture	Medium Capture	High Capture
Low Density Residential	Rain Barrels Rain Planter	Porous Paving Infiltration Basin	NA	NA	Porous Paving Infiltration Basin
Medium Density Residential	Rain Barrels Rain Planter	Porous Paving Infiltration Basin	Green Roof Rooftop Detention	Green Roof Rooftop Detention	Green Roof
High Density Residential	Rain Barrels Rain Planter	Porous Paving Infiltration Basin	Green Roof Rooftop Detention	Green Roof Rooftop Detention	Green Roof
Industrial and Public Facilities	Rain Gardens/Swales Porous Paving	Rain Gardens/Swales Porous Paving	Green Roof Rooftop Detention	Green Roof Rooftop Detention	Green Roof + Rain Gardens/Trees

Impairment: Nitrogen

Nitrogen runoff can have many sources, including agriculture, stormwater, and wastewater. Agricultural sources include excess fertilizer and animal manure are rich in nitrogen and phosphorus and can pollute water when it rains or when fields are fallow in the winter. Farmers can reduce the amount of fertilizer that reaches water bodies by applying it at the right time and method, and in the proper amount. Keeping livestock and their waste out of streams can also help.

Stormwater runoff from urban areas may also cause pollution due to nitrogen sources. When rain falls on hard surfaces like roads, sidewalks, and rooftops, it can carry pollutants like nitrogen into waterways. Other sources of nitrogen in stormwater runoff include pet and animal waste, water from irrigation, reclaimed water, wastewater leaks, failing septic systems, and atmospheric deposition.

The following recommendations are taken from the Long Island Nitrogen Action Plan, Recommendations for Fertilizer Nitrogen Applications on Residential and Commercial Turfgrass.

- The single application rate should be a maximum of 0.6 pounds of total nitrogen per 1,000 square feet.
- The annual application rate should be a maximum of 1.8 pounds of total nitrogen per 1,000 square feet.
- At least 50 percent of the nitrogen in any turfgrass fertilizer product should be “slowly available nitrogen”
- Application of fertilizer to lawns and non-agricultural turf should not occur between November 1 and April 1, annually
- Fertilizer products should not be applied on any impervious surface including parking lots, roadways, storm drains, frozen ground, and sidewalks, or where there is standing water on turf. If such application occurs, the fertilizer should be immediately contained and either applied to lawn or non-agricultural turf or placed in an appropriate container.
- Fertilizer products should not be applied to any lawn or non-agricultural turf on any real property within twenty feet of any surface water, except that this restriction should not apply where a continuous natural vegetative buffer, at least ten feet wide, separates an area of lawn or non-agricultural turf and surface water, and except that, where a spreader guard, deflector shield or drop spreader is used to apply fertilizer, such application should not occur within three feet of any surface water. This should not apply to an application of fertilizer for newly established lawn or non-agricultural turf during the first growing season.
- Grass clippings from the mowing of lawns and all non-agricultural turf should be left on the lawn.

Golf Courses Recommendations include the following.

- Fertilizer should only be applied between April 2 and October 31
- Application must comply with the requirements listed in the “Application Restrictions” section. This is in adherence with the Nutrient Runoff Law (Title 21 of Article 17 of Environmental Conservation Law).
- A seasonal limit should be implemented on the amount of nitrogen applied per calendar year not to exceed 2.7 pounds of total nitrogen per 1,000 square feet.
- Applicants should only apply fertilizer that has at least forty percent slowly available nitrogen, and following the below guidelines: a single granular fertilizer application rate of no more than 0.7 pounds per thousand square feet of total nitrogen, and no more than 0.5 pounds per thousand square feet per application of one hundred percent liquid, water soluble fertilizer.
- Golf courses may exceed the application rate of fertilizer when the turf grass has suffered a loss of greater than 10 percent turf loss per thousand square feet.
- Owners of golf courses should maintain records of application dates and rates.

Irrigation Recommendations include the following.

- Irrigation systems should be operational and ready for use prior to any fertilizer application. Systems should be able to provide an application of ¼ inch of water to fertilized areas within 24 hours of application, if no rainfall has occurred.
- Systems should be equipped with either a rain sensor, moisture sensor or an EPA Water Sense approved smart controller or any combination of these devices.
- Systems should be in proper working condition, such as having no broken or malfunctioning equipment, and work to the capabilities as designed.
- As consistent with Nassau County Regulations, systems should not run between the hours of 10:00 am and 4:00 pm daily; except where new sod/seed lawns are being grown and/or where an application of pesticides requires immediate watering as directed on the label.
- Systems should not provide more than 1½-inch of supplemental water per week.
- Irrigation systems should not run while it is raining.

Impairment: Silt/Sediment

Silt and sediment may get into surface waters by being carried by stormwater runoff or by wind. Sources include agricultural activities as well as construction sites.

The following are tips for the reduction of sediment in surface waters from the USEPA.

- Sweep sidewalks and driveways instead of hosing them off. Washing these areas results in sediment and other pollutants running off into streams, rivers and lakes.
- Use weed-free mulch when reseeding bare spots on your lawn, and use a straw erosion control blanket if restarting or tilling a lawn.
- Notify local government officials when you see sediment entering streets or streams near a construction site.
- Put compost or weed-free mulch on your garden to help keep soil from washing away.
- Avoid mowing within 10 to 25 feet from the edge of a stream or creek. This will create a safe buffer zone that will help minimize erosion and naturally filter stormwater runoff that may contain sediment.
- Either wash your car at a commercial car wash or on a surface that absorbs water, such as grass or gravel

The practices for construction sites include the following.

- Use of silt barriers such as silt fence or straw bales or coir logs, in sequence per NYSDEC standards.
- Use of stormwater inlet protection.
- Keeping stockpiled soil covered or temporarily vegetated.
- Use of rock check dams.
- Use of temporary sediment basins.
- Stabilizing unvegetated land disturbances as soon as practicable.

Additional Best Management Practices (BMPs) for the control of silt and sediment are included in the NYSDEC Standards and Specifications for Erosion and Sediment Control (aka, the Blue Book).

The control of erosion on agricultural land includes the following.

- Contour farming by plowing rows along the contour, perpendicular to the flow line to help slow runoff velocity.
- Terracing land on steep slopes to help contain runoff.
- Minimizing areas left unvegetated by using cover crops off season.
- Planting high-residue crops like corn, hay and small grains.

Impairment: Phosphorus

There are many sources of phosphorus in aquatic systems. These sources can be natural, such as waterfowl waste, atmospheric deposition, weathering of geologic phosphate material, and plant decomposition; or they can be human-induced, such as fertilizer, pet waste, agricultural and urban runoff, industrial and domestic sewage, or faulty or overloaded septic systems. Generally, excess phosphorus enters a waterbody through nonpoint source pollution. Rain or snowmelt will pick up pollutants as it flows over the land and eventually discharges into a body of water. Stream channel modification, shoreline erosion, and loss of vegetative buffers around water sources exacerbate these stormwater discharges and increase phosphorus inputs.

The importance of managing phosphorus in the watershed is essential to protecting and maintaining a healthy surface water. Identifying phosphorus sources in a surface water's watershed is the first step in developing a watershed management plan. Watershed management plans should utilize best management practices and low-impact development techniques to minimize the movement of phosphorus from the watershed to surface waters, including the following:

- Plant native shrubs or other vegetation to reduce shoreline erosion and provide a vegetated buffer that helps to absorb nutrients before entering surface waters.
- Infiltrate stormwater rather than divert it. For example, creating a rain garden or building infiltration steps can prevent raw stormwater from entering a surface water unfiltered.
- Maintain a properly working septic system and have it pumped regularly to decrease the amount of phosphorus leaching into groundwater.
- Use phosphate free fertilizers or low phosphate, slow-release nitrogen fertilizer.
- Use phosphate free soaps and/or detergents in your home.
- Do not dump leaves or grass clippings in surface waters or burn brush near surface waters or near the shore.
- Do not allow pets or livestock to urinate or defecate near surface waters.
- Clean up pet waste.