

**Incorporated Village of  
Northport  
Stormwater Management  
Program Plan**

MS4 SPDES Permit No. NYR20A303



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Required under the New York State Department of Environmental Conservation  
SPDES General Permit for Stormwater Discharges from  
Municipal Separate Storm Sewer Systems (MS4s) (GP-0-24-001)

NYSDEC SPDES Permit Number: NYR20A303

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This Stormwater Management Program Plan (SMPP) has been prepared in accordance with the New York Department of Environmental Control (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) (GP-0-24-001). The purpose of this plan is to document modified, planned, and implemented SMPP elements. This SMPP is reviewed on an annual basis and updated as necessary in order to document progress and changes made within the program.

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## INTRODUCTION

The Incorporated Village of Northport is located on the north shore of Long Island, New York. At the time of the 2020 Decennial Census, the population was approximately 7,347. The Incorporated Village of Northport covers an approximate area of 2.53 square miles bordered on the west by Northport Harbor, which connects to the Long Island Sound, a water body of “regional significance” as defined by the NYSDEC.

Stormwater is precipitation (rain or snow) that runs off surfaces such as roof tops, driveways, roads, parking lots, and lawns. As stormwater moves off these surfaces it can pick up pollutants such as oil, suspended solids, sediment, fertilizers, pesticides, nutrients and pathogens; resulting in polluted runoff. Eventually this runoff makes its way into our estuaries and is one of the major contributors to water pollution in the Incorporated Village of Northport. Polluted stormwater runoff, also known as non-point source pollution (referred to as such due to its non-focused source), can result in shellfish bed closures, bathing beach closures, poor water quality, limitation of recreational opportunities, and degraded wetlands and wildlife habitat.

The purpose of the SMPP is to improve the quality of our nation’s waters. The Federal Clean Water Act (CWA) first sought to accomplish this by minimizing and eliminating what are commonly referred to as “point sources” of pollution – defined as sources of pollution that originate from an outlet pipe or other specific points of discharge. Though there were significant improvements in water quality since the inception of this Act in 1972, pollution remained a problem in our local waterways.

The Clean Water Act was subsequently amended to address non-point sources of pollution and beginning in 1990, municipalities of a certain population were required to develop programs and practices targeted towards reducing non-point sources of pollution. This was referred to as Phase I of the CWA. In 2003, Phase II of the CWA was implemented and required all municipalities, including small MS4s, like Incorporated Village of Northport, to implement programs and practices to reduce non-point source pollution.

In New York, Phase II requires all regulated municipalities to maintain the NYSDEC GP-0-24-001 for the discharge of stormwater runoff into their surface waters.

As a condition of this permit, regulated municipalities must develop and implement a comprehensive stormwater management program that includes mandated programs and practices that address the following items:

- Public Education and Outreach on Stormwater Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in new development/redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

Pollutants of concern addressed through this SMPP plan include nutrients, sediment, pathogens, oil, grease, metals, debris, and litter. Of particular concern to the water bodies surrounding Long Island are pathogenic bacteria, nutrient loading (nitrogen and phosphorus based) and sediment buildup within water bodies caused by land-based activities. Pathogens are of particular concern in the Village of Northport where water quality impairments linked to stormwater runoff have contributed to the presence of disease-causing organisms in surface waters. The presence of these organisms has resulted in beach closures, and limitations on shellfish harvest.

*Program Administration:*

The Stormwater Management Program is administered by the Incorporated Village of Northport's Stormwater Management Officer (SMO). The position of SMO is currently held by the Village administrator.

## DEFINITIONS

Best Management Practices (BMPs) – Accepted practices relating to structural improvements or non-structural activities that help to reduce the quantity and/or improve the quality of stormwater runoff

Covered Entities – Municipal or private property owners that are subject to the conditions set forth by the EPA relating to Storm Water Management

Environmental Protection Agency (EPA) – Federal body of government that instituted and has jurisdiction over the Stormwater Management Program

Minimum Control Measure (MCM) – Six (6) basic elements of the MS4 stormwater management program that, when implemented together, are expected to result in significant reductions of pollutants discharged into receiving waterbodies

Municipal Separate Storm Sewer Systems (MS4) – A conveyance or system of conveyances (including but not limited to roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State, City, Town, Village, Borough, County, Parish, District, Association or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act (CWA) that discharges to surface waters of the State;

Designed or used for collecting or conveying stormwater, which is not a combined sewer, and which is not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR 122.2

New York State Department of Environmental Conservation (NYSDEC) – State body of government that is the Stormwater National Pollution Discharge Elimination System (NPDES) Permitting Authority

Small MS4 – Conveyance system designed or used for collecting or conveying stormwater. It is owned by a municipality with a population less than 100,000 and located within urbanized areas that were not classified as Medium or Large MS4s under Phase I stormwater rules issued in 1990

State Pollutant Discharge Elimination System (SPDES) – State system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act)

Stormwater Pollution Prevention Plan (SWPPP) – A site-specific, written document that identifies potential sources of stormwater pollution at a construction site, describes practices to reduce pollutants in stormwater discharges from a construction site, an/or identifies procedures the operator will implement to comply with the terms and conditions of a construction general permit

**Stormwater Management Program (SMP):** – Program implemented by the covered entity. A SMP is designed to address pollutants of concern (POCs) and reduce the discharge of pollutants from the small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of The Environmental Conservation Law and Clean Water Act. The SMP must address all six MCMs. The SMP needs to include measurable goals for each of the BMPs that are implemented. The SMP should:

- Describe the BMP/Measurable Goal
- Identify time lines/schedules and milestones for development and implementation
- Include quantifiable goals to assess progress over time
- Describe how the covered entity will address POCs

**Stormwater Management Program Plan (SMPP)** – Document used by the covered entity to record developed, planned and implemented SMP elements. The SMPP must describe how pollutants in stormwater runoff will be controlled

**Total Maximum Daily Load (TMDL)** – A calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards.

## **MINIMUM CONTROL MEASURE DESCRIPTIONS AND REQUIREMENTS**

The six (6) required Minimum Control Measures (MCM's) per GP-0-24-001 are detailed as follows:

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

Each of the following sections contains a basic description of the MCM and the General Permit Requirements, followed by an analysis of the Village's performance in meeting the requirements.

## **1.0 PUBLIC EDUCATION & OUTREACH ON STORMWATER IMPACTS**

The Incorporated Village of Northport will adhere to the below items in order to remain in compliance with GP-0-24-001.

### **1.1 DESCRIPTION OF MINIMUM CONTROL MEASURE**

An informed and knowledgeable public is crucial to the success of a stormwater management program since it helps to ensure the following:

- Greater support for the program as the public gains a better understanding of the reasons why an SMP is important. Public support is particularly beneficial when operators of small MS4s attempt to budget for stormwater control initiatives and seek to implement program elements
- Greater compliance with the program, mandatory and voluntary, as members of the public becomes aware of their personal responsibilities and how they and others in the community can take actions that will protect or improve local water quality

### **1.2 GENERAL PERMIT REQUIREMENTS**

The Village of Northport will be responsible for identification of Pollutants of Concern (POC), water bodies of concern, geographic areas of concern 1a. (Northport Harbor), and target audiences (village residents).

The Village of Northport will implement an ongoing public education and outreach program designed to describe to the general public and target audiences 1a. (village residents):

- POCs and their sources
- The impacts of polluted stormwater discharges on water bodies
- Steps that contributors can take to reduce pollutants in stormwater runoff
- Steps that can be taken to reduce pollutants in non-stormwater discharges

The Village of Northport will record, periodically assess and modify as needed measurable goals.

The Village of Northport will select and implement appropriate education and outreach activities and measurable goals to ensure the reduction of all POCs in stormwater discharges to the Maximum Extent Practical (MEP).

### **1.3 WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS**

The Village of Northport will plan and conduct an ongoing public education and outreach program designed to describe the impacts of pathogenic bacteria (the POC for all TMDL waterbodies within or adjoining the Village of Northport) on water bodies. The program must identify potential sources of pathogenic bacteria in stormwater runoff and describe steps that contributors can take to reduce the pathogenic bacteria in stormwater runoff. The program must also describe steps that contributors of non-stormwater discharges can take to reduce pathogenic bacteria related risk.

The Village of Northport will develop, or acquire if currently available, specific educational materials dealing with sources of pathogenic bacteria in stormwater and pollutant reduction practices. At a minimum, the educational material should address the following topics:

- Where, why, and how pathogenic bacteria pose threats to the environment and to the community
- Septic systems, geese, and pets as a source of pathogenic bacteria
- Dissemination of educational materials/surveys to households/businesses in proximity to TMDL water bodies that have pathogenic bacteria as their POC

Educational Outreach material can be found in **Appendix A**.

#### **1.4 METHODOLOGY FOR COMPLIANCE WITH PERMIT REQUIREMENTS SPECIFIC TO THE INCORPORATED VILLAGE OF NORTHPORT**

The Village of Northport has developed and implemented various BMPs in order to address the Public Education and Outreach control measure. Implemented BMPs include brochures, displays at municipal properties, and published articles. The BMPs are updated, altered, and/or expanded as needed in response to SMP programmatic needs and evolving permit requirements.

#### **1.5 BEST MANAGEMENT PRACTICES IMPLEMENTED OR UNDERWAY**

##### **1.5.1 Printed Materials/Displays**

Stormwater sources, impacts and preventative BMPs are presented through brochures and educational displays.

The Village of Northport in cooperation with the Incorporated Village of Asharoken, Town of Huntington and the environmental advocacy group Citizens Campaign for the Environment (CCE) formed the Northport Harbor Water Quality Improvement Committee (NHWQC). The goal of the Committee, active since 2010, is to advance policies and projects that will improve water quality in the Northport Bay Complex. The Committee holds public meetings on a quarterly basis to assess progress on its matrix of clean water action items and to disseminate relevant information and printed materials to the public and press.

##### **1.5.2 Public Presentations/School Programs**

The Village of Northport conducts various public presentations and group activities as well as provides information describing individual actions that can be taken to reduce stormwater runoff pollution. The following initiatives have been conducted as part of the SMP:

*Stormwater Services Presentations* – Village personnel, including the SMO, regularly participate in and give presentations to waterfront stakeholders and advisory groups, including the annual boating council program on water quality initiatives at the Northport Yacht Club every January.

*Veterans Nature Study Area Programs* – the Village of Northport - East Northport School District to provide mentoring to teaching staff and to conduct environmental education programs for elementary school students at the Veterans Nature Study Area in Northport. This was a condition

of the transfer of the federal property included in the Nature Area. More than four hundred (400) elementary school age children participated in field programs during the 2014-15 and 2015-16 school years. Instructional elements included the importance of water-sheds and the potential for stormwater runoff to carry and disperse pollutants.

*Stormwater Superheroes* – the Village of Northport works with the Cornell Cooperative Extension of Suffolk County to facilitate opportunities for Cornell to present its free K-12 “Stormwater Superheroes” educational program within Incorporated Village of Northport school districts.

### **1.5.3 Direct Mailings**

The Village of Northport will send mailings to village residents. These mailings contain important information about proper disposal of hazardous household wastes, pharmaceuticals, and other products.

## **1.6 BEST MANAGEMENT PRACTICES FOR FUTURE CONSIDERATION**

The Village of Northport continually seeks to improve the SMPP by considering new tasks that could be implemented.

## **1.7 MEASURABLE GOALS**

The Village of Northport will record, periodically assess, and modify as needed, measurable goals. To meet these goals, the Village of Northport will select and implement appropriate education and outreach activities and measurable goals to ensure the reduction of all POCs in stormwater discharges to the maximum extent practicable.

### **1.7.1 Printed Media**

The Village of Northport plans to track the number of educational brochures, literature and articles distributed to the public annually.

### **1.7.2 Outreach**

The Village of Northport will participate in a number of measurable outreach activities, including:

- The Village of Northport staffs a display table at events with brochures, outreach materials and, literature relating to clean water initiatives
- The Village of Northport provides training to construction site operators to prevent silt runoff from various sites
- The Village of Northport will track outreach efforts, including website visitation, the number of meetings attended, number of lectures and school assemblies held

## **1.8 MINIMUM REPORTING REQUIREMENTS**

The Village of Northport will perform education and outreach activities required by other MCMs (listed below), and may report on those activities in MCM 1. At minimum, the Village of Northport is responsible for reporting of the following:

- All education or outreach activities performed for the general public and target audiences including any metrics from each activity (number of attendance, quantity of materials, etc.)
- Illicit Discharge Detection and Elimination (IDDE) education activities planned or completed for public employees, businesses, and the general public, as required by Part VI.C of GP-0-24-001
- Construction site stormwater control training planned or completed for public employees, as required by Part VI.D of GP-0-24-001
- Employee pollution prevention / good housekeeping training planned or completed, as required by Part VI.F of GP-0-24-001
- Any measurable metrics of the effectiveness of any education or outreach activities, BMPs, and measurable goal assessments
- Maintenance of records detailing all training activities

## **2.0 PUBLIC INVOLVEMENT & PARTICIPATION**

The Incorporated Village of Northport will adhere to the below items in order to remain in compliance with GP-0-24-001.

### **2.1 DESCRIPTION OF MINIMUM CONTROL MEASURE**

The EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal SMP and therefore suggests that the public be given opportunities to play an active role in both the development and implementation of the program.

An active and involved community facilitates the success of a SMP via:

- Broader public support. Citizens who participate in the development and decision-making process are partially responsible for the program and therefore be more likely to take an active role in program development
- Shorter implementation schedules facilitate increased public buy-in and increased resources in the form of citizen volunteers
- The provision of a more diverse base of participation that can serve as a free source of intellectual benefit to the program
- Conduits to other programs. Citizens involved in the stormwater program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement stormwater reduction efforts on a watershed basis, as encouraged by EPA

### **2.2 GENERAL PERMIT REQUIREMENTS**

The Village of Northport will comply with the State Open Meetings Law and local public notice requirements when implementing a public involvement/participation program.

The Village of Northport will develop and implement a public involvement/participation program that:

- Identifies key individuals and groups, public and private, who are interested in or affected by the SMP
- Identifies types of input that the Village of Northport will seek from the key individuals and groups, public and private, to support development and implementation of the SMP program and how the input will be used
- Describes the public involvement/participation activities the Village of Northport will undertake to provide program access to those who want it and to gather the needed input.
  - These activities include, but are not limited to setting up a hotline or web link to report spills, dumping, construction sites of concern, etc. Additionally, stewardship activities will be undertaken, including beach cleanups, storm drain marking, and volunteer water quality monitoring.

- Provides the opportunity for the public to participate in the development, implementation, review, and revision of the SMP.

The Village of Northport will identify a local stormwater program public contact.

The SMO will act as the local point of contact for public concerns regarding stormwater management and compliance with the SPDES general permit. The email, phone, and contact for the Village Administrator and Building Department (responsible for construction permitting) are published on the Village's website, public outreach/participation materials, and on the MCC form that is to be presented to the Department.

The Village of Northport will present the MS4 Annual Report. The requirements for the MS4 Annual Report presentation include:

- Prior to submitting the Village of Northport's final MS4 Annual Report to the NYSDEC, by April 1<sup>st</sup> of each reporting year, the draft MS4 Annual Report will be presented in a format that is open to the public, where the public can ask questions about and make comments on the draft MS4 Annual Report. This is done by:
  - Holding a meeting that is open to the public, where public attendees are able to ask questions about and make comments on the report. This meeting must be publicized in the legal notices of local newspapers as being held specifically to review and comment on Incorporated Village of Northport's draft MS4 Annual Report
  - Publishing the notice of the annual meeting in the stormwater section of the Village of Northport's website, along with an electronic copy of Village of Northport draft MS4 Annual Report providing the public the opportunity to provide comments on the website or to attend the scheduled meeting
  - Including a summary of comments and (intended) responses with Village of Northport's final MS4 Annual Report. Changes made to the SMP in response to comments will be described in Village of Northport's final MS4 Annual Report
  - Ensuring that a copy of the Village of Northport's final MS4 Annual Report and the Village of Northport's SMP plan are maintained at Village Hall and on the Village's website in the Stormwater section for public viewing.

The Village of Northport will record, periodically assess, and modify as needed its measurable goals.

The Village of Northport will select and implement appropriate public involvement/participation activities and measurable goals to ensure the reduction of POCs in stormwater discharges to the MEP.

### **2.3 WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS**

The Village of Northport will develop and implement its SMP while utilizing the above-mentioned means of public involvement and participation. Public involvement and participation will allow for an SMP that can more efficiently limit the potential discharge of contaminants to Northport Harbor.

## **2.4 METHODOLOGY FOR COMPLIANCE WITH PERMIT REQUIREMENTS**

The Village has developed and implemented various BMPs that address the Public Involvement and Participation control measure. Implemented BMPs include providing the opportunity for the public to comment on the draft MS4 Annual Report and to volunteer at events such as beach clean-ups and plantings that help capture runoff. BMPs are updated, altered or expanded as needed in response to SWMP programmatic needs and evolving permit requirements.

## **2.5 BEST MANAGEMENT PRACTICES IMPLEMENTED OR UNDERWAY**

### **2.5.1 Opportunity for Public Review of Annual Reports**

Documentation related to the SMP is available to interested members of the public. Annual reports are posted on the Village of Northport's SMP web page. Additionally,, residents may contact the Village of Northport's Stormwater Management Officer, Roland Buzard, at (631) 261-7502 or at email [r.buzard@northportny.gov](mailto:r.buzard@northportny.gov)

The following procedure allows for comment on the draft Annual MS4 Report:

- The draft annual report is posted on the Village of Northport's website no later than March 1st of each year
- A verbal announcement is made at the Village of Northport's Club's spring meeting about the MS4 hearing
- An announcement is posted on the Village of Northport's web page announcing the availability of the Village's draft MS4 Annual Report for public review and/or comment
- A legal notice is placed in the local newspaper announcing the date and time of the MS4 hearing
- If public comments are received, they are incorporated into the current final MS4 Annual Report or the next year's final MS4 Annual Report in accordance with the requirements of the MS4 General Permit

The final MS4 Annual Report is submitted to the NYSDEC by April 1st of each year.

### **2.5.2 Citizen Volunteer Events**

Various stormwater related volunteer opportunities exist within the Village of Northport. Examples of opportunities for resident involvement and participation include:

- Site specific periodic clean-up events (including the annual Crab Meadow Beach Cleanup, Northport Bay Complex Cleanup, and Gold Star Beach Cleanup)
- STOP, a hazardous household waste collection and recycling program, is open five days-a-week (Tuesday-Saturday) year-round where residents can dispose of e-wastes and up to 5-gallons of toxics per visit.

## **2.6 BEST MANAGEMENT PRACTICES FOR FUTURE CONSIDERATION**

Zoning Board may be included as part of the comment process. The SMO will be available to present on the SMP upon request, or as part of the member continuing education program.

## **2.7 MEASURABLE GOALS**

### **2.7.1 Volunteer Clean-ups**

The Village of Northport continues to recruit volunteers to assist with clean up events. The goal of these events is to prevent debris from entering local water bodies with stormwater runoff.

### **2.7.2 Volunteer Garden Club**

The Village of Northport recruits volunteers to assist with green initiatives such as a large-scale plant-ins. The Village of Northport tracks the number of volunteer participants.

## **2.8 MINIMUM REPORTING REQUIREMENTS**

At minimum, the Village of Northport will report on the following items:

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

### **3.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION**

The Village of Northport will adhere to the below items in order to remain in compliance with GP-0-24-001.

#### **3.1 DESCRIPTION OF MINIMUM CONTROL MEASURE**

Federal regulations define an illicit discharge as “any discharge to an MS4 that is not composed entirely of stormwater”. Discharges from NP-DES permitted industrial sources and discharges from fire-fighting activities are excluded. Illicit discharges are considered “illicit” because MS4s are not designed to accept, process, or discharge non-stormwater wastes. In addition to uncontrolled spills resulting from roadway accidents, examples of illicit discharges include the illicit disposal of:

- Sanitary wastewater
- Septic tank/cesspool effluents
- Swimming pool water
- Car wash wastewater
- Laundry wastewater
- Automotive fluids
- Household toxics

Illicit discharges enter the system through either direct connection (e.g., wastewater piping either mistakenly or deliberately connected to storm drains), or indirect connections (e.g., infiltration into the MS4 from cracks in sanitary systems, spills collected by drain outlets as well as paint or used oil dumped directly into a drain). The result is untreated discharge that contributes pollutants in increased levels, including heavy metals, toxics, oil, grease, solvents, nutrients, viruses, and bacteria to receiving water bodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic wildlife, and human health.

#### **3.2 GENERAL PERMIT REQUIREMENTS**

The Village of Northport will implement and enforce a program to detect and eliminate illicit discharges (as defined at 40CFR 122.26(b)(2)) into the small MS4.

The Village of Northport will maintain a map, at a minimum within the Village of Northport’s jurisdiction in the urbanized area and additionally designated area, showing:

- The location of all outfalls and the names and locations of all surface waters of the State that receive discharges from those outfalls
- The preliminary boundaries of the Village of Northport’s storm sewer sheds using GIS or other tools, even if they extend outside of the urbanized area (to facilitate track down)
- The additionally designated area within the Village of Northport’s jurisdiction
- When grant funds are made available or for sewer lines surveyed during an illicit discharge track down, the Village of Northport’s storm sewer system in accordance with available

### State and EPA guidance

The Village of Northport will field verify outfall locations.

The Village of Northport will conduct an outfall reconnaissance inventory, as described in the USEPA publication titled “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment”, addressing every outfall within the urbanized area and additionally designated area within the covered entity’s jurisdiction at least once every five years, with reasonable progress each year.

The Village of Northport will map new outfalls as they are constructed or newly discovered within the urbanized area and additionally designated area.

The Village of Northport will prohibit, through a law, ordinance, or other regulatory mechanism, illicit discharges into the MS4 and implement appropriate enforcement procedures and actions. This mechanism will be equivalent to the State’s model IDDE local law “NYSDEC Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems”. The mechanism will be certified by the attorney representing the MS4 as being equivalent to the State’s model illicit discharge local law. Laws that are adopted will also be attorney-certified as effectively assuring implementation of the State’s model IDDE law.

The Village of Northport will implement a program to detect and address non-stormwater discharges, including illegal dumping, to the MS4 in accordance with current assistance and guidance documents from the State and EPA. The program will include:

- Procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for the IDDE program including description of priority areas of concern, available equipment, staff, funding, etc.
- Procedures for identifying and locating illicit discharges (track down)
- Procedures for eliminating illicit discharges
- Procedures for documenting actions

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

Address the categories of non-stormwater discharges or flows listed in Part I.A.3 as necessary.

Record, periodically assess, and modify as needed, measurable goals.

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

### **3.3 WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS**

The Village of Northport will implement and enforce a program to detect and eliminate discharges to the municipal separate storm sewer system from on-site sanitary systems in areas where factors

such as shallow groundwater, low infiltrative soils, historical on-site sanitary system failures, or proximity to pathogen impaired water bodies indicate a reasonable likelihood of system discharge. In such areas, ensure that on-site sanitary systems designed for less than 1,000 gallons per day (septic systems, cesspools, and any installed absorption fields) are inspected at a minimum frequency of once every five years and, where necessary, maintained or rehabilitated.

The Village of Northport will conduct regular field investigations/inspections in accordance with the most current version of the EPA publication titled “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment” to detect the presence of ongoing and/or intermittent on-site sanitary discharges to the storm sewer system. An advanced system inspection requiring completion by a certified professional is not required by this permit, but may be used where site specific conditions warrant. On-site sanitary system IDDE program development shall include the establishment of the necessary legal authority (such as new or revised local laws) for implementation and enforcement.

The Village of Northport will maintain a map showing the entire small MS4 conveyance system. The Village of Northport shall complete the mapping of approximately 20% of the system every year. At a minimum, the map and/or supportive documentation for the conveyance system shall include the following information:

- Type of conveyance system (closed pipe or open drainage)
- For closed pipe systems – pipe material, shape, and size as available
- For open drainage systems – channel/ditch lining material, shape, and dimensions
- Location and dimensions of any culvert crossings
- Drop inlet, catch basin, and manhole locations
- Number and size of connections (inlets/outlets) to catch basins and manholes
- Direction of flow

All information shall be prepared in digital format suitable for use in GIS software and in accordance with the Department’s guidance on Illicit Discharge Detection and Elimination. The scale shall be 1:24000 or better.

In accordance with the requirements of the SPDES General Permit for Stormwater Discharges, the Village has developed and implemented various BMPs in order to address the issue of Illicit Discharge Detection and Elimination.

### **3.4 METHODOLOGY FOR COMPLIANCE WITH PERMIT REQUIREMENTS**

#### **3.4.1 Outfalls to Surface Waters**

Village of Northport will maintain and update as necessary a map of all stormwater outfalls discharging to surface waters.

### **3.4.2 Watershed & Sewershed Boundaries**

Village of Northport will use its GIS resources to maintain maps delineating the topographical boundaries of watersheds and sewersheds within the MS4.

### **3.4.3 Surveying Stormsewer Lines**

As grant funding is available or upon detection of suspect illicit discharges, the Village inventories and inspects underground stormwater conveyance infrastructure and incorporates inventory data into GIS database.

### **3.4.4 Outfall and General Stormwater and Sanitary System Reconnaissance**

Village of Northport will conduct ongoing reconnaissance and monitoring of identified outfalls to surface waters with the goal of evaluating all outfalls within the MS4 searching for illicit discharges. 3.2. In addition to the previously mentioned outfalls, the Village of Northport will monitor priority outfalls. These priority outfalls include the following outfalls as identified on the Outfall Location Map in **Appendix B**: 2, 3, 4, 5 24, 25, 26, 27, 28, 29, 30, 31, 32, 36, 43, 51a, 54, 60, and 63. Additionally, during efforts to find illicit discharges and track them to their source, the Village of Northport will determine and document whether encountered systems are meant to convey stormwater or sanitary waste. IDDE trackdown As-builts will be produced for all systems encountered during reconnaissance.

### **3.4.5 Local Laws & Regulations**

In accordance with the NYSDEC Model Local Law, Village of Northport has developed and implemented an attorney certified local law prohibiting illicit discharges to the MS4. This local law is Article 1 Illicit Discharges and Connections under Chapter 255 Stormwater Management of the code of the Village of Northport.

### **3.4.6 Local IDDE Prevention Program**

The Village of Northport will develop and maintain a comprehensive program to detect and address illegal dumping and non-stormwater discharges in accordance with guidance from EPA and NYSDEC. This program will focus on the 19 above-mentioned outfalls

### **3.4.7 Public Information & Outreach**

The Village of Northport will inform the public, including Village staff, local businesses and residents in general of the hazards posed by illegal dumping and illicit discharges to the MS4.

## **3.5 BEST MANAGEMENT PRACTICES IMPLEMENTED OR UNDERWAY**

### **3.5.1 Outfall Inventory**

The Village of Northport maintains an outfall inventory as described in the EPA publication entitled "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment." The outfall inventory is updated as necessary to record the elimination of outfalls and the creation of additional outfalls. The Village's inventory currently identifies 19 outfalls that fall within its jurisdiction.

### **3.5.2 Surveying Stormsewer Lines & Conveyances**

The collection of mapping data of the Village's stormwater infrastructure and conveyances is an ongoing effort. All stormwater related data, including outfalls, structures and conveyances, is incorporated into the Village's GIS database, inclusive of: (i) location, (ii) size/dimension, (iii) type and (vi) physical condition. Additional data including the presence of incoming piping, material and type of piping material and capacity is collected where these criteria can be field verified. The Village currently uses ArcGIS for Server Advanced Enterprise for all mapping applications as part of the Village enterprise resource planning process.

All stormwater collection structures (i.e., leaching basins, catch basins, recharge basins and piping) within watersheds and sewersheds that lead to impaired waterbodies have been mapped, including cross-connection points between the Village's MS4 and other adjoining State, County, Town and Village MS4s. The surface location of drainage infrastructure discharging to groundwater is also mapped and the Village continues to conduct field verification and data collection of these conveyance systems to expand the usefulness of its GIS database.

### **3.5.3 Outfall Reconnaissance**

The Village of Northport's SMO conducts ongoing monitoring of identified outfalls ensuring the entire outfall inventory is monitored within a five-year period (or less) using the guidance in the IDDE Program Plan and maintains records of reconnaissance activities.

The Village of Northport has developed a map containing all outfalls that terminate in the harbor and performs routine inspections of these outfalls. Inspections must be conducted at a minimum of 48 hours following rainfall.

### **3.5.4 Adoption of the IDDE Stormwater Management Local Law**

The Village officially enacted a local law that prohibits illicit discharges within the Village. Specifically, the law seeks to:

- Meet SPDES General Permit for Stormwater Discharges requirements
- Regulate the contribution of pollutants to the MS4
- Prohibit illicit connections, activities and discharges to the MS4
- Establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with the law

### **3.5.5 Illicit Discharge Detection & Elimination Program Plan**

The Village of Northport has developed and implemented and continues to revise as necessary a program to detect and address non-stormwater discharges to the Village's MS4, including illegal dumping. In accordance with USEPA and NYSDEC assistance and guidance documents, the Village's Illicit Discharge Detection & Elimination Program Plan addresses the need to:

- Identify and locate priority areas of concern (geographic, audiences, or otherwise)
- Develop/implement procedures for identifying and tracking down the source of illicit discharges

- Develop/implementation of procedures for eliminating illicit discharges
- Documenting IDDE Program Plan actions and results

### **3.5.6 Reporting a Suspected Illicit Discharge**

Members of the general public may report a suspected illicit discharge using the “Report an Issue” page of the Village’s website.

#### **Track Down Procedures**

Track down procedures will involve one of the following methods: visual inspection at drains/manholes, sandbagging or damming at the trunk, dye testing, smoke testing, or video testing (camera inspection) (portable video camera inspection system). These investigative methods will also identify any illicit/illegal connections, cross connections, leaking or failing joints, collapsed lines, or infiltration/inflow (I/I). Both the Village's storm sewer system and sanitary sewer system will be inspected with a portable video inspection system to ascertain the condition of their respective, separate pipes. Where a suspect connection or compromised pipe is discovered, an investigative method, e.g., dye test, will be performed to verify the pipe's condition. As part of the Village's Sewage Treatment Plant's State Pollution Discharge Elimination System (SPDES) Discharge Permit compliance program the Village's sanitary sewer system will be inspected. This will serve to further enhance the detection and elimination of any illicit/illegal connections, cross connections, leaking or failing joints, collapsed lines, or I/I. Upon each identification ("specific track down") of an illicit discharge, the Village will appropriately document, by sketch and photos, each offending site or facility. Should the illicit discharge be due to a municipal operation, the Village will immediately undertake corrective action. If the source of the suspected illicit discharges is part of the Village's storm sewer system, the Village will identify and prepare an engineering plan(s) to eliminate the issue contaminating the Village's storm water system. Should the illicit discharge be due to a business, homeowner, non-municipal operation, etc., the Village will formally notify the offender (e.g., homeowner, business) of the illicit discharge/illicit connection/illicit dumping/illegal hookups and the time constraint required for the offender to correct the violation by eliminating or re-routing the illicit discharge/illicit connection/illicit dumping/illegal hookups into a proper point of discharge.

Following the elimination of the source of the illicit discharge, the Village will clean its storm sewer system utilizing the Village’s Jet-Vac system. Following the removal of contaminants related to the illicit discharge, additional sampling following the same parameters as the initial sampling will be conducted to confirm the complete elimination of the source of the illicit discharge.

The IDDE Program Plan provides comprehensive guidance for Village employees engaged in the detection and elimination of illicit discharges. Plan attachments include a “Dry Weather Monitoring and Sampling” guide, a sample of the Village’s “Spill Report” form, its “Drainage Inspection” form and the “Facility Stormwater Pollution Prevention Checklist” used by employees to ensure the Village is following its own stormwater pollution prevention guidelines.

All Forms and Sampling Guides have been included as **Appendix I**.

## **Watershed Improvement Strategy Requirements**

A listing of all IDDE Priority Areas containing commercial and industrial zoned properties, as well as individual businesses (marinas, car washes, industrial activities, etc.), that are within the Village's watersheds will be compiled for the purpose of focused IDDE inspections. The Village has no facilities that lead to the harbor.

### **3.5.7 Informing Public about Illicit Discharge Hazards**

In addition to an active training and instructional program for Village employees addressed in MCM-6 and the means of public education and outreach addressed in MCM 1, Village staff will speak and participate in civic events and public forums involving the protection and maintenance of water resources.

## **3.6 BEST MANAGEMENT PRACTICES FOR FUTURE CONSIDERATION**

### **3.6.1 Expand Efforts to Map Conveyance Systems**

The Village is mapping its stormwater infrastructure per the MS4 General Permit. The Village's focus has been base mapping of watersheds leading to local surface water-bodies, both TMDL and non-TMDL within or adjoining the Village. This mapping is complete. The Village's ongoing effort is to define the cross connections at the Village's boundaries. To date, non-TMDL cross connections remain to be completed.

### **3.6.2 Expand Illicit Discharge Detection Efforts**

The Village will continue to perform IDDE investigations on a regular basis as required by the MS4 General Permit.

## **3.7 MEASURABLE GOALS**

### **3.7.1 Map Conveyance Systems**

The Village will perform outfall inventories at least once every five (5) years with reasonable progress every year, as required by Part VII of the Permit, in order to ensure that maps are kept up to date.

### **3.7.2 Reconnaissance Activities**

The Village will maintain records of the number of outfalls monitored annually and record the results of discharges detected and illicit discharges eliminated as a result of monitoring or as a result of complaints filed with the Village.

### **3.7.3 Stormwater Complaints**

The Village utilizes two means of responding stormwater system complaints from residents:

- Notify the Village of Northport Department of Public Works
- If contact cannot be made with the Department of Public Works, said person shall contact the Village's Police Department or Village Clerk.

### **3.8 MINIMUM REPORTING REQUIREMENTS**

The Village of Northport shall report on the below items:

- Number and percent of outfalls mapped
- Number of illicit discharges detected and eliminated
- Percent of outfalls for which an outfall reconnaissance inventory has been performed
- Status of system mapping
- Activities in and results from informing public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste
- Regulatory mechanism status - certification that law is equivalent to the State's model IDDE law (if not already completed and submitted with an earlier annual report)
- Report on effectiveness of program, BMP and measurable goal assessment

## 4.0 CONSTRUCTION STORMWATER MANAGEMENT

The Village of Northport will adhere to the below items in order to remain in compliance with GP-0-24-001.

### 4.1 DESCRIPTION OF MINIMUM CONTROL MEASURE

Polluted stormwater runoff from construction sites often flows to MS4s and is potentially discharged into local waterbodies. The pollutants most commonly discharged from construction sites include:

- Sediments
- Solid and sanitary wastes
- Phosphorous (fertilizer)
- Nitrogen (fertilizer)
- Pesticides/Herbicides
- Oil and grease
- Concrete truck washout
- Construction chemicals
- Construction debris

According to the EPA's 2012 New York State Section 305(b) Water Quality Report, Urban stormwater runoff is identified as a major source in 37% of all waterbodies assessed as impaired in New York State. In another 40% of impaired waterbodies, urban stormwater runoff is a contributing source (though not the most significant source). In addition, for 35% of the waters with less severe minor impacts or threats urban stormwater runoff is noted as a major contributing source of impact.

### 4.2 GENERAL PERMIT REQUIREMENTS

The Village of Northport will implement and enforce a program that:

- Provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities, unless more stringent requirements are contained within the SPDES general permit
- Addresses stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Control of stormwater discharges from construction activities disturbing less than one (1) acre must be included in the program if that construction activity is part of a larger common plan of development or scale that would disturb one acre or more, or if controlling such activities in a particular watershed is required by the Department
- Includes a law, ordinance or other regulatory mechanism to require a Stormwater Pollution Prevention Plan ("SWPPP") for each applicable land disturbing activity that includes erosion and sediment controls that meet the State's most current technical standards:
  - This mechanism must be equivalent (and be documented as being equivalent) to one of the versions of the "NYSDEC Sample Local Laws for Stormwater Management

and Erosion and Sediment Control, and sample local laws without changes, or (i) by adoption of one of the sample local laws without changes(ii) by using the NYSDEC Gap Analysis Workbook, or (iii) by adoption of a modified version of the sample law, or an alternative law, and, in either scenario, certification by the attorney representing the MS4 that the adopted law is equivalent to one of the sample local laws

- Contains requirements for construction site operators to implement erosion and sediment control management practices
- Allows for sanctions to ensure compliance to the extent allowable by State law
- Contains requirements for construction site operators to control waste such a discarded building material, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality, pursuant to the requirement of construction permit
- Describes procedures for SWPPP review with consideration of potential water quality impacts and review of individual SWPPPs to ensure consistency with State and local sediment and erosion control requirements: (i) ensure that the individuals performing the reviews have been adequately trained and understand the State and local sediment and erosion control requirements, (ii) all SWPPPs must be reviewed for sites where the disturbance is one acre or greater, and (iii) after review of SWPPPs, the Village of Northport will utilize the "MS4 SWPPP Acceptance Form" created by the Village, and required by the SPDES General Permit for Stormwater Discharges from Construction Activity when notifying construction site owner/operators that their plans have been accepted by the Village
- Describes procedures for receipt and follow up on complaints or other information submitted by the public regarding construction site storm water runoff
- Describes procedures for site inspections and enforcement of erosion and sediment control measures including steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography and the characteristics of soils and receiving water: (i) the Village of Northport will ensure that the individual(s) performing the inspections are adequately trained and understand the State and local sediment and erosion control requirements. Adequately trained means receiving inspector training by NYSDEC sponsored or approved training syllabus, (ii) all sites must be inspected where the disturbance is one acre or greater, and (iii) covered entities must determine that it is acceptable for the owner or operator of a construction project to submit the Notice of Termination (NOT) to the Village of Northport's Building Department by performing a final site inspection themselves or by accepting the Qualified Inspector's final inspection certification(s) required by the SPDES General Permit for Stormwater Discharges from Construction Activity. The duly authorized representative shall document their determination by signing the "MS4 Acceptance" statement on the NOT
- Educates construction site owner/operators, design engineers, municipal staff and other individuals to whom these regulations apply about the municipality's construction stormwater requirements, when construction stormwater requirements apply, to whom they apply, the procedures for submission of SWPPPs, construction site inspections and other procedures associated with control of construction stormwater
- Ensures that construction site operators have received erosion and sediment control training

before they do work within the Village of Northport’s jurisdiction and maintain records of that training. Small home site construction (where the Erosion and Sediment Control Plan is developed in accordance with the “New York Standards and Specifications for Erosion and Sediment Control”) is exempt from the requirements below: (i) training may be provided by the Village of Northport or other qualified entities (such as Soil and Water Conservation Districts), (ii) the Village of Northport is not expected to perform such training, but they may co-sponsor training for construction site operators in their area, (iii) the Village of Northport may ask for a certificate of completion or other such proof of training, and (iv) the Village of Northport may provide notice of upcoming sediment and erosion control training by posting in the building department or distribute with the building permit application

- Establishes and maintains an inventory of active construction sites, including the location of the site, owner/operator contact information
- Develop, record, periodically assess and modify as needed measurable goals
- Select and implement appropriate construction stormwater BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP

#### **4.3 WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS**

The Village of Northport is working to build the quantity and quality of its watershed and stormwater conveyance system database.

#### **4.4 METHODOLOGY FOR COMPLIANCE WITH PERMIT REQUIREMENTS**

The Village of Northport has developed and implemented various BMPs in order to address the Construction Stormwater Management MCM, inclusive of:

##### **4.4.1 SPDES Equivalent Protection**

Providing equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities (SPDES GP-0-25-001) evidenced as follows in this section.

##### **4.4.2 Village Code: Stormwater Management**

Stormwater management law/established stormwater management requirements, and controls to protect public health, safety and welfare. It requires that a SWPPP be prepared and submitted to NYSDEC for each applicable land disturbing activity.

##### **4.4.3 Planning & Building Department Review**

An application for a subdivision, site plan, grading, demolition, and/or building permit triggers a Village review to determine whether a proposed activity will result in a disturbance of land that requires coverage under SPDES GP-0-25-001. If so, the site owner/ operator receives written notification that SPDES coverage is needed and Village permits will be issued only upon preparation and approval of a SWPPP and proof that a Notice of Intent (“NOI”) to gain coverage has been filed with NYSDEC.

#### **4.4.4 SWPPP Compliance Review**

The Planning board members trained in MS4 sediment and erosion control perform a SWPPP compliance review to ensure consistency with State and local erosion and sediment control requirements. Upon successful review, the Department notifies the site owner/operator in writing and instructs the owner/operator to file a NOI with the NYSDEC to gain coverage under SPDES GP-0-25-001.

#### **4.4.5 SWPPP Erosion & Sediment Controls**

The Village of Northport's stormwater management law requires that erosion and sediment controls in the approved SWPPP address how litter, construction chemicals, and construction debris will be prevented from becoming a pollutant source, including a description of the nature and type of controls for minimizing exposure of these materials to stormwater runoff as well as a spill-prevention and response. The Village of Northport reviews all of the plan elements with the site owner/operator before building permits are issued and construction commences.

#### **4.4.6 Project Site Inspections**

The Village of Northport requires that the approved SWPPP and NYSDEC acknowledgment of the NOI be posted at the project site. Once construction has begun, Building Department inspectors conduct periodic site visits to ensure adherence with the approved SWPPP.

#### **4.4.7 Sanctions for Non-Compliance**

The Village of Northport can issue a Notice of Violation ("NOV") to a site owner/operator who fails to adhere to the terms of the SPDES permit. Failure to address the NOV and bring the site into compliance, can result in the issuance of a Stop Work Order. Further or repeated failure to comply with the SPDES permit subjects the site owner/operator to prosecution in district court.

#### **4.4.8 Stormwater Runoff Complaints**

The Village maintains a variety of methods to monitor and respond to resident complaints, including those related to stormwater management. These methods ensure the complaint is properly routed to personnel responsible for follow up including the SMO and Village Police.

#### **4.4.9 Final Site Inspections**

At the conclusion of construction, a Building Department inspector conducts a final site inspection and documents that all required improvements and practices have been constructed in accordance with the SWPPP. When all requirements are met, the site owner/operator receives written confirmation and is instructed to submit a Notice of Termination ("NOT") to NYSDEC.

#### **4.4.10 Instructional Materials**

The Village disseminates an instructional pamphlet that outlines the procedures for submission of SWPPPs, construction site inspections, and other procedures associated with control of construction stormwater. This Instructional Pamphlet is included as **Appendix E**.

#### **4.4.11 Construction Site Operator Training**

A trained operator must be on site at all times during construction operations. Upon demand, the operator must present his/her training certificate to an engineering inspector or code compliance officer.

#### **4.4.12 Inventory of Active Construction Sites**

Building Department maintains an inventory of active construction sites, including the location of the site and owner/operator contact information.

#### **4.4.13 Goal Modification Assessment**

The Village records and periodically assesses and modifies measurable goals including, reviewing projects for applicability to this MCM and keeping records and inspecting private and commercial construction projects in addition to Village projects in the MS4 area according to the individual SWPPP for each project.

#### **4.4.14 Appropriation of Construction Stormwater BMPs**

The Village implements construction stormwater BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP including various construction site stormwater runoff controls.

### **4.5 BEST MANAGEMENT PRACTICES IMPLEMENTED OR UNDERWAY**

#### **4.5.1 SPDES Equivalent Protection**

The Village of Northport Board adopted local law providing equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities.

#### **4.5.2 Village Code**

Village of Northport Code, Chapter 225: Stormwater Management provides for the management of stormwater runoff and erosion and sediment control during land disturbing construction. It is certified as equivalent to New York State's Sample Local Law for Stormwater Management and Erosion & Sediment Control and was enacted with the specific intent to:

- Meet the requirements of minimum control measures four and five of the NYSDEC State Pollutant Discharge Elimination System General Permit for
- Require applicable land development activities to conform to the substantive requirements of the NYSDEC SPDES General Permit for Construction Activities or as amended or revised
- Minimize stormwater runoff from land development activities in order to reduce flooding, siltation, increases in waterbody temperature, and waterbody bank erosion
- Minimize pollution caused by stormwater runoff from land development activities that would otherwise degrade local water quality
- Minimize to the maximum extent practicable total annual volume of storm control. water runoff flowing from a site during and following development

- Reduce stormwater runoff rates and volumes, soil erosion and non-point source pollution wherever possible through stormwater management practices and to ensure that these management practices are properly maintained and functioning.
- To meet the requirements of the SPDES General Permit for Stormwater Discharges from separate storm sewer system (MS4s), Permit No. GP-0-24-001, as amended or revised;
- To regulate the contribution of pollutants to the Village's separate storm sewer system (MS4), since such systems are not designed to accept, process or discharge non-stormwater wastes;
- To prohibit illicit connections, activities and discharges to the Village's separate storm sewer system (MS4)
- To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this article and all applicable laws;
- To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment and other pollutants into the Village's separate storm sewer system (MS4).

#### **4.5.3 Planning & Building Review Procedure**

During the Village's review of a subdivision, site plan, grading, demolition and/or building permit application, if the proposed construction activity is determined to result in the disturbance of one (1) acre or more of land contributing stormwater to the MS4, the applicant is notified in writing that approval of the construction is contingent upon the satisfactory preparation of a SWPPP and receipt by the Village of a copy of a "Letter of Acknowledgment" from NYSDEC that a Notice of Intent ("NOI") has been filed by the owner/operator with NYSDEC to gain coverage under SPDES GP-0-25-001.

#### **4.5.4 SWPPP Compliance Review**

Upon submission of a proposed SWPPP and draft NOI, Building Department staff trained in MS4 sediment and erosion control conduct a SWPPP compliance review, employing the standard Stormwater Pollution Prevention Plan Checklist to ensure consistency with State and local erosion and sediment control requirements. Upon successful review, the Building Department issues a MS4 SWPPP Acceptance Form and forwards it with a SWPPP Acceptance Letter that notifies the site owner/operator in writing that the project NOI must be filed with NYSDEC to gain coverage under SPDES GP-0-25-001. Village approval of the construction activity is only granted upon satisfactory completion of a SWPPP and receipt of a copy a "Letter of Acknowledgment" from NYSDEC that a Notice of Intent has been filed by the owner/operator.

#### **4.5.5 Erosion & Sediment Control**

Construction site owner/operators for all approved subdivisions and site plans are required to participate in a Pre-Construction Meeting with the Village of Northport, at which time required erosion and sediment control management practices are reviewed. In the case of construction activities required to obtain coverage under SPDES, the Pre-Construction Meeting includes a review of all SWPPP requirements and the Village of Northport verifies credentials of the Trained Contractor/Certified Inspector assigned to be on site at all times during construction. The site

owner/operator and those present are required to sign a meeting Attendance form acknowledging their participation in the review.

#### **4.5.6 SWPPP Construction Site Inspections**

While construction is underway, Building Department inspectors make periodic site visits, using a Construction Site Inspection SWPPP Compliance Checklist.

Article II of the Village's Stormwater Management law covering erosion and sediment control authorizes the Director of Building Department or his designee inspecting the site to issue notices of violation. During a periodic visit (or in response to a public complaint) if the inspecting official determines that a land development activity is in violation of the SPDES permit requirements, a written Notice of Violation (NOV) can be issued to the construction site owner/operator and serves as a formal demand that the site be brought into compliance.

#### **4.5.7 Sanctions for Non-Compliance**

Failure to comply with an NOV can result in the issuance of summons and a Stop Work Order by the Building Department or an engineering inspector, halting all land development activities other than those directly required for addressing the instant violation.

Failure to come into compliance with the SPDES permit after an NOV or a Stop Work Order is issued subjects the site owner/operator to prosecution and penalties as established in Village Code.

#### **4.5.8 Stormwater Runoff Complaint Monitoring**

Village of Northport maintains a variety of ways for residents to register complaints including complaints about stormwater runoff from construction activities. These include:

- The Village Police or Building Department operates an emergency telephone at all times where residents can report an emergency or possible code violation.

#### **4.5.9 Final Site Inspection**

At the conclusion of construction, the engineering inspector conducts a Final Site Inspection and completes a Final SWPPP Compliance Inspection Report documenting that all required improvements and practices have been constructed in accordance with the approved SWPPP. Based on a successful Final Inspection, the inspector prepares a Notice of Termination (NOT) that is executed by the inspector and the Director of the Building Department and issued to site owner/operator directing that the NOT, as required, be filed with NYSDEC.

#### **4.5.10 Instructional Materials**

Instructional materials on SWPPP submissions, construction site inspections, and procedures associated with control of construction stormwater are distributed to: Construction Site Owners/Operators, Design Engineers, Municipal Staff and others interested parties subject to MS4 regulations. The Village Building Department hands out the "New York State Construction Runoff Guide" brochure at the front counter. It details the SWPPP process for contractors and construction

site operators, including best management practices designed to minimize construction site erosion and sedimentation wash outs. In addition, the Stormwater Management Officer and staff in the Building Department are available to answer questions and assist local contractors remain in compliance with SWPPP procedures and permit requirements.

#### **4.5.11 Construction Site Operator Training**

A certified trained operator must be on site at all times and upon demand present his/ her training certificate to an engineering inspector or code compliance officer from the Building Department. The Village of Northport ensures that construction site operators receive erosion and sediment control training before commencing work by requiring that a copy of a Certificate of Training Completion of a NYSDEC sponsored/approved program be furnished at the time of the pre-construction meeting in Village Hall. A copy of the training certificate provided by the owner/operator is attached to the permit file in the Building Department records.

#### **4.5.12 Inventory of Active Construction Sites**

The Village maintains an inventory of active construction sites, including the location of the site, owner/operator contact information on building permit cards located in the Building Department offices.

### **4.6 BEST MANAGEMENT PRACTICES FOR FUTURE CONSIDERATION**

The Village continually seeks to improve the SWMP. The Village is in the process of digitizing Building Department records that will make it easier to confirm SWPPP compliance in the field.

### **4.7 MEASURABLE GOALS**

#### **4.7.1 SWPPP Review**

The Village seeks to ensure SWPPP review for all relevant applications for construction sites disturbing one (1) acre or greater, or discharging into a TMDL waterbody.

#### **4.7.2 Educate Construction Contractors**

The Village seeks to ensure that construction site owners and operators have accessed appropriate informational resources on erosion and sediment control BMPs and to monitor contractor compliance with SWPPP educational requirements.

### **4.8 MINIMUM REPORTING REQUIREMENTS**

The Village of Northport will provide the below items when reporting:

- SPDES Permit Required: SWPPP Received Date and SWPPP Preparer Information
- Notice of Intent Received Date: Owner/Operator Information Watershed Area affected
- MS4 Acceptance Form Issuance Date
- NYSDEC NOI Acknowledgment Letter Received Date
- Notice of Termination Issuance Date
- Post Construction Stormwater Management Practiced Required:

- Type of Practice(s) Installed
- Long Term Operation and Maintenance Plan Developed for Post Construction Stormwater Management Practices: Entity Responsible for Long Term O&M Plan and Certified Covenants and Restrictions (C&R's) receipt date.
- Number of SWPPPs reviewed
- Number and type of enforcement actions
- Percent of active construction sites inspected once
- Percent of active construction sites inspected more than once
- Number of construction sites authorized for disturbances of one acre or more
- Report on effectiveness of program, BMP and measurable goal assessment.

## **5.0 POST-CONSTRUCTION STORMWATER MANAGEMENT**

The Village of Northport will adhere to the below items in order to remain in compliance with GP-0-25-001.

### **5.1 DESCRIPTION OF MINIMUM CONTROL MEASURE**

Post-construction stormwater management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction stormwater discharges is the most cost-effective approach to stormwater quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters such as local harbors and bays. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans.

The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the water body during storms. An increase in impervious surfaces (e.g., parking lots, driveways and rooftops) interrupts the natural cycle of gradual percolation of water through vegetation and soil. Water that is collected from surfaces such as asphalt and concrete and is routed to drainage systems creates the potential for large volumes of runoff to flow into receiving waters. The impacts can include stream bank scouring and flooding that often leads to a loss of aquatic life and damage to property.

SPDES General Permit for Stormwater Discharges Part VII.A.5.a.iv, and Village Code Chapter 255-28 can be referenced electronically for more information. Post-construction Runoff Controls are attached as **Appendix G**.

### **5.2 GENERAL PERMIT REQUIREMENTS**

The Village of Northport will implement and enforce a program that:

- Provides equivalent protection to the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities
- Addresses stormwater runoff from new development and redevelopment projects to the small MS4 from projects that result in a land disturbance of greater than or equal to one (1) acre. (Control of stormwater discharges from projects of less than one acre must be included in the program if that project is part of a larger common plan of development or sale), or if controlling such activities in a particular watershed is required by the Department
- Includes a law, ordinance or other regulatory mechanism to require post construction

- runoff controls from new development and re-development projects
- To the extent allowable under State law that meet the State’s most current technical standards.
- The mechanism must be equivalent to one of the versions of the “NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control”, and Equivalence will be documented:
  - by adoption of one of the sample local laws without changes
  - by using the NYSDEC Gap Analysis Workbook,
  - by adoption of a modified version of the sample law, or an alternative law, and, in either scenario and certification by the attorney representing the small MS4 that the adopted law is equivalent to one of the sample local laws
- Includes a combination of structural or non-structural management practices

The Village of Northport is required to review according to the Green Infrastructure practices defined in the Design Manual at a site level, and are encouraged to review, and revise where appropriate, local codes and laws that include provisions that preclude green infrastructure or construction techniques that minimize or reduce pollutant loadings, and if a stormwater management practice is designed and installed in accordance with the New York State Stormwater Management Design Manual or has been demonstrated to be equivalent and is properly operated and maintained, then MEP will be assumed to be met for post-construction stormwater discharged by the practice.

- Describes procedures for SWPPP review with consideration of potential water quality impacts and review of individual SWPPPs to ensure consistency with state and local post-construction stormwater requirements:
  - Ensure that the individuals performing the reviews are adequately trained and understand the State and local post construction stormwater requirements
  - Ensure that the individuals performing the reviews for SWPPPs that include post-construction stormwater management practices are qualified professionals or under the supervision of a qualified professional
  - All SWPPPs must be reviewed for sites where the disturbance is one acre or greater
  - After review of SWPPPs, the Village of Northport will utilize the “MS4 SWPPP Acceptance Form” created by the Department of Engineering Services and required by the NYSDEC SPDES General Permit for Construction Activities (GP-0-25-001) when notifying construction site owner/operators that their plans have been accepted by the Village of Northport
  - Utilize available training from sources such as Soil and Water Conservation Districts, Planning Councils, The New York State Department of State, USEPA, and/or the Department of Engineering Services to educate municipal boards and Planning and Zoning Boards on low impact development principles, better site design approach, and green infrastructure applications

The Village of Northport will maintain an inventory of post-construction stormwater management practices within the covered entities jurisdiction. At a minimum, include practices discharging to

the small MS4 that have been installed since March 10, 2003, all practices owned by the small MS4, and those practices found to cause or contribute to water quality standard violations:

- The inventory shall include at a minimum: location of practice (street address or coordinates); type of practice; maintenance needed per the NYS Stormwater Management Design Manual, SWPPP, or other provided documentation; and dates and type of maintenance performed

Ensure adequate long term operation and maintenance of management practices identified in Part VII.5.a.vi by trained staff, including inspection to ensure that practices are performing properly:

- The inspection shall include inspection items identified in the maintenance requirements (NYS Stormwater Management Design Manual, SWPPP, or other maintenance information) for the practice. Covered entities are not required to collect stormwater samples and perform specific chemical analysis.

Implement and provide adequate resources for a program to inspect development and redevelopment sites by trained staff and to enforce and penalize violators.

Record annually, assess, and modify as needed measurable goals.

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

### **5.3 WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS**

The Village of Northport will establish procedures to identify sites with erosion and/or pollutant loading problems, and establish policy and procedures for project permitting, design, funding, construction and maintenance.

### **5.4 METHODOLOGY FOR COMPLIANCE WITH PERMIT REQUIREMENTS**

In addition, the Village utilizes the following methods to comply with the SPDES General Permit for Stormwater Discharges with respect to Post-Construction Stormwater Management

#### **5.4.1 Structural Practices**

In accordance with standards in the NYS Stormwater Design Manual, Village of Northport adopts structural practices in order to reduce the discharge of pollutants to the MS4 to the maximum extent possible.

#### **5.4.2 Non-Structural Practices**

In accordance with standards in the NYS Stormwater Design Manual, Village of Northport adopts non-structural practices in order to reduce the discharge of pollutants to the MS4 to the maximum extent possible.

### **5.4.3 SWPPP Review Process**

The Village ensures that personnel involved in the SWPPP review process includes those elements of the SWPPP that concern the design, installation and maintenance of post-construction stormwater practices are properly trained and supervised. SWPPP Review / Construction Site Inspection and Maintenance Log Book can be found in **Appendix C**.

### **5.4.5 Post-Construction Stormwater Practices Inventory**

The Village does not have or anticipate having an inventory of Post-Construction Stormwater Practices, due to the lack of sites/properties intended for construction that are 1-acre in size or greater.

### **5.4.6 Long-Term O&M for Post-Construction Stormwater Practices**

The Village had developed a procedure to ensure that inspection and maintenance of post-construction practices is performed by trained individuals and performed in adherence with SPDES requirements and the terms of approved SWPPP.

## **5.5 BEST MANAGEMENT PRACTICES IMPLEMENTED OR UNDERWAY**

### **5.5.1 Low Impact Development & Green Infrastructure**

The Village's building permit process requires that homeowners contain stormwater on site and minimize the amount of stormwater that leaves their property. For example, a building permit application for a residential expansion is conditioned upon the installation of dry-wells capable capturing the runoff from a 4" storm event. In addition, permit approval requires the use of natural buffering features on all properties adjacent to surface waters.

### **5.5.2 Structural Practices**

The Village strives to minimize the impact of stormwater runoff by increasing storage capacity and the pretreatment or elimination of direct outfall discharges. Reducing the volume of stormwater directly discharging to surface water bodies will reduce pollutant loading by potentially significant amount.

### **5.5.3 Non-Structural Practices**

The Village Board has appointed a citizen's Open Space and Park Fund Advisory Program (EOSPA) responsible for reviewing and recommending the purchase and protection of sensitive lands using voter approved bond act funds. Keeping sites undeveloped increase, the ability of watersheds to absorb water from storm events.

### **5.5.4 SWPPP Review Process**

Building Department staff trained in MS4 sediment and erosion control under the direction of the Village's Director conduct SWPPP compliance reviews, employing the standard Stormwater Pollution Prevention Plan Checklist to ensure consistency with State and local erosion and sediment control requirements. The SWPPP Compliance Checklist can be found in **Appendix D**.

### **5.5.5 Long-Term O&M of Post-Construction SMPs**

In accordance with the Village of Northport's Stormwater Management Law, a property owner subject to coverage under the SPDES General Permit for Construction Activities whose approved SWPPP calls for installation of post-construction stormwater management practices (SMPs) must file a Covenant and Restriction (C&R) with the Suffolk County Clerk, binding the landowner and all future landowners that provides for long-term operation and maintenance (O&M) of the SMP in accordance with the plan set forth in the SWPPP. The C&R is a condition of the Village's issuance of a Certificate of Occupancy or Certification of Permitted Use.

A condition of the C&R is that the property owner files regular affidavits of performance of O&M responsibilities in accordance with the following provision:

*In the case of stormwater management practices subject to scheduled maintenance and/or replacement plan, proof, in the form of a signed affidavit, that such schedule maintenance and/or replacement was completed shall be submitted to the Building Department Services every three years, commencing three years from the date of filing of the Covenant and Restriction.*

Filing of triennial affidavits of performance is monitored as part of the Village's Inventory of Post-Construction practices. Failure to file is subject to a warning letter issued by the Building Department. A failure to respond to a warning can result in a site inspection, per the terms of the C&R and issuance of a Notice of Violation. Further non-compliance or evidence of an improperly operating SMP can result in issuance of a summons.

In cases where SMPs were required but the owner failed to file a C&R, the Village has three strategies to bring such owners into compliance: (i) request the owner's voluntary retroactive compliance, (ii) require filing of a comprehensive C&R at such time that an owner comes before the Village seeking a permit to make addition improvements and (iii) in the case of summons and legal action resulting from stormwater discharge in violation of regulations (i.e., an improperly maintained or failing SMP) require the filing of a C&R as a condition of stipulation of settlement.

### **Public Post-Construction SMPs**

The Village of Northport doesn't ensure adequate long-term O&M of public SMPs, due to the lack of sites/properties intended for construction that are 1-acre in size or greater.

## **5.6 BEST MANAGEMENT PRACTICES FOR FUTURE CONSIDERATION**

### **5.6.1 Digital Inventory and Maintenance Log of Management Practices.**

Village of Northport aspires to develop a GIS based system in order to track all stormwater structure maintenance, replacement and upgrade activities. In addition, the Village seeks to integrate its digital constituent service response system to be able to input citizen stormwater related complaints into the maintenance database. The goal is to produce an effective real time view of the stormwater infrastructure system that can be accessed by mobile device by Village personnel in the field.

## **5.7 MEASURABLE GOALS**

### **5.7.1 Stormwater Management through Village Permitting**

As part of the site plan approval process, the Village requires Covenants and Restrictions be placed on properties developed subject to a SWPPP. The C&R gives the Village the legal authority to track, manage and require property owners to maintain all required post-construction stormwater practices in proper working order.

### **5.7.2 Property Acquisition**

The Village seeks to acquire property in sensitive areas to preserve open space. This has the added benefit of reducing or preventing increases in the direct discharge of stormwater into surface waters.

### **5.7.3 Green Infrastructure Staff Training**

The Village encourages staff to attend training on current green infrastructure techniques and requirements.

## **5.8 MINIMUM REPORTING REQUIREMENTS**

- Number of SWPPPs reviewed
- Number and type of enforcement actions
- Number and type of post-construction stormwater management practices inventoried
- Number and type of post-construction stormwater management practices inspected
- Number and type of post-construction stormwater management practices maintained
- Regulatory mechanism status – Certification that regulatory mechanism is equivalent to one of the “NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control”
- Report on effectiveness of program, BMP and measurable goal assessment

## **6.0 POLLUTION PREVENTION & GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

The Village of Northport will adhere to the below items in order to remain in compliance with GP-0-25-001.

### **6.1 DESCRIPTION OF MINIMUM CONTROL MEASURE**

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the MS4 stormwater management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems. Please see **Appendix F** for municipal employee training presentation for good housekeeping operations.

This measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations. However, it also can result in a cost savings because proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

### **6.2 GENERAL PERMIT REQUIREMENTS**

The Village of Northport will implement a pollution prevention/good housekeeping program for municipal operations and facilities that:

- Addresses municipal operations and facilities that contribute or potentially contribute POCs to the small MS4 system. The operations and facilities may include, but are not limited to:
  - Street maintenance
  - Stormwater conveyance system maintenance
  - Vehicle and fleet maintenance
  - Salt storage
  - Park and open space maintenance
  - Municipal building maintenance
  - Solid waste management
  - New construction and land disturbances
  - Right of way maintenance
  - Marine operations
  - Hydrologic habitat modification
  
- At a minimum frequency of once every three years, perform and document a self-assessment of all municipal operations addressed by the SWMP to:
  - Determine the sources of pollutants potentially generated by the Village of Northport's operations and facilities

- Identify the municipal operations and facilities that will be addressed by the pollution prevention and good housekeeping program
- Determines management practices, policies, procedures, etc. that will be developed and implemented to reduce or prevent the discharge of (potential) pollutants. Refer to management practices identified in the “NYS Pollution Prevention and Good Housekeeping Assistance Document” and other guidance materials available from the EPA, State, or other organizations;
- Prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and covered entity’s capabilities;
- Addresses pollution prevention and good housekeeping priorities;
- Includes an employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;
- Requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet
- Permit requirements as the requirements apply to the activity performed; and
- Requires municipal operations and facilities that would otherwise be subject to the NYS Multi-sector General Permit (GP-0-23-001) for industrial stormwater discharges to prepare and implement provisions in the SWMP that comply with Parts III of the MSGP. The covered entity must also perform monitoring and record keeping in accordance with Part IV. of the MSGP. Discharge monitoring reports must be attached to the MS4 annual report. Those operations or facilities are not required to gain coverage under the MSGP. Implementation of the above noted provisions of the SWMP will ensure that MEP is met for discharges from those facilities;

The Village of Northport will consider and incorporate cost-effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing stormwater conveyance systems and municipal properties to the MEP.

The Village of Northport will record, periodically assess, and modify as needed measurable goals.

The Village of Northport will select and implement appropriate pollution prevention and good housekeeping BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.

The Village of Northport will adopt techniques to reduce the use of fertilizers, pesticides, and herbicides, as well as the potential impact to surface water.

The Village of Northport will adopt maintenance activities, schedules, and inspection procedures to reduce floatables and other pollutants discharged from the separate storm sewers.

The Village of Northport will set controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots and maintenance/storage yards. These controls include programs to recycle (reduce litter) and ensure the proper disposal of animal waste.

The Village of Northport will set procedures for the proper disposal of waste removed from separate storm sewer systems and areas listed above, including dredge spoil, accumulated sediments, floatable' s, and other debris.

The Village of Northport will conduct flood management projects to assess the impacts on water quality and examine existing projects for incorporation of additional water quality protection devices or practices.

### **6.3 WATERSHED IMPROVEMENT STRATEGY REQUIREMENTS**

The Village of Northport will enforce local laws prohibiting improper pet waste disposal and feeding waterfowl on municipal properties.

The Village of Northport will enforce state regulations requiring the collection and proper disposal of pet waste.

The Village of Northport will continue a program to manage and control the local goose population. The Local Laws can be found in **Appendix G and H**.

### **6.4 METHODOLOGY FOR COMPLIANCE WITH PERMIT REQUIREMENTS**

On a triennial basis, the Village is required to perform a self-assessment of municipal facilities and operations as specified in Part VII of the permits. The most recent Village self-assessment was completed in 2025 in preparation for site specific employee training and the Village is currently in the process of implementing BMPs to address the pollutants of concern that may be generated from Village facilities. BMPs that were previously implemented include road and stormwater structure maintenance efforts, limiting the use of fertilizers and pesticides, employee good housekeeping training, and adoption of local laws relating to the cleanup of pet waste and the feeding of waterfowl.

### **6.5 BEST MANAGEMENT PRACTICES IMPLEMENTED OR UNDERWAY**

#### **6.5.1 Roadway and Parking Lot Maintenance**

The Village is responsible for maintaining approximately thirty (32) miles of public roads, as well municipal parking lots. As part of its comprehensive maintenance program, the Highway Department sweeps all roads and parking lots annually, at minimum. The sweeping removes sand and salt applied during winter months and begins in the spring, starting with roads and lots near the north shore in an effort to maximize protection for water bodies in TMDL watersheds.

It can take anywhere from three to six months to sweep the entire Village. Sweepers unload at designated areas in the Highway facilities. The material is then sifted to segregate solid contaminants and each load is then transported to proper disposal sites which are determined based on the material.

#### **6.5.2 Catch Basin Cleaning**

The Highway Department has a comprehensive program to clean catch basins. Catch basins are

inspected annually and cleaned based on various factors, including the demand and condition. Inspections are performed in conjunction with catch basin cleanings as necessary.

### **6.5.3 Catch Basin Protection**

The Village employs an inlet protection program that requires contractors and employees to protect all catch basins during road paving projects as follows:

- All basins must have a temporary protective device installed before work begins that must remain in place until the project is completed. Periodic maintenance of the devices may be required during the project span. Upon completion of the project, all devices must be removed and cleaned in a protected area away from catch basins. Accumulated sediment is properly disposed and under no circumstances is the disposal of waste material in a catch basin allowed.

### **6.5.4 Limited Chemical Fertilizer/Pesticide Application**

The Village does not utilize any pesticides or herbicides on municipal properties.

### **6.5.5 Employee Training**

Stormwater management training takes place throughout the year and is provided to all employees responsible for implementing daily maintenance and emergency response functions that may have potential stormwater program impact. Employees at highway and DPW facilities receive training.

The SMO documents participation in pollution prevention training program using preprinted sign-in sheets that require the signature of the departmental employee present next to his/her name and title Village staff has also taken NYSDEC endorsed training courses on sediment and erosion control.

BMPs reviewed during training sessions with Village employees include:

- Pollution Prevention/Good Housekeeping for Municipal Operations
- Municipal Landscaping Practices
- Municipal Vehicle Fueling
- Municipal Vehicle and Equipment Maintenance
- Municipal Vehicle and Equipment Washing
- Parking Lot and Street Cleaning
- Road Salt Application and Storage
- Storm Drain System Cleaning
- Hazardous Materials Storage
- Municipal Facilities Management
- Spill Response and Prevention

### **6.5.6 Pollutants & E-Waste Program**

Village residents can utilize the Huntington Recycling Center, located at 641 New York Avenue

in Huntington. Open daily (Tuesday-Saturday) it provides residents with an easy, convenient means of proper disposal of household hazardous waste and electronic waste.

#### **6.5.7 Equipment List Inventory**

The Village maintains a list of all vehicles and small equipment. The list is compiled by the individual departments to which fleets and equipment are assigned. A master list is maintained by the Village Comptroller in the form of an Audit & Control “fixed asset” inventory.

#### **6.5.8 Pet Waste Ordinance**

The Village Code includes a provision to control pet waste that requires pet owners on public property to immediately pick up after pets and properly dispose of the animal waste in an appropriate receptacle.

#### **6.5.9 Feeding of Waterfowl Law**

Feeding waterfowl may cause water quality problems due to increased fecal coliform loading. In order to protect the public health, safety and welfare, Village of Northport passed a local law prohibiting the feeding of waterfowl on Village property.

#### **6.5.10 Municipal Facilities**

The Village of Northport doesn't typically utilize third parties for work regarding Village facilities with the potential to impact stormwater.

### **6.6 BEST MANAGEMENT PRACTICES FOR FUTURE CONSIDERATION**

The Village seeks to improve the SWMP by considering facility improvements and new management practices that can lessen the potential for stormwater pollution impacts. The MS4 self-assessment process has been incorporated as a standing topic by the Stormwater Coordinating Committee. This is intended to stimulate innovation and create additional opportunities for BMP implementation in the future.

The Village of Northport will conduct self-assessments as part of Pollution Prevention & Good Housekeeping Operations.

### **6.7 MEASURABLE GOALS**

#### **6.7.1 Municipal Facilities Evaluations**

The Village regularly evaluates municipal facilities to determine if BMPs are being properly implemented, therefore minimizing the potential for pollutants to enter local water bodies.

#### **6.7.2 Improve Municipal Employee Training & BMP Implementation Strategies**

The Village continues to evaluate and upgrade wherever possible both training practices for municipal employees and the implementation of storm water control BMPs at municipal facilities as improvement strategies are developed, reviewed and gain acceptance.

## 6.8 MINIMUM REPORTING REQUIREMENTS

All municipal operations and facilities within the jurisdiction of the Village of Northport (urbanized area and additionally designated area) are required to report on the activities that their program is addressing. The Village of Northport shall report on items that will demonstrate program effectiveness.

The Village of Northport will indicate the municipal operations and facilities that the pollution prevention and good housekeeping program assessed.

The Village of Northport will describe, the management practices, policies and procedures that have been developed, modified, and/or implemented and report, at a minimum, on the items below that the covered entity's pollution prevention and good housekeeping program addressed during the reporting year:

- Acres of parking lot swept
- Miles of street swept
- Number of catch basins inspected and, where necessary, cleaned
- Post-construction control stormwater management practices inspected and, where necessary, cleaned
- Pounds of phosphorus applied in chemical fertilizer
- Pounds of nitrogen applied in chemical fertilizer
- Acres of pesticides/herbicides applied

The Village of Northport will hold staff training events and document the number of staff trained.

The Village of Northport will report on effectiveness of program, BMP and measurable goal assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Part VII, the covered entity shall report on items that will demonstrate program effectiveness.

Appendix A

Educational outreach materials

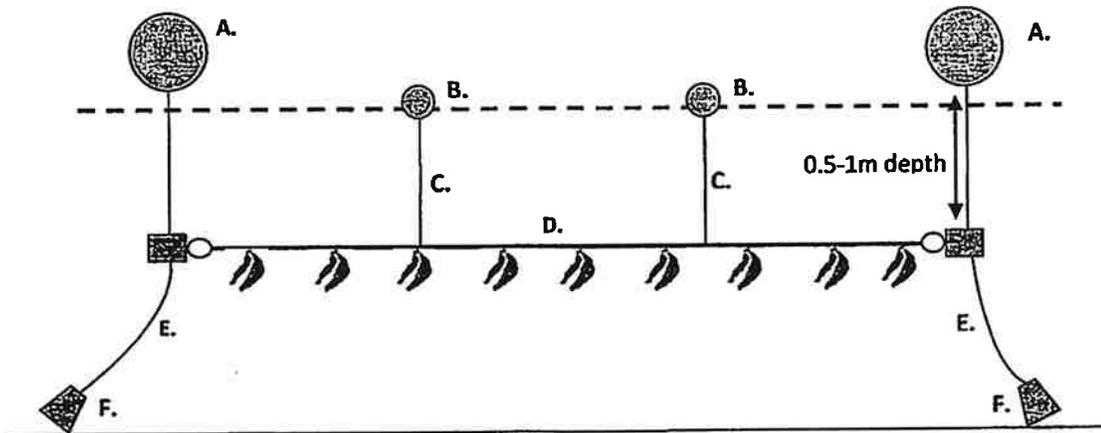
## Additional information to support application for the “Nutrient Bioextraction Research Using Sugar Kelp” project

Application ID: 1-4726-00305/00003

Applicant: Cornell Cooperative Extension of Suffolk County

Location/Facility: Northport Harbor

(1) Please provide a plan for the facility (plot plan, cross-view and profile).



- A. Mooring buoys
- B. Floats
- C. ¼" line for floats
- D. ½" sink line for kelp
- E. Anchor line (½" or 5/8" sinking line)
- F. Weight

Based on the depth of the water at the site, weights will be ~100 pounds.

(2) Is any lighting proposed for the facility?

There is no proposed lighting for the facility. All temporary buoys and floats associated with this research project will satisfy the requirements of the Town of Huntington for the placement of such objects in their waters.

(3) Are the kelp seedlings cultivated at the Town of Islip and Town of Hempstead shellfish hatcheries and then transported to the research site in Northport Harbor?

Kelp seedlings will be grown on nylon string spools, sourced from locally collected sorus tissue collected by Cornell Cooperative Extension of Suffolk County, with spores cultured at the Town of Islip and Town of Hempstead Shellfish Hatcheries. These two Town Hatcheries established seaweed nurseries in association with a similar project last year. Once the seedlings reach an adequate size, the seed spools will be transported to the research site in Northport Harbor (and other site locations in Throggs Neck, NY and Westchester County, NY) for temporary



TOWN OF HUNTINGTON  
DEPARTMENT OF MARITIME SERVICES  
MARINE DIVISION

53 New York Avenue  
Huntington, New York 11743  
Phone: (631) 351-3255

# 2

MOORING APPLICATION

PERMIT NUMBER: T232 LAST NAME: BOZARD FIRST: ROLAND  
COMPANY: INC VILLAGE OF NORTHPORT  
STREET: 224 MAIN ST CITY: NORTHPORT STATE: NY ZIP 11768  
HOME PHONE: CELL PHONE: 631-662-6421 WORK PHONE: 631-261-7502 x 330  
VESSEL REGISTRATION: DOCUMENTATION NO.:  
HULL ID NUMBER: No VESSEL  
NAME OF VESSEL: TYPE VESSEL:  
LENGTH DRAFT:  
COLOR of VESSEL: COLOR OF TOPSIDE OF VESSEL:  
TYPE of MARINE TOILET: None  
PRIMARY USE: - COMMERCIAL - RECREATIONAL RESIDENT - DEC, CORNELL COOPERATIVE EXT  
FUEL USAGE - GASOLINE: - DIESEL: FUEL CAPACITY:  
MOORING SERVICE: - PERSONAL - COMMERCIAL MOORING WEIGHT:  
HARBOR PLACEMENT: NORTHPORT HARBOR, 40.898376, -73.359527  
APPROXIMATE LOCATION: SOUTH OF NORTHPORT BOATH

DATE of APPLICATION: 10-26-2020 DATE of APPROVAL:  
DATE of FIRST USE: 11-15-2020 DATE of REMOVAL: 06-10-2020  
REGISTRATION EXPIRATION DATE:

RESIDENT: \_\_\_\_\_  
NON - RESIDENT: \_\_\_\_\_  
FEE: \_\_\_\_\_  
TOWN OFFICIAL: \_\_\_\_\_

I CERTIFY THAT THE MARINE TOILET ON BOARD VESSEL  
COMPLIES WITH ALL FEDERAL, STATE LOCAL LAWS.

DATE: 10/21/2020  
VESSEL OWNER: [Signature]  
MOORING INSPECTOR / COMPANY: \_\_\_\_\_

C Y



### What Can You Do?

You can do several things to help protect your watershed and coastal waters.

- Take responsibility for your own backyard through sensible lawn care, waste disposal, and resource conservation. Use pesticides and fertilizers sparingly and correctly.
- Compost organic waste.
- Practice good housekeeping by properly disposing of toxic substances like paint and paint thinners, automotive fluids, and cleaning products.
- Participate in "amnesty days" or take toxic wastes to appropriate collection sites.
- Curb your dog and properly dispose of pet waste. Do not leave it on the ground or throw it down a storm drain. (Your neighbors will appreciate this, too!)
- Maintain your septic tank if you have one. Frequent pumping, proper drain field maintenance, and careful waste disposal will prolong the life of your system and prevent discharge of untreated sewage to ground and surface waters.
- Pick up litter when you see it and properly dispose of your own trash.
- Properly maintain your boat, use pumpout facilities, and operate your boat in a responsible manner to avoid shoreline erosion. Follow all signage to avoid harming sensitive aquatic environments.
- Get involved in volunteer clean up, monitoring, and environmental protection efforts. Possibilities range from helping with mailings and phone campaigns to stenciling storm drains and participating in beach and stream cleanups.



### For additional information...

Please call EPA's Oceans and Coastal Protection Division at (202) 260-1952. Visit EPA's watershed and coastal web sites at <http://www.epa.gov/OWOW> or the National Estuary Program web site at <http://www.epa.gov/OWOW/estuaries/mep.html>



## Your Coastal Watershed

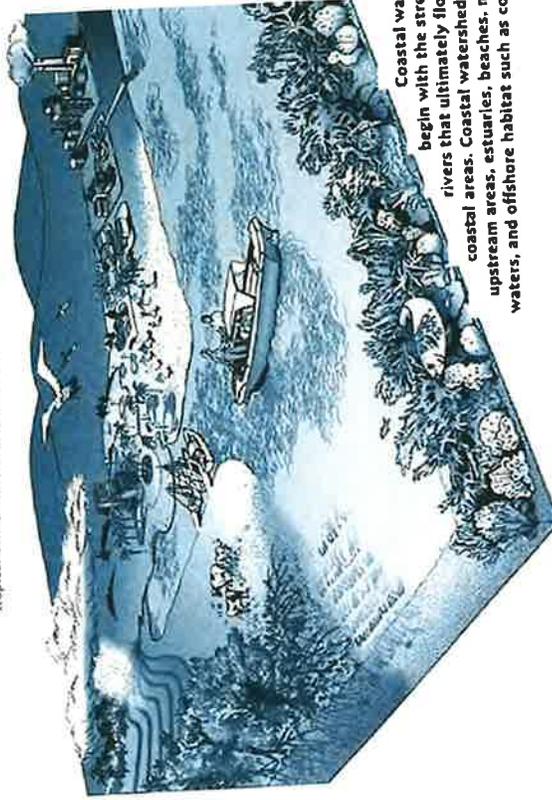
### What is a Watershed?

A watershed is a geographic area in which all sources of water, including lakes, rivers, estuaries, wetlands, and streams, as well as ground water, drain to a common surface water body. Because all watersheds are defined by natural hydrology and ultimately drain to coastal waters, they are good local points for managing coastal resources.



### Parts of the Coastal Watershed

The coastal watershed has several parts. It starts up at the beginning headwaters of the streams and rivers that ultimately drain down to the coastal areas. Headwaters often include wetlands, and wetlands often are adjacent to the flowing waters of rivers or streams. As the streams and rivers flow to coastal waters, they are influenced by many land and water uses. They pass through upland areas used for a variety of purposes such as farming, housing, businesses, recreation, and conservation. Upon reaching the coastal areas, the rivers empty into estuaries, which provide a unique habitat for a diverse group of organisms. Among other habitat functions, rivers and estuaries provide breeding and feeding grounds for a variety of aquatic and terrestrial animals. Nearshore waters, the areas directly offshore from the beach, are part of the coastal watershed because they are influenced by the activities going on along the shoreline and by pollutants coming from the land. Farther offshore are coral reefs (in tropical areas) and other offshore habitats that are part of the coastal watershed as well.



Coastal watersheds begin with the streams and rivers that ultimately flow to the coastal areas. Coastal watersheds include upstream areas, estuaries, beaches, nearshore waters, and offshore habitat such as coral reefs.

### How Does the Watershed Influence Marine Resources?

Since a watershed is made up of several components that are all part of the "big watershed picture," it is important to remember that what happens on the land can affect the water. For example, if a river or stream flows through an agricultural area, it can pick up fertilizer, manure, and pesticides from farming operations that run off the land after a rainstorm. As it passes urbanized and suburbanized areas, it might gather fertilizers that wash off lawns, untreated sewage from failing septic tanks, wastewater discharges from industrial facilities, sediment from construction sites, and runoff from impervious surfaces like parking lots. Upon reaching the coast, the stream or river can be affected by commercial and recreational boating, discharges from industrial and municipal facilities, and recreational activities on beaches. All of these areas—agricultural, suburban, urban, and coastal—can have an impact on marine resources.



### Some Pollution Impacts on the Coastal Watershed

Soil (loose dirt) from construction sites, farms, and areas where dirt is exposed can wash off into streams and rivers when it rains and flow to lakes, estuaries, and oceans. The result can be muddy waters that smother organisms living on the bottom, decrease the amount of light reaching the sea grass beds, and clog fish gills. Some kinds of pollutants can bind to sediment and flow with it to coastal waters.

Excess nutrients can also wash off the land when it rains and end up in coastal waters. Sources of excess nutrients include lawn fertilizers, pet and farm animal waste, decaying plant material, failing septic tanks, atmospheric deposition, and inefficient sewage treatment plants. The loss of wetlands in many watersheds has reduced the ability of nature to process these nutrients before they enter rivers, streams, and ultimately estuaries. These nutrients can cause an excessive amount of algae (microscopic plants) to grow in the water, blocking the light reaching sea grass. When the algae die off, the decaying process uses up the oxygen in the water, leaving little, if any, for fish and other aquatic organisms. In addition, some of these algae and related organisms (including *Pfiesteria piscicida*) release toxins that can kill fish or shellfish, and can be harmful or even fatal, to humans.

Toxic substances such as pesticides from lawns, gardens, and farms, and lead, oils, and greases deposited on roads from cars and trucks, can all run off the land with rainfall and snowmelt. Industrial plants and municipal wastewater treatment plants can also contribute to the amount of toxic substances entering streams and rivers and ultimately lakes, estuaries, and coastal waters. Fish kills and loss of the recreational uses of an area can occur.

Pathogens are microscopic organisms like bacteria and viruses. They come from untreated or poorly treated sewage, pet and farm animal waste, and improperly handled medical waste. Pathogens in the water in unsafe amounts result in beach closures, shellfish bed closures, fish kills, and human health problems.



### Resource Impacts

Activities in the watershed can adversely affect a variety of resources. Specific impacts on each of these resources are discussed in the referenced fact sheets.)

**Beaches**—Overloading of pollutants such as sewage and debris can result in beach closings. (EPA 842-F-98-010)

**Bays and estuaries**—Pollutants in and structural alterations to bays and estuaries can lead to loss of breeding and feeding grounds of fish, other aquatic animals, and birds, as well as loss of recreational areas. (EPA 842-F-98-009)

**Nearshore waters**—Along with bays and estuaries, nearshore waters are collection places for pollutants that flow from the watershed. (EPA 842-F-98-007)

**Coral reefs and other offshore areas**—Marine debris and pollutants such as nutrients and pesticides can flow offshore and affect coral reefs and other offshore habitats. (EPA 842-F-98-008)

It is important to think of the watershed as a whole system that is tied together. What happens in one part of the watershed can affect another part, sometimes hundreds of miles away.

### What Is EPA Doing to Protect Coastal Watersheds?

As one of the primary federal agencies with responsibility for protecting and restoring the nation's waters, the U.S. Environmental Protection Agency (EPA) has the opportunity to advance watershed protection. In recent years, EPA has invested considerable effort in streamlining program requirements that hinder watershed approaches and in developing useful watershed tools and services, for example, EPA has:

- increased efforts to assist states in assessing the quality of their watersheds through a variety of programs.
- Applied watershed planning tools to the wetland permitting process to identify areas that are suitable or unsuitable for development
- Provided financial assistance to states, territories, and tribes to promote watershed planning and management
- Developed the "Surf Your Watershed" web site, which provides watershed specific information to the public through the Internet and has increased public awareness of watersheds.

- Implemented the National Estuary Program to protect specific coastal watersheds and foster citizen and local government involvement in coastal watershed protection.

EPA has invested considerable effort in streamlining program requirements that hinder watershed approaches and in developing useful watershed tools and services.



EPA also works with state, local, and community organizations to help them initiate grassroots efforts for protecting watersheds. The *Getting in Step—A Pathway to Effective Outreach in Your Watershed* program provides training to community organizations interested in learning how to communicate the watershed protection message. EPA recognizes that even though federal and state agencies can provide guidance and assistance, watershed protection must be implemented at the local and watershed levels.



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# Second round of FLUPSY oysters added to Northport Harbor

Outdoors

by Chrissy Ruggeri | Fri, Aug 26 2022



The crew, led by Barry Udelson, the Marine Resource Specialist at Cornell Cooperative Extension, prepares approximately 125,000 Eastern oysters for release into Northport Harbor.



We rely on your support to share good news!

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Approximately 125,000 Eastern oysters were released into Northport Harbor this past Wednesday, August 24, part of a program run by [Cornell Cooperative Extension](#) and headed by Marine Resource Specialist Barry Udelson. This is the program's second year of oyster deployment, an effort to filter the water and reduce nitrogen in the bay.

The single set oysters were cultured at Cornell Cooperative's Southold hatchery this spring and then transported to the FLUPSY (Floating Upweller System) dock at the Woodbine Marina in Northport Village. The floats provide a constant heavy flow of water over the shellfish, allowing them to feed and grow at a much faster rate than if they were sitting at the bottom of the harbor.

A mature oyster, which is about three inches in size, can filter up to 50 gallons of water a day. Last year, the local FLUPSY program added 100,000 oysters into the harbor, and this year another 125,000. And good news, according to Mr. Udelson, who scuba dived in the area in mid-August: the oysters dropped last year are doing well. "They were the size of my hand. I've never seen anything like it, just piles [of oysters] in a big band," he told the Journal as he prepared large buckets of oysters at the Woodbine dock Wednesday morning. Last year's batch definitely spawned, too, Mr. Udelson said.

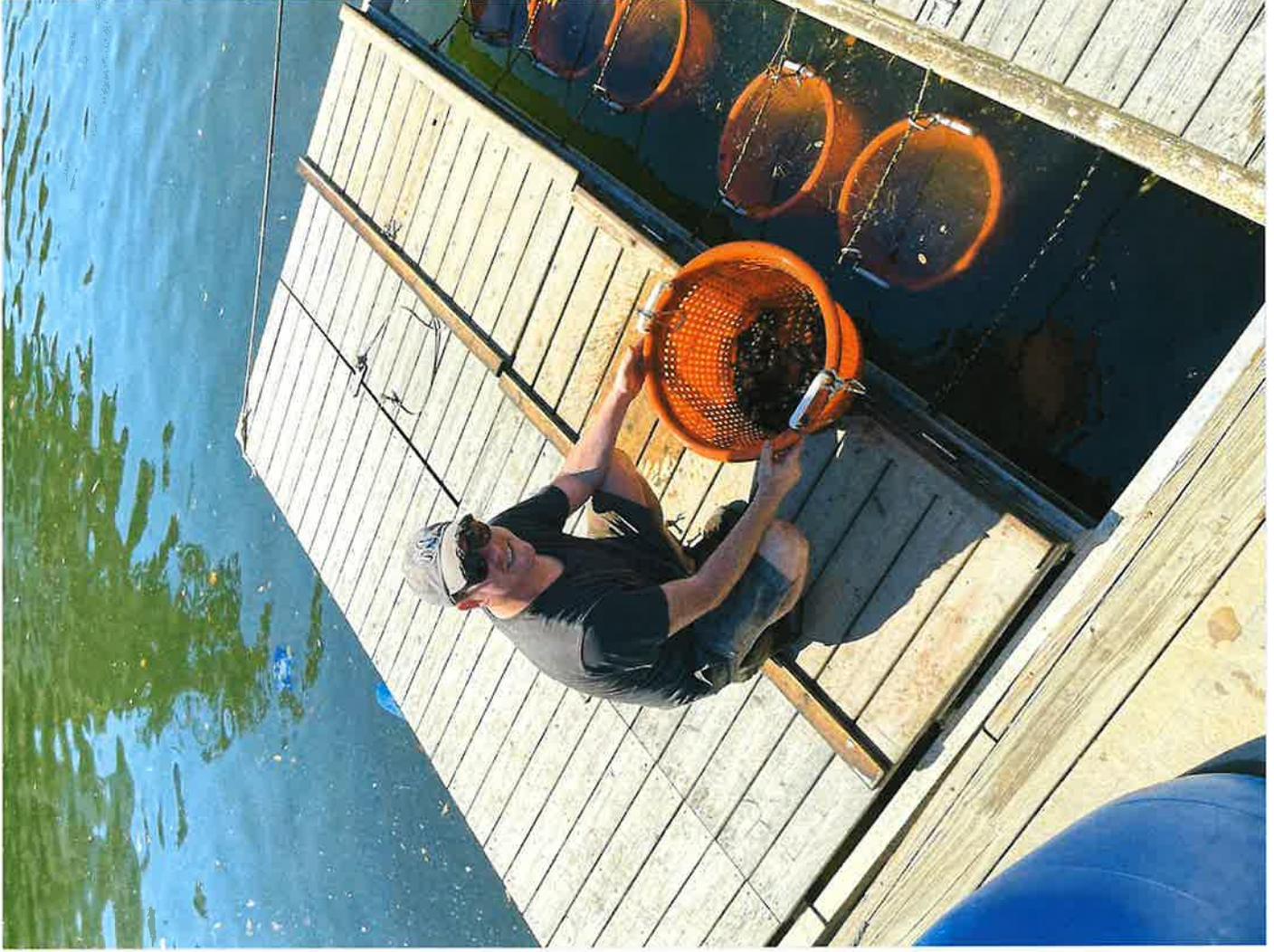
This year's drop went to the same three spots in the harbor and filled spaces in between. Local bayman Brian Bernier accompanied Mr. Udelson, FLUPSY on-site supervisor Sean Tamaro, Northport Village Trustee Dave Weber and Northport Village Mayor Donna Koch on the boat to release the oysters. Mr. Bernier used a hollow, aluminum pole to test the ground before the oysters were released to ensure there was a firm substrate. Then they "ground truthed" the area while scuba diving, Barry explained.

Trustee and Commissioner of Docks and Waterways Dave Weber is excited that the seeds planted last September are thriving in Northport Bay. This proves that within five to 10 years of this project, there will be a natural return of oysters to harvest in our waters, "helping both the environment and local baymen," Trustee Weber told the Journal.

In addition to growing single set oysters at the FLUPSY, Cornell Cooperative Extension added smaller batches of ribbed mussel and spat on shell oysters this year. The ribbed mussel will be tested for potential use as animal food. It may be another organism that can be cultured and raised, like kelp, to not only be useful in the water as a natural filter, but feed animals, too. This connects the industries, Mr. Udelson said, and creates a useful cycle.

Like the Eastern oysters, the spat on shell (which are clusters of five to ten oysters in one) are raised from seed and deployed into our local harbors. However, they aren't poachable, so they'll continue to sit in the waters and do their work by reducing nitrogen.

The local FLUPSY program is part of a larger initiative by Cornell Cooperative Extension to restore Long Island shellfish in Nassau and Suffolk counties. Northport site supervisor Sean Tamaro worked with interns Kaitlin Zenyuh, a senior at Northport High School, and Logan Carbone, a sophomore at SUNY College of Environmental Science and Forestry in Syracuse, three mornings a week for the last six weeks at the dock, in order to prepare the oysters for release.



*On-site supervisor Sean Tamaro shows off the ribbed mussels at Woodbine Marina, which will be tested for potential use as animal feed in the future.*



Approximately 125,000 single set oysters are loaded into the boat for deployment.



*Barry Udelson and Sean Tamaro released the oysters into three areas of Northport Harbor, with the best conditions for oyster survival.*



**NOEMA Huntington**  
 Mediterranean restaurant located at 7 Gerard Street in Huntington Village. Open 7 days a week. Visit us online at [NoemaNY.com](http://NoemaNY.com) or call 631-629-7777 for reservations.

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## **Join us for Our Rain Garden Planting!**

### **Calling All Gardeners - We Need Your Help!**

***This new rain garden will reduce polluted stormwater entering Northport Harbor.***



Rain Gardens, also called “Green Infrastructure”, use natural landscapes and native plantings as a successful and cost-effective way to reduce flooding, prevent polluted runoff, increase property values, and add beauty to our community.

Citizens Campaign for the Environment and the Village of Northport are working together to install beautiful new rain gardens that will prevent polluted stormwater runoff from reaching Northport Harbor and Long Island Sound. We need a little help with the plantings!

**Join us to help plant this important rain garden. Experts will be available to help, but we need volunteers to lend a hand!**

**When:** Saturday October 19, 2024

**Time:** 9:30am-12:30pm (Coffee and donuts will be provided)

**Location:** Bluff Point Rd & James Street, Northport, NY

# Protecting Northport Harbor with Rain Gardens! (/whats-new-at-cce/protecting-northport-harbor-with-rain-gardens)

March 21, 2024 (/whats-new-at-cce/protecting-northport-harbor-with-rain-gardens)



*Join us for a community forum to learn about two new planned rain gardens and how they will reduce polluted stormwater entering Northport Harbor*

**REGISTER TODAY!**  
[HTTPS://DOCS.GOOGLE.COM/FORMS/D/E/1FAIPQLSCTLYDOFYNSRFKTBMRPKCV3EUDFXUWKV3EVQ1H2QFX0JZ9GW/VIEWFORM](https://docs.google.com/forms/d/e/1FAIPQLSCTLYDOFYNSRFKTBMRPKCV3EUDFXUWKV3EVQ1H2QFX0JZ9GW/VIEWFORM)

Rain Gardens, also referred to as "green infrastructure," use natural landscapes and native plantings as a successful and cost-effective way to reduce flooding, save energy, prevent polluted runoff, and increase property values.

Citizens Campaign for the Environment and the Village of Northport are working together to install two new rain gardens on Bluff Rd and James Street. There is already a successful functioning rain garden built in front of the Northport Yacht Club. Rain gardens prevent polluted stormwater runoff from reaching Northport Harbor and Long Island Sound. They capture, store, and filter contaminants while protecting the shoreline and harbor.

Join us for a presentation on this beneficial new project, offer your feedback, and learn more about the importance of protecting Northport Harbor from polluted runoff.

**Date:**  
Wednesday, April 10, 2024

**Time:**  
7:00pm

**Location:**  
Northport Village Hall, 224 Main Street, Northport

**The event is free and open to the public** — please register here (<https://forms.gle/eLMgFj2Pra22hfdLA>).

Thank you for joining us!

Sincerely,  
All of us at CCE

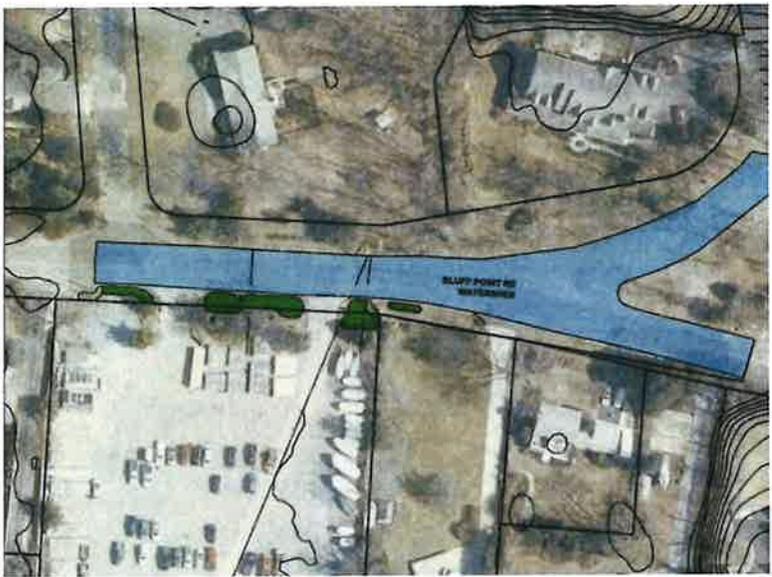
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Newer Post  
Senators Stabenow and Peters introduce legislation to extend Great Lakes protections (/whats-new-at-cce/senators-stabenow-and-peters-introduce-legislation-to-extend-great-lakes-protections)

Older Post  
Suffolk's 10 towns to create plan for regional waste program (/whats-new-at-cce/suffolks-10-towns-to-create-plan-for-regional-waste-program)

# Rain garden initiative launched to protect Northport Harbor

Community Environment & Nature Government Science & Technology Times of Huntington-Northport  
by Raymond Janis - March 21, 2022



Graphic above shows Bluff Point Road watershed in blue and proposed rain gardens in green. Graphic from Nelson Pope Voorhis

On March 16, environmental advocates met with public officials at the Northport Yacht Club to announce the addition of four rain gardens along Northport Harbor.

Adrienne Esposito, executive director of Citizens Campaign for the Environment, said her organization has partnered with the Village of Northport and the yacht club to address water pollution. According to her, rain gardens are a cost-effective and simple way to protect the harbor.

"In short, a rain garden is a nature-based solution to man-made pollution," she said. "Stormwater runoff carries with it pesticides and fertilizers and other pollution and contaminants into our surface waters across Long Island. This rain garden is very important because it will be removing thousands of gallons of rain before it goes into the harbor."

Nelson Pope Voorhis, a Melville-based engineering firm, is making this vision a reality. According to Rusty Schmidt, landscape ecologist at Nelson Pope, the proposed rain gardens will act as a filtration system, flushing out debris and other sources of pollution, to discharge stormwater safely into the harbor.

"A rain garden is a shallow bowl that we put into the landscape and that we direct water to on purpose," Schmidt said. "In this case, the water is going to be coming from Bluff Point Road, and as the water comes down the street it will go into these gardens first. That water will soak into the ground in one day or less – in this case it will probably soak in in a few hours because the soils are sandy – and that water will be cleansed and cleaned and get to a drinkable quality." He added, "It's still going out to Northport Harbor, but through the soil and without all the garbage."

According to a study conducted by the U.S. Department of Agriculture, Northport Harbor and Northport Bay are both designated as priority waterbodies. Schmidt said that the proposed rain gardens would capture roughly 15,000 gallons of rainwater during a storm event, removing several harmful contaminants from the runoff before it reaches the harbor.

"Nitrogen is the number one pollutant to our bay, and we are eliminating a large volume of nitrogen from these rain gardens," Schmidt said. "Nitrogen is the main component of growing the algal blooms, the red tides and the brown tides that are causing low oxygen and other problems in the harbor."

The project is made possible by grants from the Long Island Sound Study and the National Fish and Wildlife Foundation's Long Island Sound Futures Fund. Policymakers suggest this project will help to revitalize Northport's decimated aquatic ecosystems.

***We once had a thriving, billion-dollar shellfish industry here on the Island, and this is an important measure to bring back those types of species.***

***– Assemblyman Keith Brown (R-Northport)***

"We once had a thriving, billion-dollar shellfish industry here on the Island, and this is an important measure to bring back those types of species," said state Assemblyman Keith Brown (R-Northport). "I ran on a platform of cleaning up the Long Island Sound, the bays and the estuaries. The quality of them is a really important issue of mine, being from Northport."

Ian Milligan, deputy village mayor and commissioner of Docks & Waterways, Police and Personnel, confirmed that the rain gardens near the yacht club will be the first of several planned to be installed throughout the village.



Local officials and environmentalists point to the site of a planned rain

"We have a huge runoff water problem here in Northport and it all ends up in the harbor," Milligan said. "This is the first rain garden that we're doing in Northport and I'm also happy to say that the village, through other grants and other programs, has three more that are going to be coming out this year."

According to Esposito, these projects will lead to a cleaner, safer Northport Harbor.

"The bottom line is that this rain garden really will be a simple solution to rainwater pollution," she said. "We will be using native plantings and taking an area right now that floods and reimagining that area as a beautiful garden that will be absorbing the rain and filtering those pollutants, thereby protecting the harbor."

Esposito added that construction of the proposed rain gardens near Northport Yacht Club will begin this spring.

## Appendix B

### Village of Northport Outfall Map

# Map 1 of 1

## Inc. Village of N Drainage Facility

March 17, 202

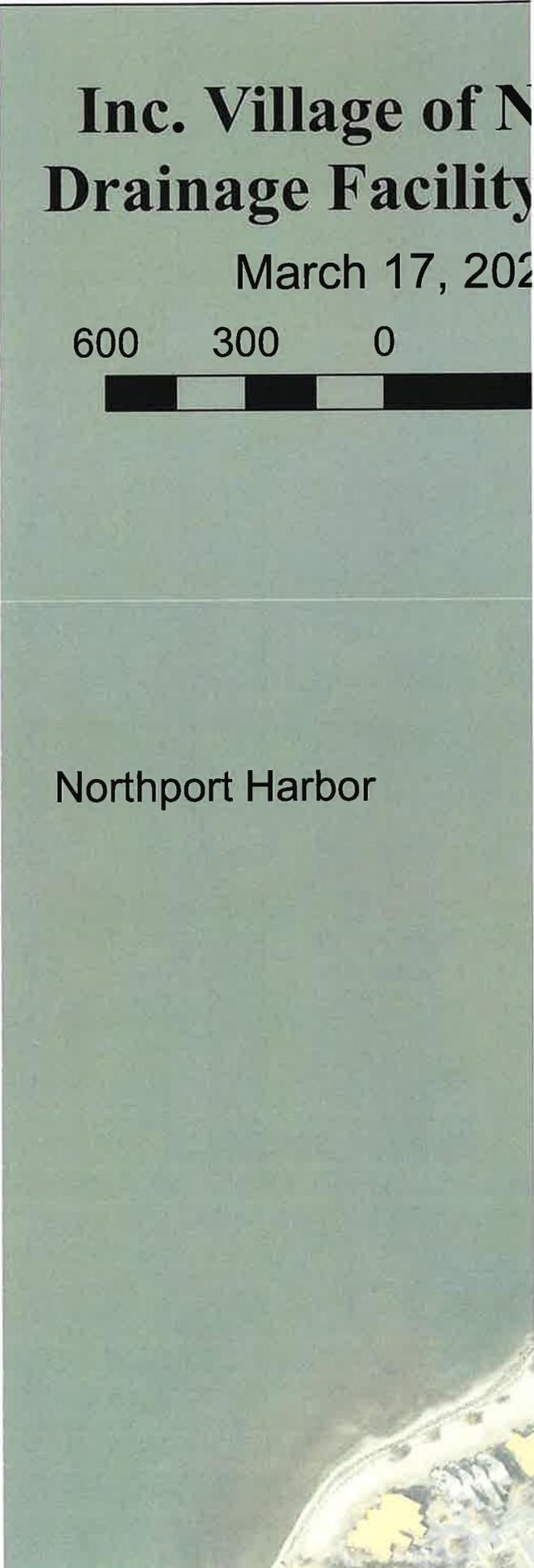
### Legend

-  Northport Outfalls
-  Catch Basins
-  Manholes
-  Northport Pipes
-  Building Footprints 2014
-  Above Ground Flow
-  Force Main

600 300 0



Northport Harbor



## Appendix C

### SWPPP Review / Construction Site Inspection and Maintenance Log Book

**CONSTRUCTION SITE INSPECTION  
AND MAINTENANCE LOG BOOK**

**STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION  
ACTIVITIES**

**SAMPLE CONSTRUCTION SITE LOG BOOK**

Table of Contents

---

- I. Pre-Construction Meeting Documents
  - a. Preamble to Site Assessment and Inspections
  - b. Pre-Construction Site Assessment Checklist
  
- II. Construction Duration Inspections
  - a. Directions
  - b. Modification to the SWPPP

**I. PRE-CONSTRUCTION MEETING DOCUMENTS**

**Project Name** \_\_\_\_\_  
**Permit No.** \_\_\_\_\_ **Date of Authorization** \_\_\_\_\_  
**Name of Operator** \_\_\_\_\_  
**Prime Contractor** \_\_\_\_\_

**a. Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector<sup>1</sup> conduct an assessment of the site prior to the commencement of construction<sup>2</sup> and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization<sup>3</sup> using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to "Qualified Inspector" inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.  
2 "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.  
3 "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

**b. Pre-construction Site Assessment Checklist**

**(NOTE: Provide comments below as necessary)**

**1. Notice of Intent, SWPPP, and Contractors Certification:**

**Yes No NA**

- Has a Notice of Intent been filed with the NYS Department of Conservation?
- Is the SWPPP on-site? Where? \_\_\_\_\_
- Is the Plan current? What is the latest revision date? \_\_\_\_\_
- Is a copy of the NOI (with brief description) onsite? Where? \_\_\_\_\_
- Have all contractors involved with stormwater related activities signed a contractor's certification?

**2. Resource Protection**

**Yes No NA**

- Are construction limits clearly flagged or fenced?
- Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
- Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

**3. Surface Water Protection**

**Yes No NA**

- Clean stormwater runoff has been diverted from areas to be disturbed.
- Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- Appropriate practices to protect on-site or downstream surface water are installed.
- Are clearing and grading operations divided into areas <5 acres?

**4. Stabilized Construction Access**

**Yes No NA**

- A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- Sediment tracked onto public streets is removed or cleaned on a regular basis.

**5. Sediment Controls**

**Yes No NA**

- Silt fence material and installation comply with the standard drawing and specifications.
- Silt fences are installed at appropriate spacing intervals
- Sediment/detention basin was installed as first land disturbing activity.
- Sediment traps and barriers are installed.

**6. Pollution Prevention for Waste and Hazardous Materials**

**Yes No NA**

- The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
- The plan is contained in the SWPPP on page \_\_\_\_\_
- Appropriate materials to control spills are onsite. Where? \_\_\_\_\_

## II. CONSTRUCTION DURATION INSPECTIONS

### a. Directions:

**Inspection Forms will be filled out during the entire construction phase of the project.**

Required Elements:

- 1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- 2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- 3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
- 4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
- 5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and
- 6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

**SITE PLAN/SKETCH**

\_\_\_\_\_  
**Inspector (print name)**

\_\_\_\_\_  
**Date of Inspection**

\_\_\_\_\_  
**Qualified Inspector (print name)**

\_\_\_\_\_  
**Qualified Inspector Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

**Maintaining Water Quality**

**Yes No NA**

- Is there an increase in turbidity causing a substantial visible contrast to natural conditions at the outfalls?
- Is there residue from oil and floating substances, visible oil film, or globules or grease at the outfalls?
- All disturbance is within the limits of the approved plans.
- Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

**Housekeeping**

**1. General Site Conditions**

**Yes No NA**

- Is construction site litter, debris and spoils appropriately managed?
- Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- Is construction impacting the adjacent property?
- Is dust adequately controlled?

**2. Temporary Stream Crossing**

**Yes No NA**

- Maximum diameter pipes necessary to span creek without dredging are installed.
- Installed non-woven geotextile fabric beneath approaches.
- Is fill composed of aggregate (no earth or soil)?
- Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

**3. Stabilized Construction Access**

**Yes No NA**

- Stone is clean enough to effectively remove mud from vehicles.
- Installed per standards and specifications?
- Does all traffic use the stabilized entrance to enter and leave site?
- Is adequate drainage provided to prevent ponding at entrance?

**Runoff Control Practices**

**1. Excavation Dewatering**

**Yes No NA**

- Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- Clean water from upstream pool is being pumped to the downstream pool.
- Sediment laden water from work area is being discharged to a silt-trapping device.
- Constructed upstream berm with one-foot minimum freeboard.

**Runoff Control Practices (continued)**

2. Flow Spreader

**Yes No NA**

- Installed per plan.
- Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

**Yes No NA**

- Installed per plan with minimum side slopes 2H:1V or flatter.
- Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- Sediment-laden runoff directed to sediment trapping structure

4. Stone Check Dam

**Yes No NA**

- Is channel stable? (flow is not eroding soil underneath or around the structure).
- Check is in good condition (rocks in place and no permanent pools behind the structure).
- Has accumulated sediment been removed?.

5. Rock Outlet Protection

**Yes No NA**

- Installed per plan.
- Installed concurrently with pipe installation.

**Soil Stabilization**

1. Topsoil and Spoil Stockpiles

**Yes No NA**

- Stockpiles are stabilized with vegetation and/or mulch.
- Sediment control is installed at the toe of the slope.

2. Revegetation

**Yes No NA**

- Temporary seedings and mulch have been applied to idle areas.
- 4 inches minimum of topsoil has been applied under permanent seedings

**Sediment Control Practices**

1. Silt Fence and Linear Barriers

**Yes No NA**

- Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
  - Joints constructed by wrapping the two ends together for continuous support.
  - Fabric buried 6 inches minimum.
  - Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation is \_\_\_% of design capacity.

**Sediment Control Practices (continued)**

**2. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated; Filter Sock or Manufactured practices)**

**Yes No NA**

- Installed concrete blocks lengthwise so open ends face outward, not upward.
- Placed wire screen between No. 3 crushed stone and concrete blocks.
- Drainage area is 1 acre or less.
- Excavated area is 900 cubic feet.
- Excavated side slopes should be 2:1.
- 2" x 4" frame is constructed and structurally sound.
- Posts 3-foot maximum spacing between posts.
- Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
- Posts are stable, fabric is tight and without rips or frayed areas.
- Manufactured insert fabric is free of tears and punctures.
- Filter Sock is not torn or flattened and fill material is contained within the mesh sock.

Sediment accumulation \_\_\_% of design capacity.

**3. Temporary Sediment Trap**

**Yes No NA**

- Outlet structure is constructed per the approved plan or drawing.
- Geotextile fabric has been placed beneath rock fill.
- Sediment trap slopes and disturbed areas are stabilized.

Sediment accumulation is \_\_\_% of design capacity.

**4. Temporary Sediment Basin**

**Yes No NA**

- Basin and outlet structure constructed per the approved plan.
- Basin side slopes are stabilized with seed/mulch.
- Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
- Sediment basin dewatering pool is dewatering at appropriate rate.

Sediment accumulation is \_\_\_% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design. All practices shall be maintained in accordance with their respective standards.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.



# APPENDIX E

## EROSION AND SEDIMENT CONTROL PLAN REVIEW CHECKLIST

Project Name \_\_\_\_\_ Site Location \_\_\_\_\_

Applicant's Name & Address \_\_\_\_\_  
\_\_\_\_\_

### General

A narrative statement shall be provided that describes the proposed project nature and purpose; the existing site conditions including topography, vegetation and drainage; adjacent and off-site areas affected by the project; description of the soils on the site and key properties; notations of critical areas such as steep slopes, channels or wetlands; the overall phasing, sequencing and stabilization plan; total disturbed area and, areas not to be disturbed, and soil restoration plan.

#### I. Construction Drawings

Are the following items shown on the construction drawings:	<u>Yes</u>	<u>No</u>
1. Vicinity Map with scale and north arrow	_____	_____
2. Legend, scales, N arrow on plan view	_____	_____
3. Existing and proposed topography shown with contours labeled with spots elevations in critical areas	_____	_____
4. Scope of the plan noted in the Title Block	_____	_____
5. Limits of clearing and grading shown , and methods of spoil disposal	_____	_____
6. Existing vegetation delineated	_____	_____
7. Soil boundaries shown on the existing and proposed plan views	_____	_____
8. Existing drainage patterns, 100 year floodplain and sub-areas shown, runoff outfall locations identified	_____	_____
9. Existing and proposed development facilities/ improvements shown	_____	_____
10. Location of Erosion and Sediment control practices as phased with construction, with dimensions and material specifications	_____	_____
11. Phasing plan with 5 acre threshold limits shown	_____	_____
12. Stockpile locations, staging areas, access points, and concrete trunk washout locations clearly defined	_____	_____
13. Street profiles, utility locations, property boundaries and, easement delineations shown	_____	_____
14. Soil Restoration Plan detailed on the site plan	_____	_____

II. <u>Construction Notes &amp; Details</u>	<u>Yes</u>	<u>No</u>
1. Specific sequence of operation given for each phase	___	___
2. Inspection and maintenance schedule shown for the specific practices	___	___
3. Design details show all dimensions and installation details necessary for construction	___	___
4. Implementation schedule for E&S practices is provided with removal criteria stated	___	___
5. Site pollution and construction waste management plan incorporated in the notes	___	___
6. Site Inspections during construction are noted on the drawings and are in accordance with the General Permit for Stormwater Discharges from Construction Activities	___	___

### III. Erosion & Sediment Control Practices

A. General	<u>Yes</u>	<u>No</u>
1. Practice meets purpose and design criteria	___	___
2. Standard details and construction notes are provided	___	___
3. Special timing of practice noted if applicable	___	___
4. Provisions for traffic crossings shown on the drawings where necessary	___	___
B. Practices Controlling Runoff	<u>Yes</u>	<u>No</u>
1. Positive drainage is maintained with contributing drainage area shown	___	___
2. Flow grades properly stabilized	___	___
3. Adequate outlet or discharge condition stabilized	___	___
4. Necessary dimensions, gradations, calculations, and materials shown	___	___
C. Practices Stabilizing Soil	<u>Yes</u>	<u>No</u>
1. Seeding rates and areas properly shown on the drawings	___	___
2. Mulch materials and rates specified on the drawings	___	___
3. Sequencing and timing provisions limit soil exposure to 7 to 14 days as appropriate	___	___

C. Practices Stabilizing Soil (cont'd)	<u>Yes</u>	<u>No</u>
4. Rolled Erosion Control Products (RECP's) used are specified to location and appropriate weight/tie down	_____	_____
5. All soil seed bed preparation and amendments are specified on the drawings or in the specifications	_____	_____
6. The seeding dates are specified to cover the entire year for both temporary and permanent seedings	_____	_____
7. Maximum created slopes are no steeper than 2 foot horizontal to 1 foot vertical with Cut and Fill slopes shown	_____	_____
D. Practices Controlling Sediment	<u>Yes</u>	<u>No</u>
1. Sediment traps/basins are sized in accordance with criteria	_____	_____
2. The contributing drainage area is shown on the grading plan	_____	_____
3. All scaled dimensions and volumes are shown on the plan	_____	_____
4. Maintenance requirements and clean out elevations established for all sediment control practices (50% capacity)	_____	_____
5. All access points of the project are shown to be stabilized	_____	_____
6. Storm drain inlets adequately protected	_____	_____
7. Buffer filter strips are appropriately sited and installed	_____	_____
7. Silt fences are shown on the contour lines with no more than one quarter acre per 100 foot drainage to it	_____	_____
8. Temporary sediment traps are not being used at locations of future stormwater infiltration facilities	_____	_____
9. Dewatering devices for traps and basins are adequately designed with details shown on the plans	_____	_____
10. Geotextile filter bags are properly sited, sized, and have their maintenance requirements detailed on the drawings	_____	_____
11. Turbidity curtains are properly located with installation, anchoring, and maintenance details shown on the plans	_____	_____

**Additional Comments and Notes**

Plan Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix D

### SWPPP Compliance Checklist

# VON SWMP Appendix D

## Village of Northport SWPPP Compliance Review Checklist

Project Name: \_\_\_\_\_

Project Location: \_\_\_\_\_

SCTM No.: \_\_\_\_\_ SPDES General Permit No.: \_\_\_\_\_

SWPPP Review By: \_\_\_\_\_ Date: \_\_\_\_\_

### **SWPPP contains a combination of**

- narrative
- plan sheets
- standard detail sheets (where appropriate)

### **Does the SWPPP Narrative:**

- Describe the nature of the construction activity?
- Address the potential for a discharge of sediment and/or other potential pollutants from the site?
- Identify the person who will oversee the SWPPP implementation?
- Identify the entity responsible for long term O & M of the permanent storm water management system?
- List the chain of responsibility for SWPPP implementation for all operators on the site?
- Describe of installation timing for all erosion and sediment control (ESC) better management practices (BMPs)?
- Describe procedures to establish additional temporary ESC BMPs as necessary for site conditions?
- Describe final stabilization methods for all exposed areas? (may be in narrative or on plan sheets)

### **Do plan sheets identify:**

- Existing and final grades?
- Locations and types of all temporary and permanent ESC BMPs?
- Stormwater flow directions and surface water divides for all pre and post-construction drainage areas?
- Impervious areas?
- Soil types?
- Locations of areas not to be disturbed?
- Limits of construction phases?

- Locations of all wetlands and surface waters that will receive pre or post-construction site runoff (if not shown on the plan sheets, an arrow to note the direction and distance)?

**Standard specifications:**

- Are specifications included where appropriate?

**Stormwater Discharge Design Requirements**

**Permanent Stormwater Management System**

- Is calculation of new impervious surface included in SWPPP?
- Are calculations for permanent stormwater management system included?
- Are there areas of the project where typical stormwater management methods are not feasible?
  - If yes, has effort been made to provide some stormwater management using alternatives?
    - Vegetated swales
    - Bioretention
    - Rain Barrels
    - Porous Pavement
    - Green Roof
    - Parking Reduction
    - Preservation of Buffers
    - Preservation of Undisturbed Areas
- Which method of permanent stormwater treatment has been selected?
  - Infiltration Basin /Ground Filtration (Recharge)
    - Is infiltration/filtration appropriate to the site and land uses?
    - Is infiltration system not excavated to final grade until drainage area constructed and stabilized?
    - Are rigorous sediment and erosion controls used to keep sediment and runoff away?
    - Is a pretreatment device used?
    - Is the system sufficient to infiltrate or filter the appropriate water quality volume?
    - Can water quality volume be discharged in 48 hours or less?
    - Is there a way to visually verify the system is operating as designed?
    - Has appropriate testing been conducted to ensure a minimum of 3 feet of separation from ground water?
    - Are calculations and/or computer model results included to demonstrate the design adequacy of the infiltration system?
    - Is adequate maintenance access provided?
    - Does the maintenance plan identify who will perform future maintenance?
  - Combination of practices
    - Is the entire water quality volume be accounted for?

- Are computer models and/or calculations included in the SWPPP?
- Alternative method
  - Hydrodynamic
  - Wet Vault
  - Media Filter

**Construction Activity Requirements**

- Addresses **erosion prevention** measures:
  - Are areas not to be disturbed delineated on plans?
  - Has appropriate construction phasing been implemented?
  - Do exposed soils with positive slope within 200 feet of surface water have erosion protection/cover?
  - Do pipe outlets have energy dissipation within 24 hours of connecting?
- Addresses **sediment control** measures:
  - Are slopes with a 3:1 grade broken up into lengths less than 75 feet?
  - Are sediment control practices established on down gradient perimeters?
  - Are all inlets protected?
  - Do stockpiles have sediment control
  - Are stockpiles placed in areas away from surface waters?
  - Do construction site entrances minimize street tracking?
- Addresses **dewatering and basin draining**:
  - Is there a plan in place for dewatering, where required, so as to not cause nuisance conditions, erosion, or inundation
- Addresses **inspections and maintenance**:
  - Identifies the person who will oversee the BMP inspection and maintenance?
  - Inspections performed once every 7 days
  - Inspections performed within 24 hrs. of a rain event greater than 0.5 in/24 hr.
  - Inspection and Maintenance records include
    - Date and time of inspection
    - Name of person(s) conducting inspections
    - Finding of inspections and recommendations for corrective actions
    - Date and amount of rainfall events greater than 0.5 in/24 hr.
  - Maintenance performed
    - Silt fence repaired/replaced/supplemented when nonfunctional, or 1/3 full; within 24 hours
    - Construction site exits inspected, tracked sediment removed within 24 hours
    - Inlet protection inspected and cleaned of sediment and verified as functional
- Addresses **pollution prevention** management measures:
  - Solid waste disposed properly; comply with Town requirements
  - External washing of vehicles limited. Runoff contained and waste properly disposed
  - Concrete washout station installed

- No engine degreasing allowed on site
- Addresses **final stabilization**:
  - Stabilization by uniform perennial vegetative cover (70% density)
  - Drainage ditches stabilized
  - All temporary synthetic and structural BMPs removed
  - Clean out sediment from conveyances and infiltration basins (return to design capacity)
  - Submit Notice Of Termination

## Appendix E

### Construction Instructional Pamphlet

# Developing Your Stormwater Pollution Prevention Plan

## A Guide for Construction Sites

EPA-833-R-06-004  
May 2007



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# Developing Your Stormwater Pollution Prevention Plan

## A Guide for Construction Sites

### Who?

Construction site operators (generally, the person who has operational control over construction plans and/or the person who has day-to-day supervision and control of activities occurring at the construction site)

### Where?

Construction sites required to comply with stormwater discharge requirements

### What?

A guide to help you develop a good Stormwater Pollution Prevention Plan (SWPPP)

### Why?

Stormwater runoff from construction sites can cause significant harm to our rivers, lakes, and coastal waters

A SWPPP is required (by your construction general permit) and will help you prevent stormwater pollution

A SWPPP is more than just a sediment and erosion control plan.

It describes all the construction site operator's activities to prevent stormwater contamination, control sedimentation and erosion, and comply with the requirements of the Clean Water Act

---

## Purpose of this Guidance Document

This document provides guidance to construction site operators that need to prepare a SWPPP in order to receive NPDES permit coverage for their stormwater discharges. The Clean Water Act provisions, EPA regulations and EPA's Construction General Permit described in this document contain legally binding requirements. This document does not substitute for those provisions, regulations or permit, nor is it a regulation or permit itself. It also does not substitute for requirements under State law or construction general permits issued by States. It does not impose legally-binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decisionmakers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. Any decisions regarding a particular construction site will be made based on the applicable statutes, regulations and/or permit terms. Therefore, interested parties are free to raise questions and objections about the appropriateness of the application of this guidance to a particular situation, and EPA—or the applicable NPDES permitting authority—will consider whether or not the recommendations or interpretations in the guidance are appropriate in that situation based on the law and regulations.

This guidance document occasionally uses language describing mandatory requirements for construction site operators and those covered by a general permit for stormwater discharges from such sites. This language is generally intended to reflect requirements applicable where EPA is the NPDES permitting authority. Although requirements in jurisdictions where EPA is not the permitting authority may resemble these requirements, the reader should not assume that this guidance accurately describes those requirements. Rather, the reader should consult the applicable regulations and any applicable NPDES permit.

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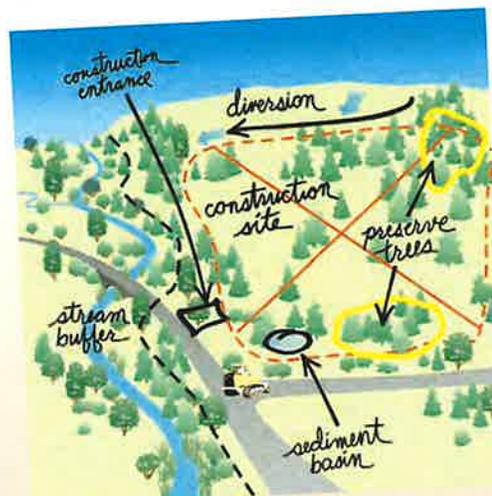
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## What is a Stormwater Pollution Prevention Plan (SWPPP)?

A SWPPP may be called many things. Your state may use terms like:

- Construction Best Practices Plan
- Sediment and Stormwater Plan
- Erosion, Sediment, and Pollution Prevention Plan
- Construction Site Best Management Practices Plan
- Erosion Control Plan and Best Management Practices
- Best Management Practices Plan
- Erosion and Sediment Control Plan

Regardless of the title used in your state, these documents—and the stormwater permits that require them—tend to have many common elements. This guide is intended to help you develop a better SWPPP for your construction site.



Example sketch identifying various points to address in the SWPPP.

## How to Use This Guide

- This guide was developed as a helpful reference guide for construction site operators across the country. We have tried to accommodate the wide range of knowledge and experience about stormwater pollution prevention that currently exists among operators—from novice to expert.
  - If you are relatively new to managing stormwater at a construction site, you will probably want to read this entire guide.
  - If you are very experienced and familiar with the requirements in your state, this guide may help you brush up on certain requirements or provide you with ideas to improve your SWPPP. You might want to review the table of contents and skip around. Be sure to take a look at the SWPPP template (Appendix A) to see if you can make improvements in the way you develop and maintain your SWPPP.
- This guide is written in a general format and can be used at most construction sites in any state, territory, or in Indian country. The document assumes that you will obtain discharge authorization under an appropriate National Pollutant Discharge Elimination System (NPDES) construction general permit and use both the permit and this guidance to assist in developing your SWPPP. In this guide, we make some references to the U.S. Environmental Protection Agency's Construction General Permit for illustrative purposes. **You should always consult your applicable NPDES permit for the exact requirements that apply to you.**
- Remember that you are developing your SWPPP for both your use and for review by the regulatory agencies responsible for overseeing your stormwater controls. As such, one of your goals in developing your SWPPP should be to present the information in a way that clearly demonstrates that it meets all the requirements of your NPDES permit.
- You can obtain an electronic copy of this guide (PDF format), the SWPPP template, and inspection form (in Microsoft Word) at [www.epa.gov/npdes/swpppguide](http://www.epa.gov/npdes/swpppguide)

# Chapter 1: Introduction

► This chapter provides an orientation to this guide and its contents and describes why stormwater controls at construction sites are necessary.

## A. Why Should You Use this Guide?

If you are responsible for erosion and sediment control and stormwater management at a permitted construction site, then this guide may be useful to you. This guide is designed to walk you through the steps for developing and implementing an effective stormwater pollution prevention plan (SWPPP). The basic outline of the guide is presented below:

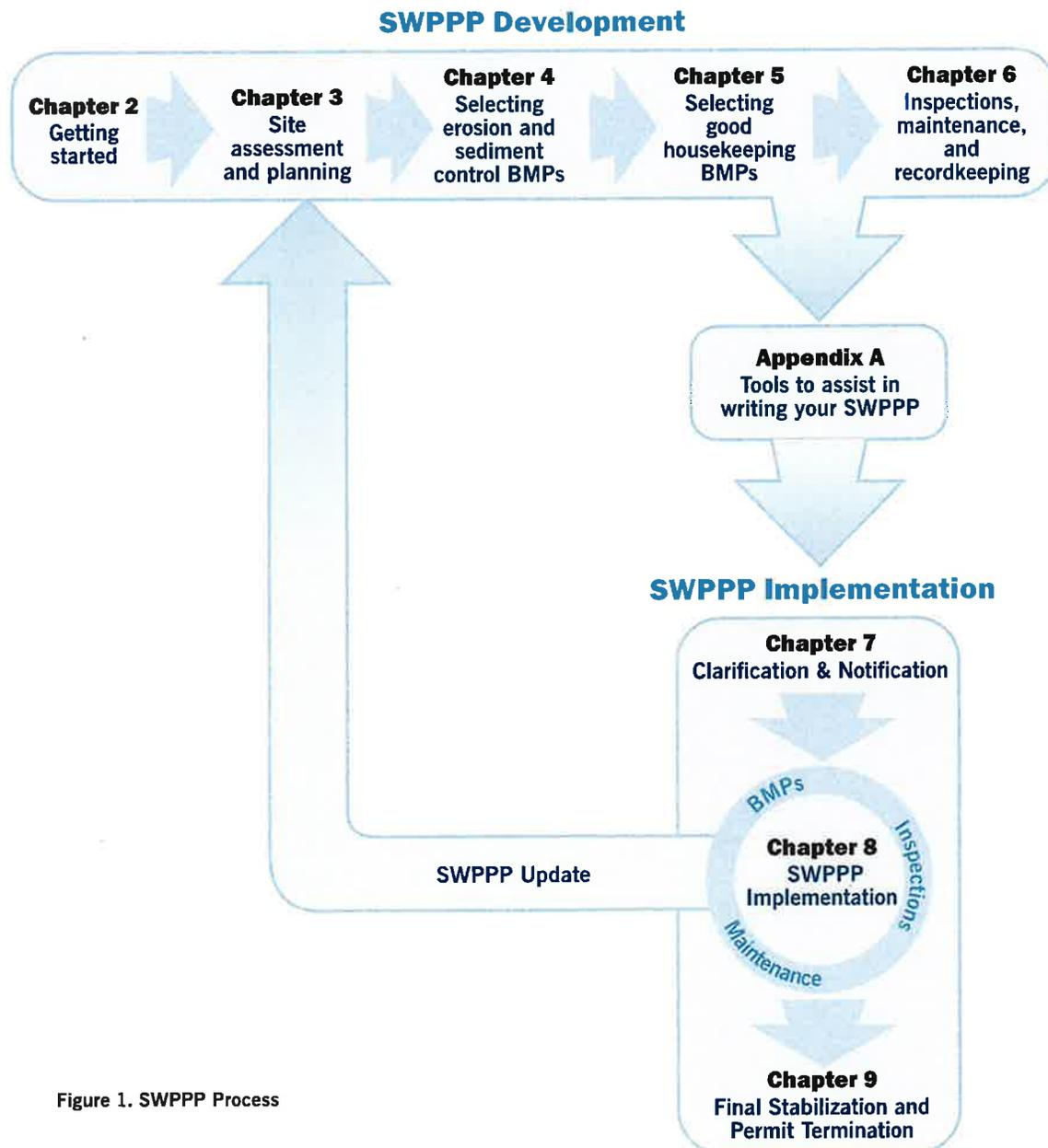


Figure 1. SWPPP Process

## Take a Closer Look...

### What is a SWPPP?

A SWPPP is a site-specific, written document that:

- Identifies potential sources of stormwater pollution at the construction site
- Describes practices to reduce pollutants in stormwater discharges from the construction site. Reduction of pollutants is often achieved by controlling the volume of stormwater runoff (e.g., taking steps to allow stormwater to infiltrate into the soil).
- Identifies procedures the operator will implement to comply with the terms and conditions of a construction general permit

### What does this mean to me?

Failure to implement your SWPPP could result in significant fines from EPA or a state environmental agency. Therefore, it is important that you develop your SWPPP to address the specific conditions at your site, fully implement it, and keep it up-to-date to reflect changes at your site.

## B. What Is Stormwater Runoff and What Are Its Impacts?

Stormwater runoff is rain or snowmelt that flows over land and does not percolate into the soil. Stormwater runoff occurs naturally, in small amounts, from almost any type of land surface, especially during larger storm events.

### SWPPP Tip!

#### A SWPPP can have different names

A SWPPP may also be called a "construction best practices plan," "sediment and stormwater plan," "erosion, sedimentation, and pollution prevention plan," or similar term. The SWPPP (or similarly named plan) is generally required to comply with EPA's or the state's stormwater construction general permit.

Impervious surfaces, such as buildings, homes, roads, sidewalks, and parking lots, can significantly alter the natural hydrology of the land by

increasing the volume, velocity, and temperature of runoff and by decreasing its infiltration capacity. Increasing the volume and velocity of stormwater runoff can cause severe stream bank erosion, flooding, and degrade the biological habitat of these streams. Reducing infiltration can lower ground water levels and affect drinking water supplies.

In addition, as stormwater runoff moves across surfaces, it picks up trash, debris, and pollutants such as sediment, oil and grease, pesticides and other toxics. Changes in ambient water temperature, sediment, and pollutants from stormwater runoff can be detrimental to aquatic life, wildlife, habitat, and human health. Soil exposed by construction activities is especially vulnerable to erosion. Runoff from an unstabilized construction site can result in the loss of approximately 35–45 tons of sediment per acre each year (ASCE and WFF, 1992). Even during a short period of time, construction sites can contribute more sediment to streams than would be deposited naturally over several

decades. Excess sediment can cloud the water reducing the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways.

The primary stormwater pollutant at a construction site is sediment. To control erosion at a construction site, it is important to understand the different types of erosion that can occur. Erosion begins when raindrops break down the soil structure and dislodge soil particles. Runoff carrying the soil particles becomes sheet erosion which eventually forms smaller rills and larger gullies. The best way to stop erosion is to keep the soil in place through vegetation, erosion control blankets, or other methods that prevent the soil from becoming dislodged during rain events.

The erosion process is typically influenced by climate, topography, soils, and vegetative cover. Understanding how these factors influence erosion will help you select and design appropriate controls to minimize erosion from your construction site.

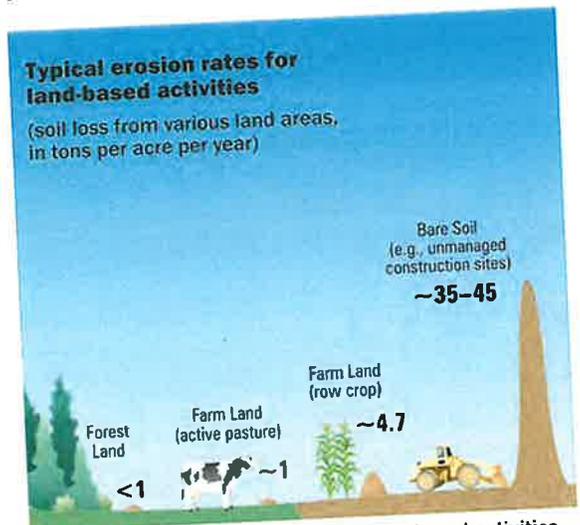
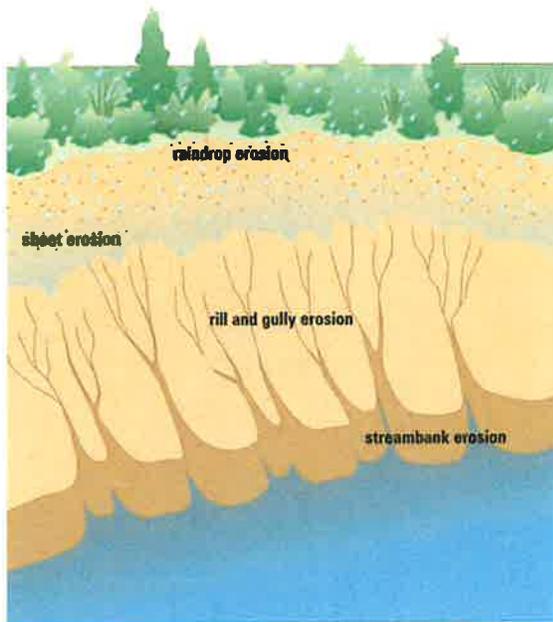


Figure 2. Typical erosion rates from land-based activities. (Dunne, T. and L. Leopold, 1978; NRCS, 2000; NRCS, 2006; ASCE and WEF, 1992)



**Figure 3. Types of erosion.**

**Raindrop erosion**

*Dislodging of soil particles by raindrops*

**Sheet erosion**

*The uniform removal of soil without the development of visible water channels*

**Rill erosion**

*Soil removal through the formation of concentrated runoff that creates many small channels*

**Gully erosion**

*The result of highly concentrated runoff that cuts down into the soil along the line of flow*

**Streambank erosion**

*Flowing water that erodes unstable streambanks*

**Climate.** The frequency, intensity, and duration of rainfall are the principal factors influencing erosion from a construction site. Know the weather patterns in your area and, if possible, plan your soil disturbance activities for periods of historically lower rainfall.

**Topography.** The longer and steeper a slope, the greater the potential there is for erosion from that slope. Use practices such as diversions or fiber rolls to break up long slopes. Consider minimizing soil disturbance activities on steeper slopes.

**Soils.** Soil type can also impact erosion. Soil texture, structure, organic matter content, compaction, and permeability can all influence erosion rates.

**Vegetative cover.** Vegetative cover provides a number of critical benefits in preventing erosion—it absorbs the energy of raindrops, slows velocity of runoff, increases infiltration, and helps bind the soil. Soil erosion can be greatly reduced by maximizing vegetative cover at a construction site.

### C. How Can Construction Site Operators Prevent Stormwater Pollution?

**An effective SWPPP is the key!** If sediment and erosion controls and good housekeeping practices are not followed, construction activity can result in the discharge of significant amounts of sediment and other pollutants. The term *Best Management Practices* or BMPs is often used to describe the controls and activities used to prevent stormwater pollution.

### SWPPP Tip!

#### Erosion versus Sedimentation

Erosion is the process by which the land surface is worn away by the action of water or wind.

Sedimentation is the movement and settling out of suspension of soil particles. It is usually easier and less expensive to prevent erosion than it is to control sediment from leaving a construction site.

BMPs can be divided into two categories—structural and non-structural BMPs. Structural BMPs include silt fences, sedimentation ponds, erosion control blankets, and temporary or permanent seeding, while non-structural BMPs include picking up trash and debris, sweeping up nearby sidewalks and streets, maintaining equipment, and training site staff on erosion and sediment control practices. In this document, the term “BMPs” is used broadly and includes both structural and non-structural controls and practices.

**A SWPPP is more than just a sediment and erosion control plan.** Most SWPPPs are written documents that describe the pollution prevention practices and activities that will be implemented on the site. It includes descriptions of the site and of each major phase of the planned activity, the roles and responsibilities of contractors and subcontractors, and the inspection schedules and logs. It is also a place to document changes and modifications to the construction plans and associated stormwater pollution prevention activities.

# Chapter 2: Getting Started

## A. What Are the Federal Requirements for Stormwater Runoff from Construction Sites?

The Clean Water Act and associated federal regulations (Title 40 of the *Code of Federal Regulations* [CFR] 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all construction site operators engaged in clearing, grading, and excavating activities that **disturb one acre or more, including smaller sites in a larger common plan of development or sale**, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges. Under the NPDES program, the U.S. Environmental Protection Agency (EPA) can authorize states to implement the federal requirements and issue stormwater permits. Today, most states are authorized to implement the NPDES program and issue their own permits for stormwater discharges associated with construction activities.

### SWPPP Tip!

#### **Don't forget about "common plans of development or sale"**

A *common plan of development or sale* includes larger-scale plans for land development to be carried out by one or more entities. Examples include housing developments and subdivisions, industrial parks, and commercial developments.

EPA has described this term in the fact sheet accompanying its Construction General Permit as including: any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.), or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot. Each permitting authority may review documentation to determine if common plan requirements apply.

Each state (or EPA, in the case of states that are not authorized) issues one or more NPDES construction general permits. These permits, generally, can be thought of as umbrella permits that cover all stormwater discharges associated with construction activity in a given state for a designated time period, usually 5 years. Operators of individual construction sites then apply for coverage under this permit. *Before applying for permit coverage, you should read and understand all the provisions of the appropriate construction general permit and develop a SWPPP.*

**Because authorized states develop their own NPDES requirements, you should carefully read your state's construction general permit and follow the specific instructions it contains.**

► This chapter describes some of the basic things you'll want to determine (Do you need permit coverage? What permit applies to you?), as well as some of the materials and information you may need to develop your SWPPP. Collecting this information before you start will help you develop your SWPPP more efficiently. Keep in mind that you may also need to gather this information and develop your SWPPP before you complete your Notice of Intent (NOI) and file for permit coverage (note that filing an NOI is not discussed until Chapter 7).

## Take a Closer Look...

### EPA Permits vs. State-Issued Permits

At the time of publication, EPA was the NPDES permitting authority in Massachusetts, New Hampshire, New Mexico, Idaho, Alaska, the District of Columbia, Puerto Rico, the U.S. territories (except the Virgin Islands), most Indian country lands, and for federal facilities in four states. For an up-to-date list of NPDES permitting authorities, visit [www.epa.gov/npdes/stormwater/construction](http://www.epa.gov/npdes/stormwater/construction) or [www.cicacenter.org/swrl.html](http://www.cicacenter.org/swrl.html)

### What does this mean to me?

*Because EPA and state-issued permits can be different, you should make sure you read and apply for the correct permit. Use the links on either of the web sites listed to the left to determine which agency issues NPDES permits where your construction activity will occur.*

Most construction general permits contain similar elements:

- **Applicability**—describes the geographic area covered and who is eligible to apply
- **Authorization**—describes the types of stormwater (and non-stormwater) discharges that are covered
- **SWPPP requirements**—outlines the elements that should be addressed to prevent the contamination of stormwater runoff leaving the construction site
- **Application**—includes instructions for obtaining permit coverage, usually by filing an application or Notice of Intent (NOI) form
- **Implementation**—BMP installation, inspection, and maintenance requirements
- **Other requirements**—may include additional requirements such as spill prevention
- **Standard conditions**—list of conditions that are applicable to most NPDES permits
- **Termination**—lists conditions for terminating permit coverage after construction is complete

### ***What Construction Activities Require NPDES Permit Coverage?***

In this document, “*construction*” refers to actions that result in a disturbance of the land, including clearing, grading, excavating, and other similar activities. It also includes “*construction-related activities*,” areas that support the construction project such as stockpiles, borrow areas, concrete truck washouts, fueling areas, material storage areas and equipment storage areas.

Construction activities that do not disturb land, such as interior remodeling, generally do not require NPDES permit coverage.

### ***Are There Situations Where a Permit Is Not Needed?***

Generally, permit coverage is not required for activities that are considered routine maintenance, such as landscaping, road maintenance, and maintaining stormwater BMPs. Some states and EPA offer the option of a waiver for small sites (disturbing less than 5 acres) in areas and times of the year with low predicted rainfall. To be eligible for the waiver, you would have to meet the requirements specified in the regulations.

## ***Local Requirements***

Operators of construction sites should keep in mind that local governments (cities, towns, counties) often have their own requirements for construction sites (e.g., local permits for grading, sediment and erosion, utilities).

**Compliance with local requirements does not mean compliance with federal NPDES requirements or vice versa, unless the authorized state agency or EPA has specifically designated the local program a *qualifying local program*.**

### ***Qualifying Local Programs***

In some states, the NPDES permitting agency has identified certain local construction stormwater control programs that have requirements that are equivalent or more protective than the state’s requirements. If one of these local stormwater programs has been designated by the permitting agency as a *qualifying local program*, the construction site operator may simply read and follow the local requirements. The permitting agency (state or EPA) might choose to waive the requirement to file a Notice of Intent (NOI) or similar application form for small construction sites operating within the jurisdiction of a qualifying local program. If waived, these sites would be covered under the appropriate construction general permit automatically. Check your construction general permit carefully.

The NPDES permitting authority must identify any qualifying local programs in the construction general permit. Violations of the local requirements are also considered violations of the NPDES requirements and may be enforced accordingly.

### ***SWPPP Tip!***

#### ***Read Your General Permit!***

You should thoroughly read and understand the requirements in your general permit. This includes requirements on eligibility (whether your site qualifies for the general permit), application (how to notify EPA or the state that you’d like to be covered by the general permit), SWPPPs, and termination (stabilizing your site and notifying EPA or the state that your project is complete). By applying for coverage under the general permit, you are telling EPA or your state that you will comply with the permit’s requirements, so read your permit carefully!

## B. Who Is Required to Get NPDES Permit Coverage?

Construction site *operators* are responsible for obtaining NPDES permit coverage for their stormwater discharges. Each state has its own definition of the term *operator*. Operators may include owners (e.g., developers), general contractors, independent subcontractors, government officials, companies, or corporations. This section reflects EPA's understanding of most NPDES permit requirements for stormwater discharges throughout the country. You should, of course, consult your construction general permit for the requirements that apply to you. In some cases, states have defined the operator as a single entity, usually the land owner or easement holder. In other states, several entities may meet the definition of operator. For instance, the owner may control the project's plans and specifications, and the general contractor may control the site's day-to-day operations. In such cases, both may be defined as operators. If a site has multiple operators, they may cooperate on the development and implementation of a single SWPPP. Operators generally obtain coverage under an NPDES permit, often by filing a form called a Notice of Intent (NOI).



Figure 4. Use signage to help educate construction staff.

EPA's Construction General Permit (which applies only where EPA is the permitting authority—see Chapter 2 Section A) defines operator as any party that:

- Has control over the construction plans and specifications and/or
- Has day-to-day operational control of the site, including activities necessary to implement the SWPPP

Regardless of whether or not the operator is a corporation or governmental entity, someone must direct the SWPPP's preparation and implementation and apply for NPDES permit coverage for the stormwater discharges. In most cases, this will be a high-level official, such as a corporate officer, manager or elected official, or a principal executive officer. For specific instructions, refer to the appropriate NPDES stormwater permit.

### Multiple Operators

In many instances, there may be more than one party at a site performing tasks related to *operational control* and more than one operator may need to submit an NOI. Depending on the site and the relationship between the parties (e.g., owner, developer, general contractor), there can either be a single party acting as site operator and consequently responsible for obtaining permit coverage, or there can be two or more operators all needing permit coverage. Exactly who is considered an operator is largely controlled by how the *owner* of the project chooses to structure the contracts with the *contractors* hired to design and/or build the project. The following are three general operator scenarios (variations on any of these three are possible, especially as the number of owners and contractors increases):

- *Owner as sole permittee.* The property owner designs the structures for the site, develops and implements the SWPPP, and serves as general contractor (or has an on-site representative with full authority to direct day-to-day operations). The owner may be the only party that needs permit coverage under these circumstances. Everyone else on the site may be considered subcontractors and might not need permit coverage.

- *Contractor as sole permittee.* The property owner hires one company (i.e., a contractor) to design the project and oversee all aspects of the construction project, including preparation and implementation of the SWPPP and compliance with the permit (e.g., a *turnkey* project). Here, the contractor would likely be the only party needing a permit. It is under this scenario that an individual having a personal residence built for his own use (e.g., not those to be sold for profit or used as rental property) would not be considered an operator. However, individual property owners would meet the definition of *operator* and may require permit coverage if they perform general contracting duties for construction of their personal residences.
- *Owner and contractor as co-permittees.* The owner retains control over any changes to site plans, SWPPPs, or stormwater conveyance or control designs; but the contractor is responsible for overseeing actual earth disturbing activities and daily implementation of SWPPP and other permit conditions. In this case, which is the most common scenario, both parties may need to apply for permit coverage.

However, you are probably not an operator and subsequently would not need permit coverage if one of the following is true:

- You are a subcontractor hired by, and under the supervision of, the owner or a general contractor (i.e., if the contractor directs your activities on-site, you probably are not an operator)
- The operator of the site has indicated in the SWPPP that someone other than you (or your subcontractor) is responsible for your activities as they relate to stormwater quality (i.e., another operator has assumed responsibility for the impacts of your

construction activities). This is typically the case for many, if not most, utility service line installations.

In addition, *owner* typically refers to the party that owns the structure being built. Ownership of the land where construction is occurring does not necessarily imply the property owner is an operator (e.g., a landowner whose property is being disturbed by construction of a gas pipeline). Likewise, if the erection of a structure has been contracted for, but possession of the title or lease to the land or structure does not occur until after construction, the would-be owner may not be considered an operator (e.g., having a house built by a residential homebuilder).

### **Transferring Ownership**

In many residential developments, an overall developer applies for the stormwater permit coverage, conducts grading activities, and installs the basic infrastructure (e.g., utilities, roads). Individual lots are then sold to builders who then construct the houses. Unless the developer is still responsible for stormwater on these individual lots (which is typically not the case), it is likely that the builder will need to apply for NPDES permit coverage for stormwater discharges during home construction.

### **Subcontractors**

It is typically a good idea to include specific contract language requiring subcontractors to implement appropriate stormwater controls. Subcontractors should be trained on appropriate BMPs and requirements in the SWPPP and should not disturb or remove BMPs. Some contractors will include specific penalties in subcontractor agreements to ensure subcontractors do not damage or remove BMPs.

## **Take a Closer Look...**

### **Erosion Control vs. Sediment Control**

When developing a SWPPP, it is important to understand the difference between erosion control and sediment control. Erosion control measures (e.g., mulch, blankets, mats, vegetative cover) protect the soil surface and prevent soil particles from being dislodged and carried away by wind or water. Sediment control measures remove soil particles after they have been dislodged (typically through settling or filtration). It is usually easier and less expensive to prevent erosion than it is to control sedimentation.

### **What does this mean to me?**

You should try to use erosion control BMPs as the primary means of preventing stormwater contamination, and sediment control techniques to capture any soil that does get eroded. Because no one technique is 100 percent effective, a good SWPPP will use both kinds of BMPs in combination for the best results.

## C. What Elements Are Required in a SWPPP?

The SWPPP lays out the steps and techniques you will use to reduce pollutants in stormwater runoff leaving your construction site. Therefore, proper development and implementation of your SWPPP is crucial. First and foremost, your SWPPP must be developed and implemented consistent with the requirements of the applicable NPDES stormwater construction permit. The following discussion describes requirements that are contained in most of these permits.

Your SWPPP is used to identify all potential pollution sources that could come into contact with stormwater leaving your site. It describes the BMPs you will use to reduce pollutants in your construction site's stormwater discharges, and it includes written records of your site inspections and the follow-up maintenance that is performed.

Your SWPPP should contain the following elements:

- Cover/title page
- Project and SWPPP contact information
- Site and activity description, including a site map
- Identification of potential pollutant sources
- Description of controls to reduce pollutants
- Maintenance/inspection procedures
- Records of inspections and follow-up maintenance of BMPs
- SWPPP amendments
- SWPPP certification

Chapters 3–6 of this guide describe how to develop a SWPPP—from site evaluation and data collection to selecting appropriate BMPs and assigning maintenance and inspection responsibilities.

## D. SWPPP Roles and Responsibilities

The operator has the lead for developing and implementing the SWPPP and committing resources to implement the BMPs. Stormwater pollution control is typically the job of more than a single person; the SWPPP development process provides a good opportunity to define roles and responsibilities of everyone involved. Roles and responsibilities are to be documented clearly in the SWPPP and subcontractor agreements as necessary. Your SWPPP should describe:

- Who is on the stormwater pollution prevention team?
- Who will install structural stormwater controls?
- Who will supervise and implement good housekeeping programs, such as site cleanup and disposal of trash and debris, hazardous material management and disposal, vehicle and equipment maintenance, and so on?
- Who will conduct routine inspections of the site to ensure all BMPs are being implemented and maintained?
- Who will maintain the BMPs?
- Who is responsible for documenting changes to the SWPPP?
- Who is responsible for communicating changes in the SWPPP to people working on the site?

When you apply for your stormwater permit, the application may ask for a SWPPP contact. This could be the construction site operator, but in many cases it's a staff person (e.g., project superintendent, field manager, construction manager, stormwater compliance officer) at the construction site who is responsible for conducting inspections, ensuring BMPs are installed and maintained, and updating the SWPPP when necessary.

### **SWPPP Tip!**

#### ***Erosion Control Certification***

Several programs promote the training and certification of individuals in erosion and sediment control. Some states have developed certification programs and require construction sites to have a certified individual on-site at all times. The Soil and Water Conservation Society and the International Erosion Control Association sponsor a national certification program, the Certified Professional in Erosion and Sediment Control ([www.cpesc.org](http://www.cpesc.org))

## E. Common SWPPP Objectives

The SWPPP outlines the steps you will take to comply with the terms and conditions of your construction general permit. Keeping the following objectives in mind as you develop your SWPPP will help guide you in addressing your permit requirements and in protecting water quality.

- *Stabilize the site as soon as possible.* Get your site to final grade and either permanently or temporarily stabilize all bare soil areas as soon as possible. Take into consideration germination times for the grasses or other vegetation selected, and provide additional stabilization (mulches, matrices, blankets, soil binders) on erosion-prone areas such as slopes and drainage ways. Also consider seasonal limitations to plant establishment and growth, such as drought or cold temperatures, and make an effort to ensure that areas that are not showing adequate vegetation establishment are reseeded or mulched immediately. Areas needed for future roads, construction, or other purposes should be temporarily stabilized (see your permit for requirements related to areas of the site not currently under active construction). Establishing a vegetated cover on as much of the site as possible will help to minimize erosion and sediment problems. Perimeter controls should remain in place until final stabilization has been achieved.
- *Protect slopes and channels.* Convey concentrated stormwater runoff around the top of slopes and stabilize slopes as soon as possible. This can be accomplished using pipe slope drains or earthen berms that will convey runoff around the exposed slope. Avoid disturbing natural channels and the vegetation along natural channels, if possible.
- *Reduce impervious surfaces and promote infiltration.* Reducing impervious surfaces will ultimately reduce the amount of runoff leaving your site. Also, divert runoff from rooftops and other impervious surfaces to vegetated areas when possible to promote infiltration.
- *Control the perimeter of your site.* Divert stormwater coming on to your site by conveying it safely around, through, or under your site. Avoid allowing run-on to contact disturbed areas of the construction site. For the runoff from the disturbed areas of the site, install BMPs such as silt fences to capture sediment before it leaves your site. Remember—“Divert the clean water, trap the dirty water.”
- *Protect receiving waters adjacent to your site.* Erosion and sediment controls are used around the entire site, but operators should consider additional controls on areas that are adjacent to receiving waters or other environmentally sensitive areas. **Remember, the primary purpose of erosion and sediment controls is to protect surface waters.**
- *Follow pollution prevention measures.* Provide proper containers for waste and garbage at your site. Store hazardous materials and chemicals so that they are not exposed to stormwater.
- *Minimize the area and duration of exposed soils.* Clearing only land that will be under construction in the near future, a practice known as construction phasing, can reduce off-site sediment loads by 36 percent for a typical subdivision (Claytor 2000). Additionally, minimizing the duration of soil exposure by stabilizing soils quickly can reduce erosion dramatically.

### Take a Closer Look...

#### Incentives to preserve open space

It should be the goal of every construction project to, where possible, preserve open space and minimize impervious surfaces through practices such as clustering houses.

Open space preservation can provide significant water quality and economic benefits to property owners.

#### What does this mean to me?

From a marketing perspective, studies have shown that lots abutting forested or other open space are initially valued higher than lots with no adjacent open space, and over time their value appreciates more than lots in conventional subdivisions (Arendt 1996). For example, lots in an open space subdivision in Amherst, Massachusetts, experienced a 13 percent greater appreciation in value over a comparable conventional development after 20 years even though the lots in the conventional development were twice as large (Arendt 1996).

# Chapter 3: SWPPP Development—Site Assessment and Planning

This chapter describes a number of steps that will help provide a good foundation for your SWPPP, including:

- Assessing current conditions at the site
- Establishing pollution prevention and water quality protection goals for your project
- Developing a framework to help you meet those goals

► The first step in developing a SWPPP is assessing the site and identifying measures to protect natural features.

## A. Assess Your Site and Proposed Project

The first step in developing your SWPPP is to evaluate your proposed construction site. Your SWPPP should describe the undeveloped site and identify features of the land that can be incorporated into the final plan and natural resources that should be protected. Understanding the hydrologic and other natural features of your site will help you develop a better SWPPP and, ultimately, to more effectively prevent stormwater pollution.

### *Visit the Site*

The people responsible for site design and drafting the SWPPP should conduct a thorough walk-through of the entire construction site to assess site-specific conditions such as soil types, drainage patterns, existing vegetation, and topography. Avoid copying SWPPPs from other projects to save time or money. Each construction project and SWPPP is unique, and visiting the site is the only way to create a SWPPP that addresses the unique conditions at that site.

### *Assess Existing Construction Site Conditions*

Assess the existing conditions at the construction site, including topography, drainage, and soil type. This assessment, sometimes called *fingerprinting* (see text box on page 11) is the foundation for building your SWPPP and for developing your final site plan. In this assessment, use or create a topographic drawing that:

- Indicates how stormwater currently drains from the site, and identify the location of discharge points or areas
- Identifies slopes and slope lengths. The topographic features of the site are a major factor affecting erosion from the site
- Identifies soil type(s) and any highly erodible soils and the soil's infiltration capacity
- Identifies any past soil contamination at the site
- Identifies natural features, including trees, streams, wetlands, slopes and other features to be protected

### **SWPPP Tip!**

**A SWPPP is a detailed plan that:**

- Identifies potential sources of stormwater pollution
- Describes the practices that will be used to prevent stormwater pollution. These should include: erosion and sediment control practices, good housekeeping practices, conservation techniques, and infiltration practices (where appropriate), and
- Identifies procedures the operator will implement to comply with all requirements in the construction general permit

## Take a Closer Look...

### Fingerprinting Your Site

When you evaluate your construction site, you should clearly identify vegetation, trees, and sensitive areas, such as stream buffers, wetlands, highly erodible soils, and steep slopes at your site. You should protect these areas from disturbance. Inventorying a site's natural features is a technique called fingerprinting. Fingerprinting identifies natural features that you can protect from clearing and heavy equipment by signage or physical barriers.

### What does this mean to me?

Fingerprinting your site will help ensure that you don't damage natural features such as waterways or wetlands. Conducting construction activity in a waterway or wetland without the proper permits can result in significant penalties.

In most cases, the site designer can compile all this information on a digitized drawing that can then be adapted to show the planned construction activity, the phases of construction, and the final site plan.

Topographic maps are readily available on the Internet (e.g., [www.terraserver.com](http://www.terraserver.com) or [www.mapquest.com](http://www.mapquest.com)) or by contacting the U.S. Geological Survey store (<http://store.usgs.gov>). If you need help determining your soil type, contact your local Natural Resource Conservation Service (NRCS) office or extension service office. To find the NRCS office nearest to your site, visit the U.S. Department of Agriculture's Service Center Locator website (<http://offices.sc.egov.usda.gov/locator/app>). Soil information is also available online from NRCS (<http://soils.usda.gov>).

### Identify Receiving Waters, Storm Drains, and Other Stormwater Conveyance Systems

Your SWPPP should clearly identify the receiving waters and stormwater systems through which stormwater from your site could flow. Many states require planning for a specific storm event or storm events. These storm events are referred to by their recurrence interval and duration such as 1-year, 6-hour storm or a 100-year, 24-hour storm. These events then translate into a specific rainfall amount depending on average conditions in your area.

If your site's stormwater flows into a municipal storm drain system, you should determine the ultimate destination of that system's discharge. This may be obvious and easy to document. However, in some systems, you may have to consult with the local agency

responsible for the storm drain system to determine the waterbody to which you are discharging.

If your site's stormwater runs off to areas not connected to the storm drain system, you should consider your land's topography and then identify the waterbodies that it could reach. Many sites will discharge some stormwater to a storm drain system and some to other areas not connected to the system. If your site's stormwater could potentially reach two or more waterbodies, note that in your SWPPP. Remember, stormwater can travel long distances over roads, parking lots, down slopes, across fields, and through storm sewers and drainage ditches.

### Describe Your Construction Project

Your SWPPP should contain a brief description of the construction activity, including:

- Project type or function (for example, low-density residential, shopping mall, highway)
- Project location, including latitude and longitude
- Estimated project start and end dates
- Sequence and timing of activities that will disturb soils at the site
- Size of the project
- Estimated total area expected to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas
- Percentage of impervious area before and after construction

Construction Site Pollutants								
Areas of Consideration	Primary Pollutant	Other Pollutants						
		Nutrients	Heavy metals	pH (acids & bases)	Pesticides & herbicides	Oil & grease	Bacteria & viruses	Trash, debris, solids
Clearing, grading, excavating, and unstabilized areas	✓							✓
Paving operations	✓							✓
Concrete washout and waste			✓	✓				✓
Structure construction/painting/cleaning		✓		✓				✓
Demolition and debris disposal	✓							✓
Dewatering operations	✓	✓						
Drilling and blasting operations	✓			✓				✓
Material delivery and storage	✓	✓	✓	✓	✓	✓		✓
Material use during building process		✓	✓	✓	✓	✓		✓
Solid waste (trash and debris)								✓
Hazardous waste			✓	✓	✓	✓		✓
Contaminated spills		✓	✓	✓	✓	✓		✓
Sanitary/septic waste		✓		✓			✓	✓
Vehicle/equipment fueling and maintenance						✓		✓
Vehicle/equipment use and storage						✓		✓
Landscaping operations	✓	✓						✓

- Runoff coefficient<sup>1</sup> before and after construction
- Soil types
- Construction site location and any nearby waters or wetlands
- Describe and identify the location of other potential sources of stormwater contamination, such as asphalt and concrete plants, stucco operations, paint and concrete washout, and such

### Identify Pollutants and Pollution Sources

Identify the pollutants and sources that are likely to be found on the site. The principle pollutant of concern, of course, is sediment. There are, however, other pollutants that may be found, usually in substantially smaller amounts, in stormwater runoff from construction sites. These can include nutrients, heavy metals, organic compounds, pesticides, oil and grease, bacteria and viruses, trash and debris, and other chemicals. After identifying the pollutants and sources, be as specific as possible in your SWPPP about the BMPs you will use to address them. The table at the left lists the sources of pollutants at construction sites, including sediment, the primary pollutant and other pollutants that may be present at construction sites.



Figure 5. Make sure storm drain inlets are protected.

<sup>1</sup> The runoff coefficient is the partial amount of the total rainfall which will become runoff. Runoff coefficients generally range from 0.95 (highly impervious) to 0.05 (vegetated surface that generates little runoff). For more information on calculating the runoff coefficient for your site, see Appendix C.

## **Non-Stormwater Discharges**

Most permits will require you to identify any non-stormwater discharges in your SWPPP. Certain non-stormwater discharges may be allowed under the terms and conditions of your permit, however, you should make every effort to eliminate these discharges where possible. You should identify these sources in your SWPPP and identify pollution prevention measures to ensure that pollutants are not introduced to these discharges and carried to nearby waterbodies.

EPA's CGP identifies these allowable non-stormwater discharges: discharges from fire-fighting activities, fire hydrant flushings, waters used to wash vehicles, buildings, and pavements where detergents are not used, water used to control dust, potable water (including uncontaminated water line flushings), uncontaminated air conditioning condensate, uncontaminated ground water or spring water, among others. The permit goes on to say that non-stormwater discharges should be eliminated or reduced to the extent feasible and that the SWPPP should identify and ensure the implementation of appropriate pollution prevention measures for these discharges. More discussion of pollution prevention measures for some of these non-stormwater sources can be found in Chapter 5.

## **Permanent Stormwater Controls (Post-Construction)**

The topic of designing, installing, and maintaining permanent or post-construction stormwater controls, although a requirement, is beyond the scope of this SWPPP guide. A SWPPP compiled in support of coverage under

EPA's Construction General Permit, however, needs to include a description of all permanent stormwater controls that will be constructed along with the buildings, roads, parking lots, and other structures. You should incorporate sediment and erosion controls into your SWPPP for areas where permanent stormwater controls, such as wet ponds, swales, and bioretention cells are to be constructed.

Effectively managing stormwater over the long-term—long after the actual construction process is over—is a significant challenge. Many communities (and a few states) have or are developing comprehensive requirements to better manage permanent (or post-construction) stormwater runoff. To be most effective, you should consider integrating your design process for your permanent stormwater controls into your overall design for your site. Planning for your permanent stormwater controls could affect your decisions about site design, location of buildings and other structures, grading, and preserving natural features. By preserving natural drainage patterns, trees, native vegetation, riparian buffers, and wetlands, you might need to construct fewer or smaller structural stormwater controls to cope with runoff from your site. Permanent stormwater controls should be designed with two important goals in mind: (1) reduction of the volume and velocity of runoff, and (2) reduction of the pollutants in the stormwater that does leave your site.

Techniques, such as *Low Impact Development*, *Better Site Design*, or *Conservation Development*, which emphasize addressing stormwater where it falls, infiltrating it, preserving natural drainage patterns, and

## **Take a Closer Look...**

### **Specimen Trees and Natural Vegetation**

Before a site plan is prepared, identify and clearly mark existing trees and vegetation you want to preserve. Some communities have tree preservation ordinances, and local extension service offices and foresters will often provide free advice on tree and plant preservation. Remember to notify all employees and subcontractors about trees and areas you intend to preserve and mark them clearly.

### **What does this mean to me?**

*Large trees and other native vegetation can represent significant value in the long term to property owners and the community at large. Many studies document that the presence of trees on residential and commercial sites provide many benefits including improved aesthetics, habitat for birds and other wildlife, and energy savings (shade) that ultimately enhance the economic value of the site. Trees also provide shade and act as windbreaks, which can reduce energy costs over the long term. By protecting existing trees, you can reduce landscaping costs and improve the appearance of a newly developed property. According to the National Arbor Day Foundation, trees around a home can increase its value by 15 percent or more.*

preserving natural vegetation offer the best opportunity to protect nearby rivers, lakes, wetlands, and coastal waters. **Incorporating these ideas and concepts into the design for your project before it is built also offers the opportunity to reduce capital infrastructure and long-term maintenance costs.**

At the neighborhood or even at the watershed scale, *Smart Growth* techniques can help us design neighborhoods that minimize impacts on water quality, reduce air pollution, and improve the general quality of life for residents. **In the Resources list in Appendix D, you will find a list of suggestions on this topic, including how to incorporate Smart Growth and Low Impact Development techniques into the design of your site.**

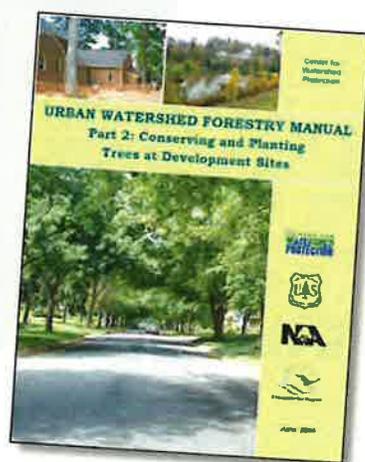
## B. Identify Approaches to Protect Natural Resources

Preservation of natural areas, waterbodies, and open space has numerous economic, aesthetic, community, and environmental benefits. Preservation efforts also often increase the value of lots and homes and help to reduce overall expenditures on infrastructure. Specifically, these kinds of conservation efforts can help to significantly reduce the volume and velocity of stormwater runoff and the pollutants that may be carried with it.

### SWPPP Tip!

#### Tree Preservation Resources

For more on tree preservation, contact your local extension service office or forester. Also, American Forests has useful information and tools at their website, [www.americanforests.org/resources/urbanforests](http://www.americanforests.org/resources/urbanforests). The Center for Watershed Protection in cooperation with the U.S. Forest Service has developed a series of manuals on urban forestry. Part two, titled *Conserving and Planting Trees at Development Sites* will be of particular interest. You can find these manuals at [www.cwp.org](http://www.cwp.org)



## Protect Nearby Waters

Your SWPPP should describe how you will protect and preserve any streams, wetlands, ponds or other waterbodies that are on your property or immediately adjoining it. Riparian areas around headwater streams are especially important to the overall health of the entire river system. Many states and communities have buffer or shoreline protection requirements to preserve sensitive areas around waterbodies.

Many states apply special designations to high-value or high-quality waters. Check with your state water pollution control agency to determine if your project could discharge to *outstanding* or special protection waters (such as wetlands, or salmon and trout streams). You might be subject to additional requirements to protect these waterbodies.

Wetland areas, including bogs, marshes, swamps, and prairie potholes may be found in areas adjacent to rivers, lakes, and coastal waters but may also be found in isolated places far from other surface waters. Many types of wetlands are protected under the Clean Water Act and construction activities in and around these areas may require an additional permit from the Army Corps of Engineers. Construction site operators should make every effort to preserve wetlands and must follow applicable local, state, and federal requirements before disturbing them or the areas around them.

To ensure the protection of natural areas during the construction period, you should use a combination of techniques, including temporary fencing, signage, and educating staff and subcontractors.

## Assess Whether Your Project Impacts an Impaired Waterbody

Under the Clean Water Act, states are required to determine if rivers, lakes, and other waters are meeting water quality standards. When a waterbody does not meet water quality standards because of one or more sources of pollution, the state lists the water as impaired. When a water is determined to be impaired, the state or EPA develops a plan for correcting the situation. This plan is called a Total Maximum Daily Load (TMDL). If stormwater from your project could reach an impaired water with or without an approved TMDL (either directly or indirectly through a municipal storm drain system), your permit

may include additional requirements to ensure that your stormwater discharges do not contribute to that impairment and your stormwater controls are consistent with plans to restore that waterbody. Your SWPPP should describe the specific actions you will take to comply with these permit requirements for impaired waters.

You should determine, before you file for permit coverage, if the receiving waters for your project are impaired and if so, whether a TMDL has been developed for this waterbody. Visit EPA's Enviromapper website ([www.epa.gov/waters/enviromapper](http://www.epa.gov/waters/enviromapper)) or contact your state environmental agency for more information.

### ***Assess Whether You Have Endangered Plant or Animal Species in Your Area***

**The federal Endangered Species Act protects endangered and threatened species and their critical habitat areas.** (States and tribes may have their own endangered species laws.) In developing the assessment of your site, you should determine whether listed endangered species are on or near your property. Critical habitat areas are often designated to support the continued existence of listed species. You should also determine whether critical habitat areas have been designated in the vicinity of your project. Contact your local offices of the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), or your state or tribal heritage centers. These organizations often maintain lists of federal and state listed endangered and threatened species on their Internet sites. For more information and to locate lists for your state, visit [www.epa.gov/npdes/endangeredspecies](http://www.epa.gov/npdes/endangeredspecies)

Additionally, your state's NPDES stormwater permit may specifically require that you address whether the activities and the stormwater discharged by your construction site have the potential to adversely affect threatened or endangered species or the critical habitat areas. You might need to conduct a biological investigation or assessment and document the results of the assessment in your SWPPP. The state may reference federal, state, or tribal endangered species protection laws or regulations.

EPA's Construction General Permit contains detailed procedures to assist construction site operators in determining the likely impact of

their projects on any endangered species or critical habitat. Construction site operators in areas covered by EPA's Construction General Permit are required to assess the impact of their activities and associated stormwater discharges on species and habitat in the "project area" which may extend beyond the site's immediate footprint.

### ***Assess Whether You Have Historic Sites that Require Protection***

The National Historic Preservation Act, and any state, local and tribal historic preservation laws, apply to construction activities. As with endangered species, some permits may specifically require you to assess the potential impact of your stormwater discharges on historic properties. However, whether or not this is stated as a condition for permit coverage, the National Historic Preservation Act and any applicable state or tribal laws apply to you. Contact your State Historic Preservation Officer ([www.ncshpo.org/stateinfo/olist/fulllist.htm](http://www.ncshpo.org/stateinfo/olist/fulllist.htm)) or your Tribal Historic Preservation Officer ([grants.cr.nps.gov/thpo/tribaloffices.cfm](http://grants.cr.nps.gov/thpo/tribaloffices.cfm)).

## **C. Develop Site Maps**

The final step in the site evaluation process is to document the results of your site assessment and your planned phases of construction activity on a detailed site map or maps. This includes developing site maps showing planned construction activities and stormwater practices for the various major stages of construction, protected areas, natural features, slopes, erodible soils, nearby waterbodies, permanent stormwater controls, and so on. You must keep your SWPPP and your site maps up-to-date to reflect changes at your site during the construction process.

### ***Location Maps***

A general location map is helpful to identify nearby, but not adjacent, waterbodies in proximity to other properties. You can use any easily available maps or mapping software to create a location map.

### ***Site Maps***

The detailed construction site maps should show the entire site and identify a number of features at the site related to construction activities and stormwater management practices.



Figure 6. Example site map.

**Map of undeveloped or existing site.** For many sites, a map of the undeveloped or existing site, noting the features that you identified in Section A of this Chapter, will help you develop your SWPPP and identify current site features that you want to preserve. On this map note current drainage patterns, storm drains, slopes, soil types, waters and other natural features. Also note any existing structures, roads, utilities, and other features.

**Map or series of maps for construction plans.** Site maps should show the construction activities and stormwater management practices for each major phase of construction (e.g., initial grading, infrastructure, construction, and stabilization). The site maps should legibly identify the following features:

- Stormwater flow and discharges. Indicate flow direction(s) and approximate slopes after grading activities, as well as locations of discharges to surface waters or municipal storm drain systems.
- Areas and features to be protected. Include wetlands, nearby streams, rivers, lakes, and coastal waters, mature trees and natural vegetation, steep slopes, highly erodible soils, etc.
- Disturbed areas. Indicate locations and timing of soil disturbing activities (e.g. grading). Mark clearing limits.
- BMPs. Identify locations of structural and non-structural BMPs identified in

the SWPPP, as well as post-construction stormwater BMPs.

- Areas of stabilization. Identify locations where stabilization practices are expected to occur. Mark areas where final stabilization has been accomplished.
- Other areas and roads. Indicate locations of material, waste, borrow, or equipment storage.

You should complete your site maps after reviewing Chapters 4 and 5 and any applicable BMP design manual to select appropriate BMPs for your site.

### Use Site Maps to Track Progress

Develop and keep up-to-date site maps showing non-structural BMPs that change frequently in location as the work on a construction site progresses. Your permit requires that you keep your SWPPP up-to-date, so mark up the site map with the location of these BMPs. Indicate the current location of the following:

- Portable toilets
- Material storage areas
- Vehicle and equipment fueling and maintenance areas
- Concrete washouts
- Paint and stucco washouts
- Dumpsters or other trash and debris containers
- Spill kits
- Stockpiles
- Any other non-structural non-stormwater management BMPs
- Any temporarily removed structural BMPs
- Any changes to the structural BMPs

If a marked-up site map is too full to be easily read, you should date and fold it, put it in the SWPPP for documentation, and start a new one. That way, there is a good hard copy record of what has occurred on-site.

Construction sites are dynamic. As conditions change at the construction site, such as the locations of BMPs, your SWPPP must reflect those changes.

# Chapter 4: SWPPP Development—Selecting Erosion and Sediment Control BMPs

► This chapter presents a brief discussion of erosion and sediment control principles and a discussion of some commonly used BMPs.

This document is not intended as an engineering or design manual on BMPs. The engineer or other qualified person that develops the details of your sediment and erosion control plan should be using the appropriate state or local specifications. The descriptions below provide a kind of checklist of the things to look for and some helpful installation and maintenance hints.

Erosion and sediment controls are the structural and non-structural practices used during the construction process to keep sediment in place (erosion control) and to capture any sediment that is moved by stormwater before it leaves the site (sediment control). Erosion controls—keeping soil where it is—are the heart of any effective SWPPP. Your SWPPP should rely on erosion controls as the primary means of preventing stormwater pollution. Sediment controls provide a necessary second line of defense to properly designed and installed erosion controls.

The suite of BMPs that you include in your SWPPP should reflect the specific conditions at the site. The information that you collected in the previous steps should help you select the appropriate BMPs for your site. An effective SWPPP includes a combination or suite of BMPs that are designed to work together.

## Ten Keys to Effective Erosion and Sediment Control (ESC)

The ultimate goal of any SWPPP is to protect rivers, lakes, wetlands, and coastal waters that could be affected by your construction project. The following principles and tips should help you build an effective SWPPP. **Keep in mind that there are many BMP options available to you. We have selected a few common BMPs to help illustrate the principles discussed in this chapter.**

### *Erosion Control (keeping the dirt in place) and Minimizing the Impact of Construction*

1. Minimize disturbed area and protect natural features and soil
2. Phase construction activity
3. Control stormwater flowing onto and through the project
4. Stabilize soils promptly
5. Protect slopes

### *Sediment Controls (the second line of defense)*

6. Protect storm drain inlets
7. Establish perimeter controls
8. Retain sediment on-site and control dewatering practices
9. Establish stabilized construction exits
10. Inspect and maintain controls

## Take a Closer Look...

### BMPs in Combination

BMPs work much better when they are used in combination. For instance, a silt fence should not be used alone to address a bare slope. An erosion control BMP should be used to stabilize the slope, and the silt fence should serve as the backup BMP.

### What does this mean to me?

Wherever possible, rely on erosion controls to keep sediment in place. Back up those erosion controls with sediment controls to ensure that sediment doesn't leave your site. Continually evaluate your BMPs. Are they performing well? Could the addition of a supplemental BMP improve performance? Should you replace a BMP with another one that might work better? Using BMPs in series also gives you some protection in case one BMP should fail.

## Erosion Control and Minimizing the Impact of Construction

**ESC Principle 1: Minimize disturbed area and protect natural features and soil.** As you put together your SWPPP, carefully consider the natural features of the site that you assessed in Chapter 3. By carefully delineating and controlling the area that will be disturbed by grading or construction activities, you can greatly reduce the potential for soil erosion and stormwater pollution problems. Limit disturbed areas to only those necessary for the construction of your project. Natural vegetation is your best and cheapest erosion control BMP.

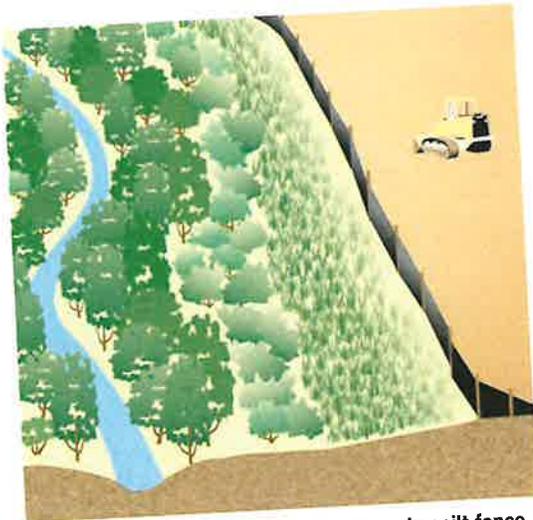


Figure 7. Protect vegetated buffers by using silt fence or other sediment controls.

Protecting and preserving topsoil is also a good BMP. Removing topsoil exposes underlying layers that are often more prone to erosion and have less infiltration capacity. Keeping topsoil in place preserves the natural structure of the soils and aids the infiltration of stormwater.

**ESC Principle 2: Phase construction activity.** Another technique for minimizing the duration of exposed soil is phasing. By scheduling or sequencing your construction work and concentrating it in certain areas, you can minimize the amount of soil that is exposed to the elements at any given time. Limiting the area of disturbance to places where construction activities are underway and stabilizing them as quickly as possible can be one of your most effective BMPs.

**ESC Principle 3: Control stormwater flowing onto and through your project.** Plan for any potential stormwater flows coming onto the project area from upstream locations, and divert (and slow) flows to prevent erosion. Likewise, the volume and velocity of on-site stormwater runoff should be controlled to minimize soil erosion.

**Example BMP: Diversion Ditches or Berms**  
**Description:** Diversion ditches or berms direct runoff away from unprotected slopes and may also direct sediment-laden runoff to a sediment-trapping structure. A diversion ditch can be located at the upslope side of a construction site to prevent surface runoff from entering the disturbed area. Ditches or berms on slopes need to be designed for erosive velocities. Also, ensure that the diverted water is released through a stable outlet and does not cause downslope or downstream erosion or flooding.

### Installation Tips:

- Divert run-on and runoff away from disturbed areas
- Ensure that the diversion is protected from erosion, using vegetation, geotextiles, or other appropriate BMPs
- Divert sediment-laden water to a sediment-trapping structure
- Use practices that encourage infiltration of stormwater runoff wherever possible

### Maintenance:

- Inspect diversions and berms, including any outlets, regularly and after each rainfall
- Remove any accumulated sediment

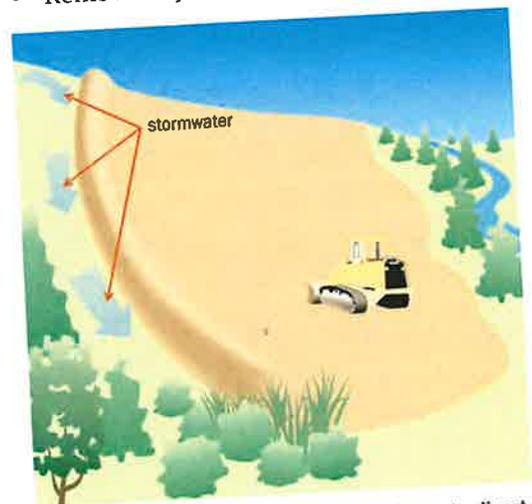


Figure 8. Illustration of a construction berm to divert stormwater away from the disturbed construction area.

#### **ESC Principle 4: Stabilize soils promptly.**

Where construction activities have temporarily or permanently ceased, you should stabilize exposed soils to minimize erosion. You should have stabilization measures in place after grading activities have ceased (many permits require stabilization within a specified time frame). You can provide either temporary or permanent cover to protect exposed soils. Temporary measures are necessary when an area of a site is disturbed but where activities in that area are not completed or until permanent BMPs are established. Topsoil stockpiles should also be protected to minimize any erosion from these areas. Temporary-cover BMPs include temporary seeding, mulches, matrices, blankets and mats, and the use of soil binders (there may be additional state and local requirements for the use of chemical-based soil binders). Permanent-cover BMPs include permanent seeding and planting, sodding, channel stabilization, and vegetative buffer strips. Silt fence and other sediment control measures are not stabilization measures.

#### **SWPPP Tip!**

##### **Final Stabilization**

Once construction activity in an area is completed and the area is stabilized (typically by achieving 70 percent permanent vegetative cover), you can mark this area on your SWPPP and discontinue inspections in that area. By bringing areas of your site to final stabilization, you can reduce your workload associated with maintaining and inspecting BMPs. For more information on final stabilization, see Chapter 9.

##### **Example BMP: Temporary Seeding**

*Description:* Temporarily seeding an area to establish vegetative cover is one of the most effective, and least expensive, methods of reducing erosion. This approach, as a single BMP, might not be appropriate on steep slopes, when vegetation cannot be established quickly enough to control erosion during a storm event, or when additional activities might occur soon in the area.

##### **Installation Tips:**

- Seed and mulch area (the mulch provides temporary erosion protection by protecting the soil surface, moderating temperature, and retaining moisture while seeds germinate and grow)

- Water regularly, if needed, to ensure quick growth
- Maintain backup BMPs, such as silt fence or settling ponds

#### **SWPPP Tip!**

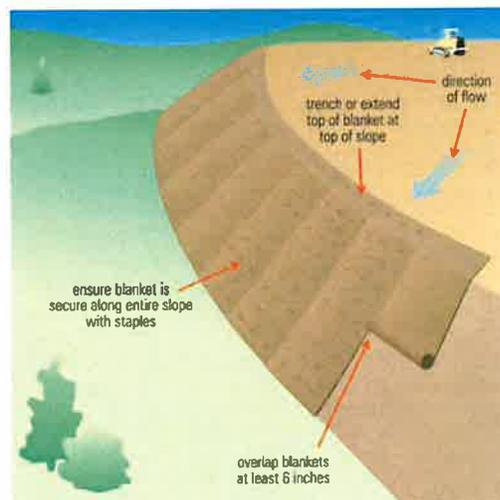
##### **Wind Control BMPs**

In areas where dust control is an issue, your SWPPP should include BMPs for wind-erosion control. These consist of mulching, wet suppression (watering), and other practices.

**ESC Principle 5: Protect slopes.** Protect all slopes with appropriate erosion controls. Steeper slopes, slopes with highly erodible soils, or long slopes require a more complex combination of controls. Erosion control blankets, bonded fiber matrices, or turf reinforcement mats are very effective options. Silt fence or fiber rolls may also be used to help control erosion on moderate slopes and should be installed on level contours spaced at 10- to 20-foot intervals. You can also use diversion channels and berms to keep stormwater off slopes.

##### **Example BMP: Rolled erosion control products**

*Description:* Erosion control products include mats, geotextiles, and erosion control blankets and products that provide temporary stabilization and help to establish vegetation on disturbed soils. Such products help control erosion and help establish vegetation and are often used on slopes, channels, or stream banks.



**Figure 9. Illustration of erosion control blankets installed on slope.**

#### Installation Tips:

- Use rolled erosion-control products on slopes steeper than 3 to 1 (horizontal to vertical) and in swales or long channels

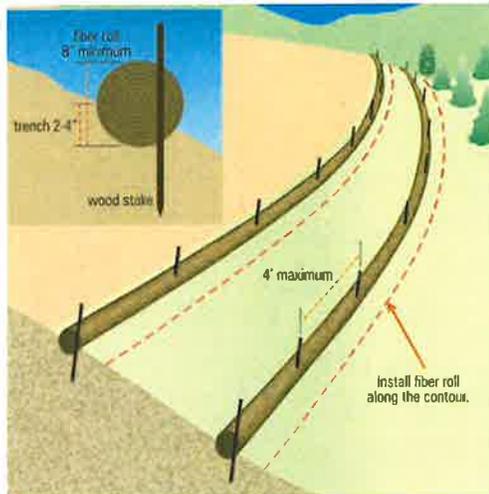


Figure 10. Illustration of a fiber roll installation along a slope.

- Trench the top of the blanket into the ground to prevent runoff from flowing under the blanket
- Overlap the lower end of the top mat over the top of the downslope mat to ensure that runoff stays on top of the blankets and mats
- Staple blankets and mats according to specifications

#### Maintenance:

- Periodically inspect for signs of erosion or failure
- Repair the blanket or mat if necessary
- Continue inspections until vegetation is established at the level required to qualify as final *stabilization*

#### **ESC Principle 6: Protect storm drain inlets.**

Protect all inlets that could receive stormwater from the project until final stabilization of the site has been achieved. Install inlet protection before soil-disturbing activities begin. Maintenance throughout the construction process is important. Upon completion of the project, storm drain inlet protection is one of the temporary BMPs that should be removed. Storm drain inlet protection should be used not only for storm drains within the active construction project, but also for storm drains outside the project area that might receive stormwater discharges from the project. If there are storm drains on private property that could receive stormwater runoff from your project, coordinate with the owners of that property to ensure proper inlet protection.

#### Example BMP: Storm Drain Inlet Protection

*Description:* Storm drain inlet protection prevents sediment from entering a storm drain by surrounding the inlet with a filtering material. Several types of filters are commonly used for inlet protection: silt fence, rock-filled bags, or block and gravel. The type of filter used depends on the inlet type (for example, curb inlet, drop inlet), slope, and volume of flow. Many different commercial inlet filters are also available. Some commercial inlet filters are placed in front of or on top of an inlet, while others are placed inside the inlet under the grate.

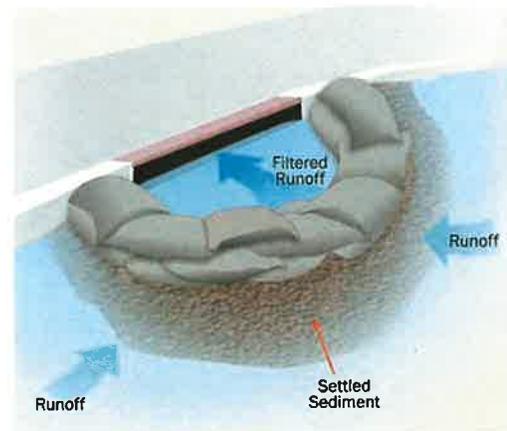


Figure 11. Illustration of a storm drain inlet with rock-filled bags filtering stormwater.

#### Installation Tips:

- Install inlet protection as soon as storm drain inlets are installed and before land-disturbance activities begin in areas with existing storm drain systems
- Protect all inlets that could receive stormwater from your construction project
- Use in conjunction with other erosion prevention and sediment control BMPs—remember, inlet protection is a secondary BMP!
- Design your inlet protection to handle the volume of water from the area being drained. Ensure that the design is sized appropriately.

#### Maintenance:

- Inspect inlets frequently and after each rainfall

- Remove accumulated sediment from around the device and check and remove any sediment that might have entered the inlet
- Replace or repair the inlet protection if it becomes damaged
- Sweep streets, sidewalks, and other paved areas regularly

### SWPPP Tip!

Storm drain inlet protection should never be used as a primary BMP! Use erosion control techniques such as hydromulching or erosion-control blankets to prevent erosion. Use inlet protection and other sediment control BMPs as a *backup* or last line of defense.

**ESC Principle 7: Establish perimeter controls.** Maintain natural areas and supplement them with silt fence and fiber rolls around the perimeter of your site to help prevent soil erosion and stop sediment from leaving the site. Install controls on the downslope perimeter of your project (it is often unnecessary to surround the entire site with silt fence). Sediment barriers can be used to protect stream buffers, riparian

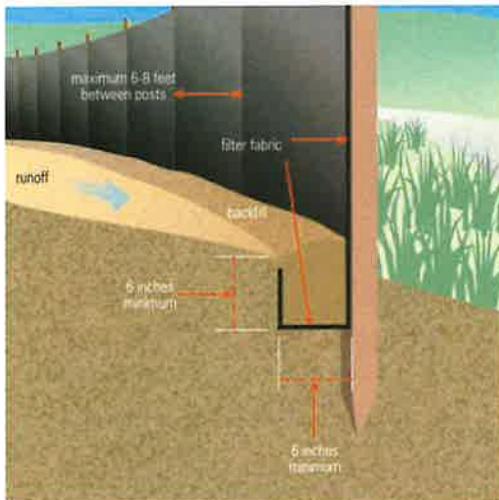


Figure 12. Illustration of proper techniques to use in installing silt fence.

areas, wetlands, or other waterways. They are effective only in small areas and should not be used in areas of concentrated flow.

#### Example BMP: Silt Fence and Fiber Rolls

**Description:** A silt fence is a temporary sediment barrier consisting of a geotextile attached to supporting posts and trenched into the ground. Silt fencing is intended to retain sediment that has been dislodged by stormwater. It is designed only for runoff from small areas and is not intended to handle flows from large slopes or in areas of concentrated flow. Fiber rolls serve the same purpose and consist of an open mesh tubular sleeve filled with a fibrous material which traps sediment. Fiber rolls are generally staked to the ground.

#### Installation Tips:

##### DO:

- Use silt fence or fiber rolls as perimeter controls, particularly at the lower or down slope edge of a disturbed area
- Leave space for maintenance between toe of slope and silt fence or roll
- Trench in the silt fence on the uphill side (6 inches deep by 6 inches wide)
- Install stakes on the downhill side of the fence or roll
- Curve the end of the silt fence or fiber roll up-gradient to help it contain runoff

##### DON'T:

- Install a silt fence or fiber rolls in ditches, channels, or areas of concentrated flow
- Install it running up and down a slope or hill
- Use silt fencing or fiber rolls alone in areas that drain more than a quarter-acre per 100 feet of fence

#### Maintenance:

- Remove sediment when it reaches one-third of the height of the fence or one-half the height of the fiber roll
- Replace the silt fence or roll where it is worn, torn, or otherwise damaged
- Retrench or replace any silt fence or roll that is not properly anchored to the ground

**ESC Principle 8: Retain sediment on-site and control dewatering practices.** Sediment barriers described in ESC Principle 7 can trap sediment from small areas, but when sediment retention from a larger area is required, consider using a temporary sediment trap or sediment basin. These practices detain sediment-laden runoff for a period of time, allowing sediment to settle before the runoff is discharged. Proper design and maintenance are essential to ensure that these practices are effective.

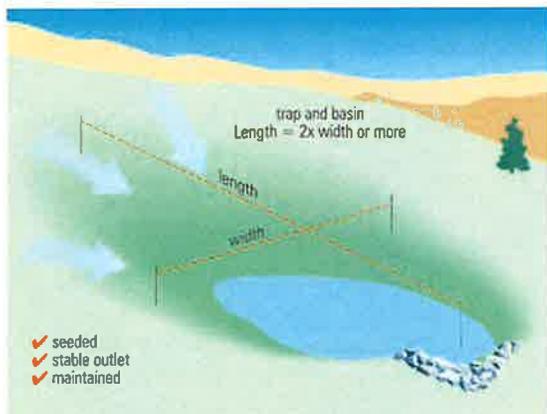


Figure 13. Illustration of a sediment basin.

You should use a sediment basin for common drainage locations that serve an area with 10 or more acres disturbed at any one time. The basin should be designed to provide storage for

the volume of runoff from the drainage area for at least a 2-year, 24-hour storm (or 3,600 cubic feet of storage per acre drained, which is enough to contain 1 inch of runoff, if the 2-year, 24-hour calculation has not been performed). Check your permit for exact basin sizing requirements. Sediment basins should be located at low-lying areas of the site and on the down-gradient side of bare soil areas where flows converge. Do not put sediment traps or basins in or immediately adjacent to flowing streams or other waterways.

Where a large sediment basin is not practical, use smaller sediment basins or sediment traps (or both) where feasible. At a minimum, use silt fences, vegetative buffer strips, or equivalent sediment controls for all down-gradient boundaries (and for those side-slope boundaries deemed appropriate for individual site conditions).

Dewatering practices are used to remove ground water or accumulated rain water from excavated areas. Pump muddy water from these areas to a temporary or permanent sedimentation basin or to an area completely enclosed by silt fence in a flat vegetated area where discharges can infiltrate into the ground.

Never discharge muddy water into storm drains, streams, lakes, or wetlands unless the sediment has been removed before discharge.

Keep in mind that some states and local jurisdictions require a separate permit for dewatering activities at a site.

**ESC Principle 9: Establish stabilized construction exits.** Vehicles entering and leaving the site have the potential to track significant amounts of sediment onto streets. Identify and clearly mark one or two locations where vehicles will enter and exit the site and focus stabilizing measures at those locations. Construction entrances are commonly made from large crushed rock. They can be further stabilized using stone pads or concrete. Also, steel wash racks and a hose-down system will remove even more mud and debris from vehicle tires. Divert runoff from wash areas to a sediment trap or basin. No system is perfect, so sweeping the street regularly completes this BMP.

**Example BMP: Stabilized Construction Exit**

*Description:* A rock construction exit can reduce the amount of mud transported onto paved roads by vehicles. The construction exit does this by removing mud from vehicle tires before the vehicle enters a public road.



Figure 14. Illustration of a stabilized construction exit.

You might also want to install a wheel wash when mud is especially difficult to remove or space doesn't allow sufficient tire revolutions (four or five are needed) before exiting the site. Direct wash water to a suitable settling area—do not discharge wash water to a stream or storm drain!

#### *Installation tips:*

- Ensure that the exit is at least 50 feet long (generally, the length of two dump trucks) and graded so runoff does not enter the adjacent street
- Place a geotextile fabric under a layer of aggregate at least 6–12 inches thick. The stones or aggregate should be 3–6 inches in diameter
- Train employees and subcontractors to use the designated construction exits. Empower your employees to provide directions to subcontractors and others that are not on the site every day

#### *Maintenance:*

- Replenish or replace aggregate if it becomes clogged with sediment
- Sweep the street regularly

**ESC Principle 10: Inspect and maintain controls.** Inspection and maintenance is just as important as proper planning, design, and installation of controls. Without adequate maintenance, erosion and sediment controls will quickly fail, sometimes after just one rainfall, and cause significant water quality problems and potential violations of the NPDES construction general permit. Your permit likely requires you to maintain your BMPs at all times. To do this effectively, you should establish an inspection and maintenance approach or strategy that includes both regular and spot inspections. Inspecting both prior to predicted storm events and after will help ensure that controls are working effectively. Perform maintenance or corrective action as soon as problems are noted. **Inspection and maintenance of BMPs are addressed in more detail in Chapter 6.**

## Other Sediment and Erosion Control Techniques

As mentioned at the beginning of this chapter, there are many other erosion and sediment control techniques that can be used effectively. The BMPs highlighted in this chapter are among those more commonly used and highlight many general erosion and sediment control principles for which other BMPs may be used effectively. Check to see if your state or local government has developed a BMP design manual for detailed information on any BMP you are considering. Appendix D lists several good BMP design manuals. You can also find out more about various BMPs by visiting EPA's Menu of BMPs at [www.epa.gov/npdes/menuofbmps](http://www.epa.gov/npdes/menuofbmps)

The following BMPs are also commonly used at construction sites.

#### Erosion control measures:

- Surface roughening, trackwalking, scarifying, sheepsfoot rolling, imprinting
- Soil bioengineering techniques (e.g., live staking, fascines, brush wattles)
- Composting
- Sodding

#### Sediment control and runoff management measures:

- Gravel bag barrier
- Compost berm
- Rock or brush filters
- Baffles or skimmers in sediment basins to increase effectiveness
- Lowering soil levels near streets and sidewalks to prevent runoff
- Level spreaders
- Energy dissipaters
- Check dams

# Chapter 5: SWPPP Development—Selecting Good Housekeeping BMPs

## Six Key Pollution Prevention Principles for Good Housekeeping

Construction projects generate large amounts of building-related waste, which can end up polluting stormwater runoff if not properly managed. The suite of BMPs that are described in your SWPPP must include pollution prevention (P2) or good housekeeping practices that are designed to prevent contamination of stormwater from a wide range of materials and wastes at your site. The six principles described below are designed to help you identify the pollution prevention practices that should be described in your SWPPP and implemented at your site.

1. Provide for waste management
2. Establish proper building material staging areas
3. Designate paint and concrete washout areas
4. Establish proper equipment/vehicle fueling and maintenance practices
5. Control equipment/vehicle washing and allowable non-stormwater discharges
6. Develop a spill prevention and response plan

**P2 Principle 1: Provide for waste management.** Design proper management procedures and practices to prevent or reduce the discharge of pollutants to stormwater from solid or liquid wastes that will be generated at your site. Practices such as trash disposal, recycling, proper material handling, and cleanup measures can reduce the potential for stormwater runoff to pick up construction site wastes and discharge them to surface waters.

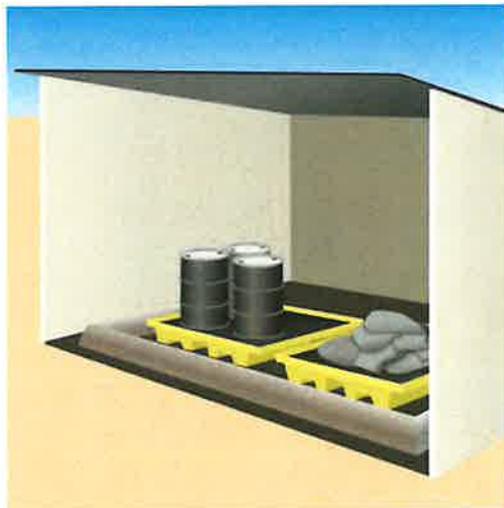


Figure 15. Illustration showing construction materials with secondary containment and overhead cover to prevent stormwater contamination.

Provide convenient, well-maintained, and properly located toilet facilities. Provide for regular inspections, service, and disposal. Locate toilet facilities away from storm drain inlets and waterways to prevent accidental spills and contamination of stormwater. Treat or dispose of sanitary and septic waste in accordance with state or local regulations.

Proper material use, storage, waste disposal, and training of employees and subcontractors can prevent or reduce the discharge of hazardous and toxic wastes to stormwater. Implement a comprehensive set of waste-management practices for hazardous or toxic materials, such as paints, solvents, petroleum products, pesticides, wood preservatives, acids, roofing tar, and other materials. Practices should include storage, handling, inventory, and cleanup procedures, in case of spills (see the following P2 principles).

► This chapter presents a brief discussion of good housekeeping principles to consider to ensure your construction site does not contaminate stormwater runoff.

As noted in Chapter 3, sediment is the principal pollutant of concern in stormwater discharges from construction sites. But, EPA's CGP and many state construction general permits require that the SWPPP describe good housekeeping measures for other pollutants that might be found on construction sites. This chapter discusses these measures.

## Waste Management Checklist

### Solid or Construction Waste

- ✓ Designate trash and bulk waste-collection areas on-site
- ✓ Recycle materials whenever possible (e.g., paper, wood, concrete, oil)
- ✓ Segregate and provide proper disposal options for hazardous material wastes
- ✓ Clean up litter and debris from the construction site daily
- ✓ Locate waste-collection areas away from streets, gutters, watercourses, and storm drains. Waste-collection areas (dumpsters, and such) are often best located near construction site entrances to minimize traffic on disturbed soils. Consider secondary containment around waste collection areas to further minimize the likelihood of contaminated discharges.

### Sanitary and Septic Waste

- ✓ Provide restroom facilities on-site
- ✓ Maintain clean restroom facilities and empty porta-johns regularly
- ✓ Provide secondary containment pans under porta-johns, where possible
- ✓ Provide tie-downs or stake downs for porta-johns in areas of high winds
- ✓ Educate employees, subcontractors, and suppliers on locations of facilities
- ✓ Do not discharge or bury wastewater at the construction site
- ✓ Inspect facilities for leaks, repair or replace immediately

### Hazardous Materials and Wastes

- ✓ Develop and implement employee and subcontractor education, as needed, on hazardous and toxic waste handling, storage, disposal, and cleanup
- ✓ Designate hazardous waste-collection areas on-site
- ✓ Place all hazardous and toxic material wastes in secondary containment
- ✓ Hazardous waste containers should be inspected to ensure that all containers are labeled properly and that no leaks are present

### ***P2 Principle 2: Establish proper building material handling and staging areas.***

Your SWPPP should include comprehensive handling and management procedures for building materials, especially those that are hazardous or toxic. Paints, solvents, pesticides, fuels and oils, other hazardous materials or any building materials that have the potential to contaminate stormwater should be stored indoors or under cover whenever possible or in areas with secondary containment. Secondary containment prevents a spill from spreading across the site and include dikes, berms, curbing, or other containment methods. Secondary containment techniques should also ensure the protection of ground water. Designate staging areas for activities such as fueling vehicles, mixing paints, plaster, mortar, and so on. Designated staging areas will help you to monitor the use of materials and to clean up any spills. Training employees and subcontractors is essential to the success of this pollution prevention principle.

## SWPPP Tip!

### ***Material Staging Area Measures***

Your SWPPP should include procedures for storing materials that can contribute pollutants to stormwater. Consider the following:

- Train employees and subcontractors in proper handling and storage practices
- Designate site areas for storage. Provide storage in accordance with secondary containment regulations and provide cover for hazardous materials when necessary. Ensure that storage containers are regularly inspected for leaks, corrosion, support or foundation failure, or any other signs of deterioration and tested for soundness
- Reuse and recycle construction materials when possible

### ***P2 Principle 3: Designate washout areas.***

Concrete contractors should be encouraged, where possible, to use the washout facilities at their own plants or dispatch facilities. If it is necessary to provide for concrete washout areas on-site, designate specific washout areas and design facilities to handle anticipated washout water. Washout areas should also be provided for paint and stucco operations. Because washout areas can be a source of pollutants from leaks or spills,

EPA recommends that you locate them at least 50 yards away from storm drains and watercourses whenever possible.

Several companies rent or sell prefabricated washout containers, and some provide disposal of waste solids and liquids along with the containers. These prefabricated containers are sturdy and provide a more reliable option for preventing leaks and spills of wash water than self-constructed washouts. Alternatively, you can construct your own washout area, either by digging a pit and lining it with 10 mil plastic sheeting or creating an aboveground structure from straw bales or sandbags with a plastic liner. If you create your own structure, you should inspect it daily for leaks or tears in the plastic because these structures are prone to failure.

Regular inspection and maintenance are important for the success of this BMP. Both self-constructed and prefabricated washout containers can fill up quickly when concrete, paint, and stucco work are occurring on large portions of the site. You should also inspect for evidence that contractors are using the washout areas and not dumping materials onto the ground or into drainage facilities. If the washout areas are not being used regularly, consider posting additional signage, relocating the facilities to more convenient locations, or providing training to workers and contractors.

### SWPPP Tip!

#### Washout Area Measures

When concrete, paint, or stucco is part of the construction process, consider these practices which will help prevent contamination of stormwater. Include the locations of these areas and your maintenance and inspection procedures in your SWPPP.

- Do not washout concrete trucks or equipment into storm drains, streets, gutters, uncontained areas, or streams
- Establish washout areas and advertise their locations with signs
- Provide adequate containment for the amount of wash water that will be used
- Inspect washout structures daily to detect leaks or tears and to identify when materials need to be removed
- Dispose of materials properly. The preferred method is to allow the water to evaporate and to recycle the hardened concrete. Full service companies may provide dewatering services and should dispose of wastewater properly. Concrete wash water can be highly polluted. It should not be discharged to any surface water, storm sewer system, or allowed to infiltrate into the ground. It should not be discharged to a sanitary sewer system without first receiving written permission from the system operator

#### **P2 Principle 4: Establish proper equipment/vehicle fueling and maintenance practices.**

Performing equipment/vehicle fueling and maintenance at an off-site facility is preferred over performing these activities on the site, particularly for road vehicles (e.g., trucks, vans). For grading and excavating equipment, this is usually not possible or desirable. Create an on-site fueling and maintenance area that is clean and dry. The on-site fueling area should have a spill kit, and staff should know how to use it. If possible, conduct vehicle fueling and maintenance activities in a covered area; outdoor vehicle fueling and maintenance is a potentially significant source of stormwater pollution. Significant maintenance on vehicles and equipment should be conducted off-site.

### SWPPP Tip!

#### Equipment/Vehicle Fueling and Maintenance Measures

Consider the following practices to help prevent the discharge of pollutants to stormwater from equipment/vehicle fueling and maintenance. Include the locations of these areas and your inspection and maintenance procedures in your SWPPP.

- Train employees and subcontractors in proper fueling procedures (stay with vehicles during fueling, proper use of pumps, emergency shut-off valves, and such)
- Inspect on-site vehicles and equipment daily for leaks, equipment damage, and other service problems
- Clearly designate vehicle/equipment service areas away from drainage facilities and watercourses to prevent stormwater run-on and runoff
- Use drip pans, drip cloths, or absorbent pads when replacing spent fluids
- Collect all spent fluids, store in appropriate labeled containers in the proper storage areas, and recycle fluids whenever possible

#### **P2 Principle 5: Control equipment/vehicle washing and allowable non-stormwater discharges.**

Environmentally friendly washing practices can be practiced at every construction site to prevent contamination of surface and ground water from wash water. Procedures and practices include using off-site facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water or routing to the sanitary sewer; and training employees and subcontractors in proper cleaning procedures.

## Take a Closer Look...

### Non-Stormwater Runoff

A construction site might have sources of runoff that are not generated by stormwater. These non-stormwater discharges include fire hydrant flushing, vehicle or equipment wash water (no detergents!), water used to control dust, and landscape irrigation.

### What does this mean to me?

Take steps to infiltrate these sources of uncontaminated water into the ground. You can also route these sources of water to sediment ponds or detention basins or otherwise treat them with appropriate BMPs.

## SWPPP Tip!

### Equipment/Vehicle Washing Measures

The following equipment/vehicle washing measures will help prevent stormwater pollution. Include the location of your washing facilities and your inspection and maintenance procedures in your SWPPP.

- Educate employees and subcontractors on proper washing procedures
- Clearly mark the washing areas and inform workers that all washing must occur in this area
- Contain wash water and treat and infiltrate it whenever possible
- Use high-pressure water spray at vehicle washing facilities without any detergents because water can remove most dirt adequately
- Do not conduct any other activities, such as vehicle repairs, in the wash area

requirements and ensure that clear and concise spill cleanup procedures are provided and posted for areas in which spills may potentially occur. When developing a spill prevention plan, include, at a minimum, the following:

- Note the locations of chemical storage areas, storm drains, tributary drainage areas, surface waterbodies on or near the site, and measures to stop spills from leaving the site
- Specify how to notify appropriate authorities, such as police and fire departments, hospitals, or municipal sewage treatment facilities to request assistance
- Describe the procedures for immediate cleanup of spills and proper disposal
- Identify personnel responsible for implementing the plan in the event of a spill

**P2 Principle 6: Develop a spill prevention and response plan.** Most state and EPA construction general permits require the preparation of spill prevention and response plans. Generally, these plans can be included or incorporated into your SWPPP. The plan should clearly identify ways to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention and response. The plan should also specify material handling procedures and storage

## SWPPP Tip!

### Spill Prevention Measures

Additional spill prevention measures that will help prevent spills and leaks include the following:

- Describe and list all types of equipment to be used to adequately clean up the spill
- Provide proper handling and safety procedures for each type of waste
- Establish an education program for employees and subcontractors on the potential hazards to humans and the environment from spills and leaks
- Update the spill prevention plan and clean up materials as changes occur to the types of chemicals stored and used at the facility

## Take a Closer Look...

### Spill Prevention, Control and Countermeasure (SPCC) Plan

Construction sites may be subject to 40 CFR Part 112 regulations that require the preparation and implementation of a SPCC Plan to prevent oil spills from aboveground and underground storage tanks. Your facility is subject to this rule if you are a nontransportation-related facility that:

- Has a total storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons and
- Could reasonably be expected to discharge oil in quantities that may be harmful to navigable waters of the United States and adjoining shorelines

Furthermore, if your facility is subject to 40 CFR Part 112, your SWPPP should reference the SPCC Plan. To find out more about SPCC Plans, see EPA's website on SPCC at [www.epa.gov/oilspill/spcc.htm](http://www.epa.gov/oilspill/spcc.htm)

### What does this mean to me?

#### Reporting Oil Spills

In the event of an oil spill, you should contact the National Response Center toll free at 1-800-424-8802 for assistance, or for more details, visit their website: [www.nrc.uscg.mil/nrchp.html](http://www.nrc.uscg.mil/nrchp.html)

# Chapter 6: SWPPP Development—Inspections, Maintenance, and Recordkeeping

► This chapter describes the inspection and maintenance procedures your SWPPP should include, as well as recordkeeping requirements.

## A. Describe Your Plans and Procedures for Inspecting BMPs

Earlier discussions in this manual pointed out that the effectiveness of erosion and sediment control BMPs and good housekeeping and pollution prevention measures depend on consistent and continual inspection and maintenance. This step focuses on developing a plan for BMP inspection and maintenance to ensure that a schedule and procedures are in place.

### Inspections

Your responsibility does not stop after BMPs are installed. Your BMPs must be maintained in good working order at all times. Further, your permit requires that you conduct regular inspections and document the findings of those inspections in your SWPPP.

Your construction general permit describes the *minimum* frequency of inspections, which is typically weekly or bi-weekly and after each rainfall event exceeding one-half inch. To meet the requirement to maintain all BMPs in good working order, EPA recommends that you develop an inspection schedule that goes beyond these minimums and is customized for your site and the conditions affecting it.

In developing your inspection schedule consider the following:

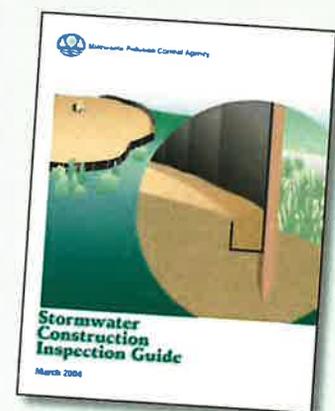
- Consider using *spot* inspections. You may want to inspect certain parts of your site more frequently or even daily. Target places that need extra attention, such as areas around construction site entrances, check nearby streets for dirt, check inlet protection, and so on.
- Consider using informal inspections. Your permit outlines the minimum requirements for formal inspections that must be documented and included in your SWPPP. You can also add informal inspections that wouldn't require documentation, unless of course, a problem is identified. Always document any problems you find and those that are identified by staff.
- Consider adding inspections *before or even during* rain events. Many permits require inspections of BMPs after rain events. You should consider adding inspections *before or during* predicted rain events. Consult a local weather source and initiate inspections before predicted storm events as a way to ensure that controls are operational.
- Train staff and subcontractors. Use your staff and subcontractors to help identify any potential problems with your BMPs. Again, document any issues that are confirmed problems.

EPA recommends that you develop an inspection schedule that meets the needs of your site. You'll probably also want to update and refine this schedule based on your experiences, the findings of your inspections, and the changing conditions at your site.

### SWPPP Tip!

#### Inspection Guide

The State of Minnesota has developed a *Stormwater Construction Inspection Guide* to assist municipal site inspectors in procedures for conducting a compliance inspection at construction sites. This guide can also be useful for construction operators conducting self-inspections. Available at [www.pca.state.mn.us/water/stormwater/stormwatr-c.html](http://www.pca.state.mn.us/water/stormwater/stormwatr-c.html)



## SWPPP Tip!

### Selecting BMP Inspectors

A BMP inspection is only as good as the inspector. Therefore, it is important to select qualified personnel to conduct BMP inspections. The SWPPP should identify who has the responsibility for conducting inspections. Personnel selected to conduct inspections should be knowledgeable in the principles and practices of erosion and sediment controls, possess the technical skills to assess conditions at the construction site that could impact stormwater quality, and assess the effectiveness of any sediment and erosion control measures selected.

Several states and other organizations offer training that will help prepare inspectors to accurately evaluate BMPs, decide when maintenance is appropriate, or when a different BMP should be substituted. (Several states require that sites be inspected by someone that the state certifies as a qualified inspector.) One national organization offers two certification programs that would be useful for personnel who are developing and implementing SWPPPs and conducting inspections. These certification programs are called: “*Certified Professional in Erosion and Sediment Control (CPESC)*” and “*Certified Professional in Stormwater Quality (CPSWQ)*.” You can find more information on these programs at [www.cpesc.org](http://www.cpesc.org)

### Inspection Reports

Complete an inspection report after each inspection. You should retain copies of all inspection reports and keep them with or in your SWPPP. Generally, the following information is required to be included in your inspection report:

- Inspection date
- Inspector information, including the names, titles, and qualifications of personnel conducting the inspection
- Weather information for the period since the last inspection (or for the first inspection since commencement of construction activity) including a best estimate of the beginning of each storm, its duration, approximate amount of rainfall for each storm (in inches), and whether any discharges occurred. You may create a log to record the basic weather information or you may keep copies of weather information from a reliable local source, such as the internet sites of local newspapers, TV stations, local universities, etc.
- Current weather information and a description of any discharges occurring at the time of the inspection

- Descriptions of evidence of previous or ongoing discharges of sediment or other pollutants from the site
- Location(s) of BMPs that need to be maintained
- Location(s) of BMPs that failed to operate as designed or proved inadequate for a location
- Location(s) where additional BMPs are needed but did not exist at the time of inspection
- Corrective action required, including any necessary changes to the SWPPP and implementation dates
- Reference to past corrective actions documenting follow-up actions taken

Consider taking digital photographs during inspections to document BMPs, problems identified, and progress in implementing the SWPPP.

**Appendix B includes an example stormwater inspection report.** You should use this report, or a similar report, to document your stormwater construction site inspections. Check to see if your state or local authority has developed an inspection checklist for your use. The inspection report is broken up into two main sections—site-specific BMPs and overall site issues. For the site-specific BMPs, you should number the structural and non-structural BMPs in your SWPPP on a copy of your site map (preferably in the order in which you would inspect them on the site). Then as you conduct your inspections, you can verify whether each BMP has been installed and maintained. If a BMP has not been installed or needs maintenance, describe this in the corrective action section and list a date for when the corrective action will be completed and who will be responsible for completing the action. The overall site issues section describes 11 common issues at construction sites you should inspect for. You can customize this form to meet the needs of your particular situation.

Make sure each inspection report is signed and certified consistent with your permit’s requirements.

**Chapter 8, Section D contains more information on implementing an inspection program. Also, see the suggested inspection report form in Appendix B.**

## SWPPP Tip!

### Consider More Effective BMPs

During inspections, consider whether the installed BMPs are working effectively. If you find a BMP that is failing or overwhelmed by sediment, you should consider whether it needs to be replaced with a more effective BMP or enhanced by the addition of another, complimentary BMP. Ensure that you record such changes in your SWPPP and on your site map.

## B. BMP Maintenance

Implementing a good BMP maintenance program is essential to the success of your SWPPP and to your efforts to protect nearby waterways. You should conduct maintenance of BMPs regularly and whenever an inspection (formal or informal) identifies a problem or potential issue. For instance, trash and debris should be cleaned up, dumpsters should be checked and covered, nearby streets and sidewalks should be swept daily, and so on. Maintenance on erosion and sediment controls should be performed as soon as site conditions allow. Consider the following points when conducting maintenance:

- Follow the designers or manufacturer's recommended maintenance procedures for all BMPs
- Maintenance of BMPs will vary according to the specific area and site conditions
- Remove sediment from BMPs as appropriate and properly dispose of sediment into controlled areas to prevent soil from returning to the BMP during subsequent rain events
- Remove sediment from paved roadways and from around BMPs protecting storm drain inlets
- Ensure that construction support activities, including borrow areas, waste areas, contractor work areas, and material storage areas and dedicated concrete and asphalt batch plants are cleaned and maintained
- Replace damaged BMPs, such as silt fences, that no longer operate effectively

You should keep a record of all maintenance activities, including the date, BMP, location, and maintenance performed in your SWPPP.

## C. Recordkeeping

You must keep copies of the SWPPP, inspection records, copies of all reports required by the permit, and records of all data used to complete the NOI to be covered by the permit for a period of at least 3 years from the date that permit coverage expires or is terminated.

Records should include:

- A copy of the SWPPP, with any modifications
- A copy of the NOI and Notice of Termination (NOT) and any stormwater-related correspondence with federal, state, and local regulatory authorities
- Inspection forms, including the date, place, and time of BMP inspections
- Names of inspector(s)
- The date, time, exact location, and a characterization of significant observations, including spills and leaks
- Records of any non-stormwater discharges
- BMP maintenance and corrective actions taken at the site (Corrective Action Log)
- Any documentation and correspondence related to endangered species and historic preservation requirements
- Weather conditions (e.g., temperature, precipitation)
- Date(s) when major land disturbing (e.g. clearing, grading, and excavating) activities occur in an area
- Date(s) when construction activities are either temporarily or permanently ceased in an area
- Date(s) when an area is either temporarily or permanently stabilized

# Chapter 7: Certification and Notification

► This chapter describes how, after developing your SWPPP, you can obtain permit coverage for your stormwater discharges.

## A. Certification

### **Signature and Certification**

The construction site operator must sign the permit application form, which is often called a *Notice of Intent* or *NOI*. (In some instances, the construction general permit may not require the submission of an *NOI* or application. Construction activities may be covered automatically.)

All reports, including SWPPPs and inspection reports, generally must be signed by the construction site operator or a duly authorized representative of that person. The authorized representative is typically someone who has direct responsibility for implementing the SWPPP. If the operator chooses to designate an authorized representative, a signed letter or statement to that effect must be included in the SWPPP. Check your permit for exact requirements.

Your SWPPP must include the signature of the construction site operator or authorized representative and the certification statement provided in the general permit. An example of the certification language from EPA's Construction General Permit follows:

"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."

This ensures that the SWPPP was developed and reviewed by a responsible party with the ability to implement the BMPs and other commitments described in the SWPPP.

### **Copy of Permit Requirements**

Most general permits require you to keep a copy of the permit and your *NOI* with your SWPPP. This allows you to quickly check the permit if a question arises about a permit requirement.

### **Other State, Tribal, and Local Programs**

Include in your SWPPP a description of any other federal, state, tribal, or local requirements for erosion and sediment control and stormwater management that apply to your site. Many local governments also impose erosion and sediment control requirements; your SWPPP should comply with both the general permit and any applicable local requirements.

### **SWPPP Tip!**

#### **Posting a sign at the construction entrance**

EPA and many state general permits require that you post a sign or other notice conspicuously near the main entrance of the construction site. EPA's permit requires that the sign contain a copy of the *NOI*, the location of the SWPPP, and a contact person for viewing the SWPPP.

## SWPPP Tip!

### **Making your SWPPP available**

While EPA and most states do not require you to submit a copy of your SWPPP for review, your SWPPP must be available to these and other government agencies for inspection. Your permit may also require you to make your SWPPP available to the public, if requested. If you have the ability, you should consider posting your SWPPP on the Internet and publicizing the URL. Check your permit for exact requirements.

## **B. Notification**

Now that you have developed your SWPPP and before you begin construction, you must begin the process of obtaining permit coverage from your authorized state or EPA. Authorized states and EPA use *general* permits to cover all construction sites. These broadly written general or *umbrella* permits apply to all construction activities in a given state.

**Obtaining Coverage Under a General Permit**  
**Important! Before obtaining permit coverage, you should read a copy of the appropriate construction general permit and develop your SWPPP.**

To obtain coverage under a state or EPA construction general permit, you will typically need to fill out and submit an application form, often called a Notice of Intent or NOI. Submitting this form to the permitting authority indicates your *intent* to be authorized to discharge stormwater under the appropriate general permit for construction activities. Depending on the permit, you may be authorized to discharge immediately or at some later time. In some cases, you are not authorized to discharge until the state has notified you accordingly. EPA's Construction General Permit requires a 7-day waiting period after a complete NOI is received and posted on EPA's website ([www.epa.gov/npdes/noisearch](http://www.epa.gov/npdes/noisearch)). The waiting period expires when the permit's status changes from *waiting* to *active*.

## **Take a Closer Look...**

### **Information on the Application or Notice of Intent (NOI)**

The NOI provides the permitting authority with pertinent information about your construction site, such as owner/operator information, site location, estimated project start and completion dates, approximate area to be disturbed, information about your SWPPP, receiving waters, and endangered species review certification. An appropriate person who is authorized to represent your organization must sign and verify that the facts contained in the NOI are true and accurate. For businesses, a certifying official is typically a corporate officer, such as a president, vice president, or manager of operations. For municipalities, it's typically a principal executive officer or ranking elected official. Check your permit for exact signature requirements.

In general, the only information you need to submit to the permitting authority is the NOI. EPA and most authorized state agencies do not require you to submit your SWPPP for approval. However, many local governments review and approve at least the erosion and sediment control component of your SWPPP.

### **What does this mean to me?**

*There are significant penalties for failing to obtain authorization to discharge or for submitting inaccurate information. If you are the certifying official, make sure you are authorized to discharge before construction activities begin.*

## SWPPP Tip!

### **Deadline for submitting NOIs under EPA's Construction General Permit**

For EPA's construction general permit, the fastest and easiest way to obtain permit coverage is to use EPA's electronic permit application system, called "eNOI" at [www.epa.gov/npdes/stormwater/enoi](http://www.epa.gov/npdes/stormwater/enoi). Using this approach, you may be authorized to discharge in as little as 7 days after submission of your electronic NOI. If you choose to submit your NOI by mail, EPA recommends that you send it at least one month before you need permit coverage.

# Chapter 8: SWPPP Implementation

## A. Train Your Staff and Subcontractors

Your site's construction workers and subcontractors might not be familiar with stormwater BMPs, and they might not understand their role in protecting local rivers, lakes and coastal waters. Training your staff and subcontractors in the basics of erosion control, good housekeeping, and pollution prevention is one of the most effective BMPs you can institute at your site.

Basic training should include

- Spill prevention and cleanup measures, including the prohibition of dumping any material into storm drains or waterways
- An understanding of the basic purpose of stormwater BMPs, including what common BMPs are on-site, what they should look like, and how to avoid damaging them
- Potential penalties associated with stormwater noncompliance

Staff directly responsible for implementing the SWPPP should receive comprehensive stormwater training, including

- The location and type of BMPs being implemented
- The installation requirements and water quality purpose for each BMP
- Maintenance procedures for each of the BMPs being implemented
- Spill prevention and cleanup measures
- Inspection and maintenance recordkeeping requirements

You can train staff and subcontractors in several ways: short training sessions (food and refreshments will help increase attendance), posters and displays explaining your site's various BMPs, written agreements with subcontractors to educate their staff members, signs pointing out BMPs and reminders to keep clear of them. Every construction site operator should try to train staff and subcontractors to avoid damaging BMPs. By doing so, operators can avoid the added expense of repairs.

► Your SWPPP is your guide to preventing stormwater pollution. However, it is just a plan. Implementing your SWPPP, maintaining your BMPs, and then constantly reevaluating and revising your BMPs and your SWPPP are the keys to protecting your local waterways.

### SWPPP Tip!

#### *Train your staff and subcontractors!*

Here are a few key things you will want to cover with each person working on your site:

- Use only designated construction site entrances
- Keep equipment away from silt fences, fiber rolls, and other sediment barriers
- Know the locations of disposal areas, and know the proper practices for trash, concrete and paint washout, hazardous chemicals, and so on
- Keep soil, materials, and liquids away from paved areas and storm drain inlets. Never sweep or wash anything into a storm drain
- Know the location and understand the proper use of spill kits
- Know the locations of your site's designated protection areas. Keep equipment away from stream banks, valuable trees and shrubs, and steep slopes. Clearly mark these areas with signs
- Keep equipment off mulched, seeded, or stabilized areas. Post signs on these areas, too
- Know who to contact when problems are identified!

## B. Ensure Responsibility—Subcontractor Agreements

At any given site, there might be multiple parties (developer, general contractor, builders, subcontractors) that have roles and responsibilities for carrying out or maintaining stormwater BMPs at a given site. These roles and responsibilities should be documented clearly in the SWPPP (see Chapter 2, Section D). In some cases (state requirements vary), there may be one entity that has developed the SWPPP and filed for permit coverage and, therefore, is designated as the *operator*. When other parties at a site are not officially designated as operators, many operators are incorporating the roles and responsibilities of these *non-operators* in the agreements and contracts they have with these companies and individuals. This contract language should spell out responsibilities implementing and maintaining stormwater BMPs, for training staff, and for correcting damage to stormwater BMPs on the site. Several states have stormwater regulations that hold other parties liable even if they are not identified as the *operator*.

## C. Implement Your SWPPP Before Construction Starts

Once you have obtained permit coverage and you are ready to begin construction, it is time to implement your SWPPP. You must implement appropriate parts of your SWPPP before construction activity begins. This generally involves installing storm drain inlet protection, construction entrances, sediment basins, and perimeter silt fences before clearing, grading, and excavating activities begin.

After construction activities begin, your SWPPP should describe when additional erosion and sediment controls will be installed (generally after initial clearing and grading activities are complete). You should also begin BMP inspections once clearing and grading activities begin.

### SWPPP Tip!

#### Take Photographs During Inspections

Taking photographs can help you document areas that need maintenance and can help identify areas where subcontractors might need to conduct maintenance. Photographs can also help provide documentation to EPA or state inspectors that maintenance is being performed.

### SWPPP Tip!

#### Prepare for the rain and snowmelt!

In some areas of the country, construction site operators are required to develop *weather triggered* action plans that describe additional activities the operator will conduct 48 hours before a predicted storm (at least a 50 percent forecasted chance of rain). It is also a good idea to stockpile additional erosion and sediment control BMPs (such as silt fencing, and fiber rolls) at the site for use when necessary.

## D. Conduct Inspections and Maintain BMPs

As mentioned earlier (Chapter 6), EPA recommends that you develop an inspection schedule for your site that considers the size, complexity, and other conditions at your site. This should include regularly scheduled inspections and less formal inspections. EPA recommends that you develop a plan that includes inspections before and after anticipated rain events. You might also want to inspect some BMPs during rain events to see if they are actually keeping sediment on site! Conducting inspections during rain events also allows a construction site operator to address minor problems before they turn into major problems.

#### Temporarily Removed BMPs

BMPs sometimes need to be temporarily removed to conduct work in an area of the site. These temporarily removed BMPs should be noted on the site plan and replaced as soon as possible after the completion of the activity requiring their removal. If a rain is forecast, the BMPs should be replaced as soon as possible before the rain event.

## ***Recommended Inspection Sequence***

You should conduct thorough inspections of your site, making sure to inspect all areas and BMPs. The seven activities listed below are a recommended inspection sequence that will help you conduct a thorough inspection (adapted from MPCA 2004).

### ***1. Plan your inspection***

- Create a checklist to use during the inspection (see Appendix B)
- Obtain a copy of the site map with BMP locations marked
- Plan to walk the entire site, including discharge points from the site and any off-site support activities such as concrete batch plants should also be inspected
- Follow a consistent pattern each time to ensure you inspect all areas (for example, starting at the lowest point and working uphill)

### ***2. Inspect discharge points and downstream, off-site areas***

- Inspect discharge locations to determine whether erosion and sediment control measures are effective
- Inspect nearby downstream locations, if feasible
- Walk *down the street* to inspect off-site areas for signs of discharge. This is important in areas with existing curbs and gutters
- Inspect downslope municipal catch basin inlets to ensure that they are adequately protected

### ***3. Inspect perimeter controls and slopes***

- Inspect perimeter controls such as silt fences to determine if sediment should be removed
- Check the structural integrity of the BMP to determine if portions of the BMP need to be replaced
- Inspect slopes and temporary stockpiles to determine if erosion controls are effective

### ***4. Compare BMPs in the site plan with the construction site conditions***

- Determine whether BMPs are in place as required by the site plan

- Evaluate whether BMPs have been adequately installed and maintained
- Look for areas where BMPs are needed but are missing and are not in the SWPPP

### ***5. Inspect construction site entrances***

- Inspect the construction exits to determine if there is tracking of sediment from the site onto the street
- Refresh or replace the rock in designated entrances
- Look for evidence of additional construction exits being used that are not in the SWPPP or are not stabilized
- Sweep the street if there is evidence of sediment accumulation

### ***6. Inspect sediment controls***

- Inspect any sediment basins for sediment accumulation
- Remove sediment when it reduces the capacity of the basin by the specified amount (many permits have specific requirements for sediment basin maintenance. Check the appropriate permit for requirements and include those in your SWPPP)

### ***7. Inspect pollution prevention and good housekeeping practices***

- Inspect trash areas to ensure that waste is properly contained
- Inspect material storage and staging areas to verify that potential pollutant sources are not exposed to stormwater runoff
- Verify that concrete, paint, and stucco washouts are being used properly and are correctly sized for the volume of wash water
- Inspect vehicle/equipment fueling and maintenance areas for signs of stormwater pollutant exposure

## Common Compliance Problems During Inspections

The following are problems commonly found at construction sites. As you conduct your inspections, look for these problems on your site (adapted from MPCA 2004).

### Problem #1—Not using phased grading or providing temporary or permanent cover (i.e., soil stabilization)

In general, construction sites should phase their grading activities so that only a portion of the site is exposed at any one time. Also, disturbed areas that are not being actively worked should have temporary cover. Areas that are at final grade should receive permanent cover as soon as possible.

### Problem #2—No sediment controls on-site

Sediment controls such as silt fences, sediment barriers, sediment traps and basins must be in place before soil-disturbance activities begin. Don't proceed with grading work out-of-phase.

### Problem #3—No sediment control for temporary stockpiles

Temporary stockpiles must be seeded, covered, or surrounded by properly installed silt fence. Stockpiles should never be placed on paved surfaces.

### Problem #4—No inlet protection

All storm drain inlets that could receive a discharge from the construction site must be protected before construction begins and must be maintained until the site is finally stabilized.

### Problem #5—No BMPs to minimize vehicle tracking onto the road

Vehicle exits must use BMPs such as stone pads, concrete or steel wash racks, or equivalent systems to prevent vehicle tracking of sediment.

### Problem #6—Improper solid waste or hazardous waste management

Solid waste (including trash and debris) must be disposed of properly, and hazardous materials (including oil, gasoline, and paint) must be properly stored (which includes secondary containment). Properly manage portable sanitary facilities.

### Problem #7—Dewatering and other pollutant discharges at the construction site

Construction site dewatering from building footings or other sources should not be discharged without treatment. Turbid water should be filtered or allowed to settle.

### Problem #8—Poorly managed washouts (concrete, paint, stucco)

Water from washouts must not enter the storm drain system or a nearby receiving water. Make sure washouts are clearly marked, sized adequately, and frequently maintained.

### Problem #9—Inadequate BMP maintenance

BMPs must be frequently inspected and maintained if necessary. Maintenance should occur for BMPs that have reduced capacity to treat stormwater (construction general permits or state design manuals often contain information on when BMPs should be maintained), or BMPs that have been damaged and need to be repaired or replaced (such as storm drain inlet protection that has been damaged by trucks).

### Problem #10—Inadequate documentation or training

Failing to develop a SWPPP, keep it up-to-date, or keep it on-site, are permit violations. You should also ensure that SWPPP documentation such as a copy of the NOI, inspection reports and updates to the SWPPP are also kept on-site. Likewise, personnel working on-site must be trained on the basics of stormwater pollution prevention and BMP installation/maintenance.

## E. Update and Evaluate Your SWPPP

Like your construction site, your SWPPP is dynamic. It is a document that must be amended to reflect changes occurring at the site. As plans and specifications change, those changes should be reflected in your SWPPP. If you find that a BMP is not working and you decide to replace it with another, you must reflect that change in your SWPPP. Document in your SWPPP transitions from one phase of construction to the next, and make sure you implement new BMPs required for that next phase.

### *Are Your BMPs Working?*

You should evaluate the effectiveness of your BMPs as part of your routine inspection

process. An informal analysis of both your inspection's findings and your list of BMP repairs will often reveal an inadequately performing BMP. An inspection immediately after a rain event can indicate whether another approach is needed.

You may decide to remove an existing BMP and replace it with another, or you may add another BMP in that area to lessen the impact of stormwater on the original installation.

When you update your SWPPP, you can simply mark it up, particularly for relatively simple changes and alterations. More significant changes might require a rewriting of portions of the SWPPP. The site map should also be updated as necessary.

# Chapter 9: Final Stabilization and Permit Termination

► This chapter describes what you must do to stabilize your construction site and end permit coverage.

## Stabilize Disturbed Areas

As your construction project progresses, you must stabilize areas not under construction. EPA and most states have specific requirements and time frames that must be followed. Generally, it is a wise management practice to stabilize areas as quickly as possible to avoid erosion problems that could overwhelm silt fences, sediment basins, and other sediment control devices.

### SWPPP Tip!

#### *Stabilize as soon as practicable*

EPA's Construction General Permit states that, "stabilization measures must be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased."

Temporary stabilization can be achieved through a variety of BMPs, including mulching, seeding, erosion control blankets, hydroseeding, and other measures.

Permanent or final stabilization of areas on your site is generally accomplished by installing the final landscape requirements (e.g., trees, grass, gardens, or permanent stormwater controls). Once the site has been stabilized, you can terminate your permit coverage.

Sediment controls, such as silt fence, berms, sediment ponds or traps, alone, are not stabilization measures. You should continue to use these kinds of measures (e.g., silt fence around an area that has been seeded) until full stabilization is achieved.

## A. Final Stabilization

When you have completed your construction project or an area within the overall project, you must take steps to permanently and finally stabilize it. Check your permit for the specific requirements you must meet. After a project or an area in the project has been fully stabilized, you should remove temporary sediment and erosion control devices (such as silt fences). You might also be able to stop routine inspections in these stabilized areas. However, in some states such as Colorado, inspections are required every 30 days (after the construction has been completed and the site is stabilized) until permit coverage has been terminated. In general, you should be aware that



Figure 16. Seeding is an effective BMP that can be used to temporarily or permanently stabilize disturbed areas.

final stabilization often takes time (weeks or even months), especially during times of low rainfall or during the colder months of the year. You should not discontinue routine inspections until you have met the final stabilization requirements in your permit.

EPA and many states define final stabilization as occurring when a uniform, evenly distributed perennial vegetative cover with a density of 70 percent of the native background cover has been established on all unpaved areas and areas not covered by permanent structures. Some states have a higher percentage of vegetative cover required (e.g., New York requires 80 percent). Please review your state's construction general permit for specific requirements.

Native vegetation must be established uniformly over each disturbed area on the site. Stabilizing seven of ten slopes, or leaving an area equivalent to 30 percent of the disturbed area completely unstabilized will not satisfy the *uniform vegetative cover* standard.

The contractor must establish vegetation over the entire disturbed soil area at a minimum density of 70 percent of the native vegetative coverage. For example, if native vegetation covers 50 percent of the undisturbed ground surface (e.g., in an arid or semi-arid area), the contractor must establish 35 percent vegetative coverage uniformly over the entire disturbed soil area ( $0.70 \times 0.50 = 0.35$  or 35 percent). Several states require perennial native vegetative cover that is *self-sustaining* and capable of providing *erosion control equivalent to preexisting conditions* to satisfy the 70 percent coverage requirement.

In lieu of vegetative cover, you can apply alternate measures that provide equivalent soil stabilization to the disturbed soil area. Such equivalent measures include blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion-resistant soil covering or treatments. Your construction general permit might allow all or some of these alternate measures for equivalent soil stabilization for final stabilization; check your general permit.

## B. Permit Termination

Once construction activity has been completed and disturbed areas are finally stabilized, review your general permit for specific steps to end your coverage under that permit. EPA and many states require you to submit a form, often called a notice of termination (NOT), to end your coverage under that construction general permit. Before terminating permit coverage, make sure you have accomplished the following:

- Remove any construction debris and trash
- Remove temporary BMPs (such as silt fence). Remove any residual sediment as needed. Seed and mulch any small bare spots. BMPs that will decompose, including some fiber rolls and blankets, may be left in place
- Check areas where erosion-control blankets or matting were installed. Cut away and remove all loose, exposed material, especially in areas where walking or mowing will occur. Reseed all bare soil areas
- Ensure that 70 percent of background native vegetation coverage or equivalent stabilization measures have been applied for final soil stabilization of disturbed areas
- Repair any remaining signs of erosion
- Ensure that post-construction BMPs are in place and operational. Provide written maintenance requirements for all post-construction BMPs to the appropriate party
- Check all drainage conveyances and outlets to ensure they were installed correctly and are operational. Inspect inlet areas to ensure complete stabilization and remove any brush or debris that could clog inlets. Ensure banks and ditch bottoms are well vegetated. Reseed bare areas and replace rock that has become dislodged
- Seed and mulch or otherwise stabilize any areas where runoff flows might converge or high velocity flows are expected
- Remove temporary stream crossings. Grade, seed, or re-plant vegetation damaged or removed
- Ensure subcontractors have repaired their work areas before final closeout

You might also be required to file an NOT if you transfer operational control to another

## Take a Closer Look...

### Is there a deadline to submit an NOT?

Many states require a Notice of Termination (NOT) or similar form to indicate that the construction phase of a project is completed and that all the terms and conditions have been met. This notification informs the permitting authority that coverage under the construction general permit is no longer needed. If your permitting authority requires such a notification, check to see what conditions must be met in order to submit it and check to see if there is a deadline for submission. EPA's Construction General Permit requires that you submit an NOT when you have met all your permit requirements. The NOT is due no later than 30 days after meeting these requirements.

### What does this mean to me?

*Check your permit carefully for details and conditions relating to terminating your permit coverage.*

party before the project is complete. The new operator would be required to develop and implement a SWPPP and to obtain permit coverage as described above.

EPA and most states allow homebuilders to terminate permit coverage when the property has been transferred to the homeowner with temporary or final stabilization measures in place. If the transfer is made with temporary stabilization measures in place, EPA expects the homeowner to complete the final landscaping. Under these circumstances, EPA and most states do not require homeowners to develop SWPPPs and apply for permit coverage.

## C. Record Retention

EPA's regulations specifies that you must retain records and reports required in the permit, including SWPPPs and information used to complete the NOI, for at least 3 years from the termination of coverage or expiration of the permit. You should also keep maintenance and inspection records related to the SWPPP for this same time frame. General permits issued by states may have a longer period for retention.



**Figure 17.** Make sure inlets, outlets, and slopes are well stabilized before leaving the site and filing your "Notice of Termination" for ending permit coverage.

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## Acknowledgements

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# Appendix A: SWPPP Template

An electronic copy of the SWPPP template is available on EPA's web site at:  
<http://www.epa.gov/npdes/swpppguide>

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## Appendix B: Sample Inspection Report

An electronic copy of the sample inspection report is available on EPA's web site at:  
<http://www.epa.gov/npdes/swpppguide>

# Appendix C: Calculating the Runoff Coefficient

The following information is largely taken from EPA's 1992 guidance *Stormwater Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-005).

It is important to estimate your development's impact on runoff after construction is complete. This can be done by estimating the runoff coefficient for pre- and post-construction conditions. The runoff coefficient ("C" value) is the partial amount of the total rainfall which will be come runoff. The runoff coefficient is used in the "rational method" which is:

$$Q = CiA,$$

Where Q = the rate of runoff from an area,  
i = rainfall intensity, and  
A = the area of the drainage basin.

There are many methods which can be used to estimate the amount of runoff from a construction site. You are not required to use the rationale method to design stormwater conveyances or BMPs. Consult your State/local design guides to determine what methods to use for estimating design flow rates from your development.

The less rainfall that is absorbed (infiltrates) into the ground, evaporates, or is otherwise absorbed on site, the higher the "C" value. For example, the "C" value of a lawn area is 0.2, which means that only 20 percent of the rainfall landing on that area will run off, the rest will be absorbed or evaporate. A paved parking area would have a "C" value of 0.9, which means that 90 percent of the rainfall landing on that area will become runoff. You should calculate the runoff coefficient for conditions before construction and after construction is complete. It is suggested that a runoff coefficient be calculated for each drainage basin on the site. The following is an example of how to calculate the "C" value.

The runoff coefficient or "C" value for a variety of land uses may be found in Table C-1 (NOTE: Consult your State/local design guide, if available, to determine if specific "C" values are specified for your area). The "C" values provide an estimate of anticipated runoff for particular land uses. Most sites have more than one type of land use and therefore more than one "C" value will apply. To have a "C" value that represents your site you will need to calculate a "weighted C value."

## Calculating a "Weighted C value"

When a drainage area contains more than one type of surface material with more than one runoff coefficient a "weighted C" must be calculated. This "weighted C" will take into account the amount of runoff from all the various parts of the site. A formula used to determine the "weighted C" is as follows:

$$C = \frac{A_1C_1 + A_2C_2 + \dots + A_xC_x}{(A_1 + A_2 + \dots + A_x)}$$

Where A = acres and C = coefficient.

Therefore, if a drainage area has 15 acres (ac.) with 5 paved acres (C = 0.9), 5 grassed acres (C = 0.2), and 5 acres in natural vegetation (C = 0.1), a "weighted C" would be calculated as follows:

$$C = \frac{(5 \text{ ac} \times 0.9) + (5 \text{ ac} \times 0.2) + (5 \text{ ac} \times 0.1)}{(5 \text{ ac} + 5 \text{ ac} + 5 \text{ ac})} = 0.4$$

**Table C-1. Typical “C” Values**

Description of Area	Runoff Coefficients
Business	
Downtown Areas	0.70 – 0.95
Neighborhood Areas	0.50 – 0.70
Residential	
Single-family areas	0.30 – 0.50
Multi-units, detached	0.40 – 0.60
Multi-units, attached	0.60 – 0.75
Residential (suburban)	0.25 – 0.40
Apartment dwelling areas	0.50 – 0.70
Industrial	
Light Areas	0.50 – 0.80
Heavy Areas	0.60 – 0.90
Parks, cemeteries	0.10 – 0.25
Playgrounds	0.20 – 0.35
Railroad yard areas	0.20 – 0.40
Unimproved areas	0.10 – 0.30
Streets	
Asphalt	0.70 – 0.95
Concrete	0.80 – 0.95
Brick	0.70 – 0.85
Drives and Walks	0.75 – 0.85
Roofs	0.75 – 0.95
Lawns – coarse textured soil (greater than 85% sand)	
Slope: Flat, 2%	0.05 – 0.10
Average, 2-7%	0.10 – 0.15
Steep, 7%	0.15 – 0.20
Lawns – fine textured soil (greater than 40% clay)	
Slope: Flat, 2%	0.13 – 0.17
Average, 2-7%	0.18 – 0.22
Steep, 7%	0.25 – 0.35

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# Appendix D: Resources List

The following are just a few of the many resources available to assist you in developing your SWPPP. The inclusion of these resources does not constitute an endorsement by EPA.

## EPA Resources

EPA Stormwater Construction Website

<http://www.epa.gov/npdes/stormwater/construction>

- EPA's Construction General Permit (<http://www.epa.gov/npdes/stormwater/cgp>)  
*EPA's general permit that applies to all construction activity disturbing greater than one acre in the states and territories where EPA is the permitting authority.*
- Construction SWPPP Guide, SWPPP Template and inspection form ([www.epa.gov/npdes/swpppguide](http://www.epa.gov/npdes/swpppguide))  
*A downloadable copy of this guide, the SWPPP template and inspection form.*
- Menu of BMPs (<http://www.epa.gov/npdes/stormwater/menuofbmps>)  
*Site containing over 40 construction BMP fact sheets. Also contains fact sheets on other stormwater program areas, and case studies organized by program area.*

National Management Measures to Control Nonpoint Source Pollution from Urban Areas

<http://www.epa.gov/owow/nps/urbanmm/index.html>

Managing Your Environmental Responsibilities: A Planning Guide for Construction and Development

<http://www.epa.gov/compliance/resources/publications/assistance/sectors/constructmyer/index.html>

Expedited Settlement Offer Program for Stormwater (Construction)

<http://www.epa.gov/Compliance/resources/policies/civil/cwa/esoprogramstormwater.pdf>

*A supplemental program to ensure consistent EPA enforcement of stormwater requirements at construction sites for relatively minor violations.*

Construction Industry Compliance Assistance

<http://www.cicacenter.org>

*Plain language explanations of environmental rules for the construction industry. Links to stormwater permits and technical manuals for all 50 states.*

## Smart Growth and Low Impact Development Resources

Using Smart Growth Techniques as Stormwater Best Management Practices

[http://www.epa.gov/livablecommunities/pdf/sg\\_stormwater\\_BMP.pdf](http://www.epa.gov/livablecommunities/pdf/sg_stormwater_BMP.pdf)

Stormwater Guidelines for Green, Dense Development

[http://www.epa.gov/smartgrowth/pdf/Stormwater\\_Guidelines.pdf](http://www.epa.gov/smartgrowth/pdf/Stormwater_Guidelines.pdf)

Protecting Water Resources with Smart Growth

[http://www.epa.gov/smartgrowth/pdf/waterresources\\_with\\_sg.pdf](http://www.epa.gov/smartgrowth/pdf/waterresources_with_sg.pdf)

Parking Spaces / Community Places: Finding the Balance Through Smart Growth Solutions

<http://www.epa.gov/smartgrowth/parking.htm>

EPA Nonpoint Source Low Impact Development site

<http://www.epa.gov/owow/nps/lid/>

Better Site Design: A Handbook for Changing Development Rules in Your Community

Available from <http://www.cwp.org>

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## State BMP/Guidance Manuals

Kentucky Erosion Prevention and Sediment Control Field Guide

<http://www.water.ky.gov/permitting/wastewaterpermitting/KPDES/storm/>

*Easy to read field guide describing erosion and sediment control BMP selection, installation and maintenance.*

Minnesota Stormwater Construction Inspection Guide

<http://www.pca.state.mn.us/publications/wq-strm2-10.pdf>

*A manual designed to assist municipal construction inspectors in the procedures for conducting a compliance inspection at construction sites.*

California Stormwater Quality Association's Construction Handbook

<http://www.cabmphandbooks.org/Construction.asp>

Delaware Erosion and Sediment Control Handbook

<http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/Stormwater/StormWater.htm>

Western Washington Stormwater Management Manual – Volume II – Construction Stormwater Pollution Prevention

<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

Eastern Washington Stormwater Management Manual

<http://www.ecy.wa.gov/biblio/0410076.html>

*A guidance document addressing stormwater design and management in more arid climates.*

## Certification Programs

Certified Professional in Erosion and Sediment Control

<http://www.cpesc.org>

Virginia Erosion and Sediment Control Certification Program

<http://www.dcr.virginia.gov/sw/estr&crt2.htm>

Florida Stormwater, Erosion and Sedimentation Control Inspector Certification

<http://www.dep.state.fl.us/water/nonpoint/erosion.htm>

## Other Resources

International Erosion Control Association

<http://www.ieca.org>

*A non-profit organization helping members solve the problems caused by erosion and its byproduct—sediment.*

Erosion Control Magazine

<http://www.erosioncontrol.com>

*A journal for erosion and sediment control professionals.*

Designing for Effective Sediment & Erosion Control on Construction Sites by Jerald S. Fifield, PH.D., CPESC.

Available from Forester Press

<http://www.foresterpress.com>

*Book describing proven and practical methods for minimizing erosion and sedimentation on construction sites.*

Stormwater Permitting: A Guide for Builders and Developers by National Association of Home Builders (NAHB).

Available from NAHB <http://www.nahb.org>

## Appendix F

### Pollution Prevention/Good Housekeeping

STORM WATER POLLUTION PREVENTION

- MINIMUM CONTROL MEASURE 6 -

POLLUTION PREVENTION/GOOD HOUSEKEEPING  
FOR MUNICIPAL OPERATIONS

MUNICIPAL EMPLOYEE TRAINING PRESENTATION

## **It all starts with Storm Water Runoff:**

Stormwater flows from rooftops, over paved areas, bare soil and lawns - it picks up litter, sediment, pesticides, fertilizers, chemicals from automobiles, bacteria from animal waste and other pollutants.



## **Benefits of Storm Water Management:**

- Protect drinking water supplies & recreational waterways,
- Reduce negative impacts to aquatic resources,
- Enhance property values,
- Improve quality of life,
- Infrastructure protection, and
- Savings from property/material loss prevention.



**New York State Pollutant Discharge Elimination System  
(SPDES)**

**General Stormwater Permits:**

**GP-0-24-001: SPDES General Permit (GP) for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).**

**Regulates MS4s located in “urbanized areas” .**

**GP-0-25-001: SPDES General Permit (GP) for Stormwater Discharges from Construction Activity.**

**Regulates Construction Activities that disturb 1 acre or more of land.**

## MS4 Storm Water Permit GP-0-24-001

MS4 Definition: A storm water conveyance or system of storm water conveyances owned by a State, City, Town, Village, or other public entity that discharges to the Waters of the United States and is:

- Designed or used to collect or convey stormwater (includes gutters, pipes and ditches)
- Not a combined sewer (i.e., a system that conveys both storm water and sanitary wastewater.
- Not part of a Publicly Owned Treatment Works (i.e., a waste water treatment plant)

## MS4 Program Requirements

- Addresses the 6 Minimum Control Measures (MCM),
- Lists approved Best Management Practices (BMPs),
- Sets measurable goals for each Minimum Control Measure,
- Provides for annual reporting (Annual Report and Municipal Compliance Certification due April 1 of each year),
- Covers the area draining to MS4 or “Waters of the United States” (*surface waters*), and
- Is developed, implemented and enforced to reduce storm water pollutants to Maximum Extent Practicable (MEP).

- SWMP – Storm Water Management Program
- Addresses each of the 6 **Minimum Control Measures**:
  - MCM 1 - Public Education & Outreach
  - MCM 2 - Public Participation & Involvement
  - MCM 3 - Illicit Discharge Detection & Elimination
  - MCM 4 - Construction Site Runoff Control
  - MCM 5 - Post-Construction Storm Water Management
  - MCM 6 - Pollution Prevention/Good Housekeeping for Municipal Operations**

# MCM 6 - REQUIREMENTS

- Develop and implement an Operations & Maintenance (O&M) Program.
  - Includes training of municipal employees, and
  - Goal of preventing or reducing pollutant runoff from municipal operations.
- Include training to prevent or reduce pollution that might result from:
  - Park and Open Space Operations & Maintenance,
  - Fleet and Building Operations & Maintenance,
  - New Construction and other types of Land Disturbance,
  - Storm Water Conveyance System Operations & Maintenance, and
  - Municipal Facility Operations.

# TRAINING AS REQUIRED BY THE PERMIT

Annual Employee Training – implemented to eliminate/reduce storm water pollution.

Best Management Practices (BMPs) categories:

- Good Housekeeping and Spill Prevention,
- Vehicle/Equipment Washing,
- Vehicle/Equipment Maintenance,
- Spill/Uncontrolled Release Reporting and Response,
- Street Maintenance (including Storm Sewers Systems),
- Indoor/Outdoor storage of Supplies, Materials and Waste Materials, and
- Landscaping and Lawn Care.

Materials that can cause pollution if released in an uncontrolled manner:

- Anti-freeze
- Fuel
- Hazardous Chemicals (Acids, Bases, Solvents, ...)
- Herbicides
- Paint (Oil-based, Anti-Fouling, ...)
- Pesticides
- Petroleum-based Lubricants
- Salt
- Sand/Soil/Aggregates

- Does your Facility have Spill Response Kits available?
  - Location(s)?
  - Contents?
- Activities most likely to result in an accidental spill or release:
  - Fueling of vehicles/equipment,
  - Performing Lubricating Oil changes on vehicles/equipment, and
  - Improper storage of Hazardous Chemicals/Pesticides/Herbicides.
- Are the outdoor Dumpsters/Waste Bins at your Facility maintained with lids closed when not in use?
- If vehicle/equipment washing or washdown occurs at your Facility, is the wastewater stream ultimately treated and disposed of at a Waste Water Treatment Facility?
- General housekeeping?

## MCM#6 - GOOD HOUSEKEEPING

Keep work areas neat and orderly:

- Don't let scrap accumulate,
- Sweep up regularly, and
- Clean up drips & spills promptly.

Keep unused containers tightly closed:

- Maintain lids on containers unless they are in use, and
- Make sure all fuel/lubricant/chemical containers are labeled correctly.

## VEHICLE & EQUIPMENT MAINTENANCE

- Stay with vehicle during fueling activities,
- Move any leaking vehicles/equipment indoors and use drip pans as needed,
- Employ drip pans when leaking vehicles/equipment cannot be moved indoors immediately,

AND

- Perform vehicle/equipment maintenance indoors if at all possible.

# VEHICLE/EQUIPMENT WASHING

- Option 1)** Wash vehicles/equipment at a commercial facility.
- Option 2)** Wash vehicles/equipment indoors: The wash water waste stream must ultimately go to a sanitary sewer for treatment and disposal.
- Option 3)** When commercial or inside facilities are not available – wash vehicles/equipment on an impervious surface where the wash water waste stream ultimately goes to a sanitary sewer for treatment and disposal: The designated wash area should be roofed and storm water kept off of wash pad in order to reduce the volume of the wash water waste stream liquids requiring treatment and disposal.

# SPILL REPORTING & RESPONSE

**NEVER hose down or wash down a spill or uncontrolled release!**

- That's strictly prohibited!

**Clean up spills of non-toxic liquids and materials quickly before they get away.**

- Do a thorough job, leave no residue behind.

**Protect storm drains and catch basins from spills.**

- Place pgs or absorbents between the spill/uncontrolled release and the storm drain.

**Dispose of clean-up waste properly.**

- Recycle the resulting materials or send the materials to appropriate landfill facility.

## STREET MAINTENANCE

- Debris and waste material resulting from street sweeping and catch basin cleaning must ultimately go to a sanitary landfill.
- Any waste water leaching from this debris/material must go to a sanitary sewer system for treatment and disposal at a waste water treatment plant.
- Install and maintain devices designed to protect storm drain inlets from pollutant entry during street maintenance and/or construction.

## LANDSCAPING & LAWN CARE

- Ensure that employees obtain proper training and licensing prior to pesticide application,
  - Apply pesticides strictly according to the manufacturer's label/instructions,
  - Apply pesticides/herbicides/fertilizer only on "as-needed" basis,
  - Ensure that a "buffer zone" is maintained next to open water (ponds & streams) as labeled,
- AND**
- Compost or otherwise properly dispose of vegetation clippings and yard waste.

## ILLICIT DISCHARGE DETECTION AND ELIMINATION

Be alert to illicit discharges to the Storm Sewer System or the environment:

- Discolored or inappropriate pipe discharges.
- Bad-smelling discharges.
- Potential for soil erosion to the storm system.

Report illicit discharges to your supervisory staff so that the conditions may be addressed and remedied.

## Appendix G

### Post-construction Runoff Controls

## VON SWMP Appendix F

### **§ 255-36. Postconstruction action.**

- A. Maintenance after construction. The owner or operator of property where stormwater management systems are installed in accordance with this article shall ensure they are operated and maintained to achieve the goals of this article. Proper operation and maintenance shall include, at a minimum, the following:
- (1) A preventive/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the owner or operator or person in charge of property to achieve the goals of this article.
  - (2) Written procedures for operation and maintenance of the stormwater management systems and the training of new maintenance personnel.
  - (3) Discharges from the SMPs shall not exceed design criteria or cause or contribute to water quality standard violations in accordance with § 255-32B.
- B. Covenants and restrictions required. Prior to the issuance of a certificate of occupancy or certificate of permitted use for properties which are required to have a stormwater management system in place, the owner shall execute covenants and restrictions that shall be binding on all subsequent landowners served by the stormwater management system.
- (1) The covenant shall provide for access to the system at reasonable times for periodic inspection by the SMO or his designee to ensure that the system is maintained in proper working order and to ensure that it meets design standards and complies with all the provisions of this article.
  - (2) The covenants and restrictions shall also provide for the long-term maintenance and continuation of stormwater control measures approved by the SMO for the particular project.
  - (3) The Village of Northport, in lieu of executing a covenant and restriction providing for long-term maintenance, at its sole discretion, may accept dedication of any existing or future stormwater management system, provided such system meets all the requirements of this article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

- (4) The applicant shall submit the required covenants and restrictions to the Village Attorney for approval as to form and content. Upon the required approval of the Village Attorney, the applicant shall record the document in the office of the Suffolk County Clerk at his or her own cost and expense and provide the Village Attorney and the Building Inspector with a copy of the recorded instrument and evidence that same has been approved by the Village Attorney before a certificate of occupancy or certificate of permitted use will be issued or released.

Appendix H

Local Laws

# **Chapter 255**

## **STORMWATER MANAGEMENT**

### **GENERAL REFERENCES**

- Environmental quality review — See Ch. 138.**      **Site plan — See Ch. 247.**  
**Flood damage prevention — See Ch. 159.**      **Diversion of watercourses — See Ch. 299.**  
**Grading and filling — See Ch. 173.**      **Waterways — See Ch. 302.**  
**Planning Board — See Ch. 219.**      **Zoning — See Ch. 306.**  
**Sewers — See Ch. 239.**      **Subdivision regulations — See Ch. A312.**



ARTICLE I  
**Illicit Discharges and Connections**

**§ 255-1. Legislative intent.**

The purpose of this article is to provide for the health, safety, and general welfare of the citizens of the Village of Northport through the regulation of nonstormwater discharges to the Village's separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. One of the methods chosen by the Board is to control the introduction of pollutants into the Village's separate storm sewer system (MS4) in order to comply with requirements of the SPDES General Permit for Municipal Separate Storm Sewer Systems. The declared objectives of this article are as follows:

- A. To meet the requirements of the SPDES General Permit for Stormwater Discharges from separate storm sewer system (MS4s), Permit No. GP-02-02, as amended or revised;
- B. To regulate the contribution of pollutants to the Village's separate storm sewer system (MS4), since such systems are not designed to accept, process or discharge nonstormwater wastes;
- C. To prohibit illicit connections, activities and discharges to the Village's separate storm sewer system (MS4);
- D. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this article and all applicable laws;
- E. To promote public awareness of the hazards involved in the improper discharge of trash, yard waste, lawn chemicals, pet waste, wastewater, grease, oil, petroleum products, cleaning products, paint products, hazardous waste, sediment and other pollutants into the Village's separate storm sewer system (MS4).

**§ 255-2. Applicability.**

This article shall apply to all water entering the Village's separate storm sewer system (MS4) generated on developed and undeveloped lands in any zoning district, unless explicitly exempted by an authorized enforcement agency.

**§ 255-3. Definitions and word usage.**

For the purpose of this article, certain terms and words are hereby defined. Words used in the present tense include the future, words in the singular include the plural, and words in the plural include the singular; the word "shall" is mandatory. For the purpose of this article, the following terms and phrases shall have the meanings set forth below:

**AUTHORIZED ENFORCEMENT AGENCY** — The U.S. Environmental Protection Agency, the New York State Department of Environmental Conservation and any department of the Village of Northport or employees thereof designated to enforce this article.

**BEST MANAGEMENT PRACTICES (BMPs)** — Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. Best management practices shall also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

**CLEAN WATER ACT** — The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) and any subsequent amendment thereto.

**CONSTRUCTION ACTIVITY** — Activities requiring authorization under the New York State SPDES Permit No. GP-02-01, as amended or revised, for stormwater discharges from construction work or activity, including construction work or projects resulting in land disturbance of one or more acres, and are not limited to clearing and grubbing, grading, excavating and demolition; all areas less than one acre, in all zoning districts, requiring subdivision, site plan, steep slope, building permit and other municipal approval.

**HAZARDOUS MATERIAL** — Any material, including any substance, waste, or combination thereof, which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

**ILLICIT CONNECTION** — Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the Village's separate storm sewer system (MS4), including but not limited to:

- A. Any conveyance which allows any nonstormwater discharge, including treated or untreated sewage, process wastewater, and wash water, to enter the Village's separate storm sewer system (MS4), and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency; or
- B. Any drain or conveyance connected from commercially or industrially utilized property to the Village's separate storm sewer system (MS4) which has not been documented in plans, maps, or equivalent records and has not been approved by an authorized enforcement agency.

**ILLCIT DISCHARGE** — Any direct or indirect nonstormwater discharge to the Village's separate storm sewer system (MS4), except as exempted in § 255-5A of this chapter or by an authorized enforcement agency.

**INDIVIDUAL SEWAGE TREATMENT SYSTEM** — A facility serving one or more parcels of land or residential households, or a private, commercial or institutional facility, that treats sewage or other liquid wastes for discharge into the groundwaters of New York State, except where a permit for such a facility is required under the applicable provisions of Article 17 of the Environmental Conservation Law.

**INDUSTRIAL ACTIVITY** — Activities requiring a New York State SPDES Permit No. GP-0-06-002, as amended or revised, for discharges from industrial uses or activities, including any activity pertaining to industry, manufacturing, commerce, trade, business or institution, and is distinguished from construction.

**MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)** — A conveyance or system of conveyances, including roads with drainage systems, municipal streets and highways, catch basins, curbs, sluice-ways, gutters, ditches, man-made channels, storm drains and related appurtenances, which meet all of the following criteria:

- A. Is owned or operated by the Village of Northport;
- B. Is designed or used for collecting or conveying stormwater;
- C. Is not a combined sewer; and
- D. Is not part of a publicly owned treatment works (POTW), as defined at 40 CFR 122.2 and Chapter 239 of the Northport Village Code.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)** — The state agency responsible for the administration and enforcement of state environmental laws and regulations.

**NONSTORMWATER DISCHARGE** — Any discharge to the Village's separate storm sewer system (MS4) that is not composed entirely of stormwater.

**PERSON** — Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner, the owner's agent or person in charge or in possession of property.

**POLLUTANT** — Dredged spoil, filter backwash, solid waste, incinerator residue, treated or untreated sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, and industrial, municipal or agricultural waste and ballast discharged into water which may cause or might reasonably be expected to cause pollution of the waters in contravention of the standards.

**PREMISES** — Any building, lot, parcel of land, or portion of land in any zoning district, whether improved or unimproved, including adjacent sidewalks, walkways, paths and parking strips.

SPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES GP-02-01 — A DEC SPDES permit issued to developers of construction activities to regulate disturbance of one or more acres of land.

SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM MUNICIPAL SEPARATE SEWER SYSTEMS GP-02-02 — A DEC SPDES permit issued to municipalities to regulate discharges from municipal separate storm sewers for compliance with EPA-established water quality standards and/or to specify stormwater control standards.

SPECIAL CONDITIONS —

- A. Discharge compliance with water quality standards. The condition that applies where the Village of Northport has been notified that the discharge of stormwater authorized under its MS4 permit may have caused or has the reasonable potential to cause or contribute to the violation of an applicable water quality standard. Under this condition, the Village of Northport shall take all necessary actions to ensure future discharges do not cause or contribute to a violation of such standards.
- B. 303(d) listed waters. The condition in the Village of Northport's MS4 permit that applies in the event of a discharge into a 303(d) listed water. Under this condition, the stormwater management program must ensure to the fullest extent possible no increase of the listed pollutant of concern to the 303(d) listed water.
- C. Total maximum daily load (TMDL) strategy. The condition in the Village of Northport's MS4 permit where a TMDL, including requirements for control of stormwater discharges, has been approved by the EPA for a water body or watershed into which the MS4 discharges.
- D. The condition in the Village of Northport's separate storm sewer system (MS4) permit that applies if a TMDL is approved in the future by the EPA for any water body or watershed into which a separate storm sewer system discharges. Under this condition, the Village of Northport shall review the applicable TMDL to see if it includes requirements for control of stormwater discharges. If the Village's separate storm sewer system (MS4) is not meeting the TMDL stormwater allocations, the Village of Northport shall, within six months of the TMDL's approval, modify its stormwater management program to ensure that reduction of the pollutant of concern specified in the TMDL is achieved.

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) STORMWATER DISCHARGE PERMIT — A permit issued by the New York State Department of Environmental Conservation which authorizes the discharge of pollutants into waters of the state.

STORMWATER — Rainwater, surface runoff, snowmelt and drainage.

STORMWATER MANAGEMENT OFFICER (SMO) — The person or persons designated to administer, implement and enforce the provisions of this article and inspect stormwater management practices.

303(d) LIST — A list of all surface waters in the state for which beneficial uses of the water (drinking, recreation, aquatic habitat and industrial use) are impaired by pollutants. Such list is prepared periodically by the New York State Department of Environmental Conservation as required by Section 303(d) of the Clean Water Act, or successor law. 303(d) listed waters include but are not limited to estuaries, lakes and streams that fall short of state surface water quality standards and are not expected to improve within the next two years.

TOTAL MAXIMUM DAILY LOAD (TMDL) — The maximum amount of a pollutant to be allowed to be released into a water body so as not to impair uses of the water, allocated among the sources of that pollutant.

WASTEWATER — Water that is not stormwater, is contaminated with pollutants and is or will be discarded.

**§ 255-4. Responsibility for administration. [Amended 10-5-2010 by L.L. No. 8-2010]**

The Village Administrator, or such other person as shall be designated by the Mayor as the Stormwater Management Officer (SMO) for the purpose of this article, shall administer, implement, and enforce the provisions of this article. Such powers granted or duties imposed upon the authorized enforcement official may also be assigned by the Mayor to other Village employees.

**§ 255-5. Illegal discharges and connections; exceptions.**

A. Illegal discharges. No person shall discharge or cause to be discharged into the Village's separate storm sewer system (MS4) any materials other than stormwater except as follows:

- (1) The following discharges are exempt from the provisions of this section, unless the New York State Department of Environmental Conservation or the Village of Northport has determined the discharge to be a substantial contributor of pollutants: water line flushing or other potable water sources; landscape irrigation or lawn watering; existing diverted stream flows; rising groundwater; uncontaminated groundwater infiltration into storm drains; uncontaminated pumped groundwater; foundation or footing drains; crawl space or basement sump pumps; airconditioning condensate; irrigation water; springs; water from individual residential car washing; natural riparian habitat or wetland flows; dechlorinated swimming pool discharges; street wash water; water from fire-fighting activities; and any other water source not containing pollutants.
- (2) Discharges approved in writing by the SMO to protect life or property from imminent harm or damage, provided that such approval shall not be construed to constitute compliance with other applicable laws and requirements, and further provided that such discharges may be permitted for a specified period of time and

under such conditions as the SMO may deem appropriate to protect such life and property while reasonably maintaining the purpose and intent of this article.

- (3) Dye testing in compliance with applicable state and local laws is an allowable discharge, provided the SMO has been verbally notified prior to the time of the test.
- (4) Any discharge permitted under a SPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the New York State Department of Environmental Conservation, provided that the discharger is in full compliance with all requirements of the permit, waiver or order and other applicable laws and regulations, and provided that written approval has been granted for any such discharge to the Village's separate storm sewer system (MS4).
- (5) Any discharge pursuant to a municipal act, including but not limited to the application of sand, salt and other substances used for road safety during inclement weather, fire-extinguisher foam, and oil-spill absorbent material utilized pursuant to the Village's spill response procedure.

**B. Illicit connections.**

- (1) No person shall construct, use, maintain, or permit the continued existence of an illicit connection to the Village's separate storm sewer system (MS4).
- (2) For the purpose of this article, an illicit connection made in the past, regardless of whether the connection was permissible at the time of connection, shall be prohibited.

**§ 255-6. (Reserved)**

**§ 255-7. Activities contaminating stormwater.**

**A. No person shall:**

- (1) Cause or contribute to a violation of the Village's separate storm sewer system (MS4) SPDES permit.
- (2) Take any action which may subject the Village of Northport to special conditions as defined in this article.

**B. Upon notification that a person's activities cause or contribute to violations of the Village's separate storm sewer system (MS4) SPDES permit authorization, that person shall take all reasonable actions to correct such activities or abate the condition complained of within the time specified in the notice.**

**§ 255-8. Prevention, control and reduction of stormwater pollutants.**

- A. Best management practices. Where illicit discharges or activities contaminating stormwater have been identified, the SMO shall require implementation of best management practices (BMPs) to control those illicit discharges and activities.
- B. The property owner, person in charge or in possession, or the operator of a commercial or industrial establishment shall provide, at his own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the Village's separate storm sewer system (MS4) through the use of structural and nonstructural BMPs.
- C. Any person responsible for property in any zoning district which is or may be the source of an illicit discharge or an activity contaminating stormwater shall be required to implement, at his own expense, additional structural and nonstructural BMPs to reduce or eliminate the source of pollutants to the Village's separate storm sewer system (MS4).
- D. For the purpose of this article, full compliance with all terms and conditions of a valid SPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this article.

**§ 255-9. (Reserved)****§ 255-10. (Reserved)****§ 255-11. (Reserved)****§ 255-12. Industrial or construction activity discharges.**

Any person subject to an industrial or construction activity SPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the SMO prior to allowing of discharges to the Village's separate storm sewer system (MS4).

**§ 255-13. Access to facilities and monitoring of discharges.**

- A. The SMO, the NYSDEC, the Suffolk County Department of Health Services or other agency having jurisdiction shall be permitted to enter and inspect facilities subject to regulation under this article or other applicable law as often as may be necessary to determine compliance with this article. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to the SMO or to the representative of other agencies having jurisdiction.

- B. Facility operators shall allow the SMO or other agency having jurisdiction ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records as may be required to implement the provisions of this article or other applicable law.
- C. The Village of Northport or other agency having jurisdiction shall have the right to set up on any facility subject to the provisions of this article such devices as are necessary to conduct monitoring and/or sampling of the facility's stormwater discharge.
- D. The Village of Northport or other agency having jurisdiction has the right to require the facilities subject to the provisions of this article to install monitoring equipment as is reasonably necessary to determine whether the property is in compliance. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated at least once every two years to ensure their accuracy. Proof of such calibration shall be provided upon request.
- E. Unreasonable delays in allowing access to a facility shall be deemed a violation of this article, and any person who impedes or interferes with the ability of the SMO or other agency having jurisdiction to perform inspections or carry out their duties shall be in violation of this article.
- F. At the request of the SMO, the Village Attorney of the Village of Northport is authorized to make application to any court of competent jurisdiction for the issuance of an administrative search warrant in order to conduct an inspection of any premises where the owner, person in charge or in possession refuses or fails, after due notice, to allow an inspection of its premises and where there is reasonable cause to believe that a violation of this article is occurring or has occurred.

**§ 255-14. (Reserved)**

**§ 255-15. Notification of spills.**

- A. Notwithstanding any other provision of law to the contrary, as soon as any owner, person in charge or in possession of property, facility operator or person responsible for emergency response for a facility has information of any known or suspected release of hazardous or nonhazardous materials which are resulting or may result in illegal discharges or pollutants entering into the Village's separate storm sewer system (MS4), said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. Said person shall notify the Village of Northport Department of Public Works of such spillage in person, by telephone or by facsimile no later than the next business day following the discharge. Notifications in person or by telephone shall be confirmed by written notice, addressed and mailed to the Village of Northport Department of Public Works within three

business days of the telephone notice. If contact cannot be made with the Department of Public Works, said person shall immediately contact the Village's Police Department or Village Clerk.

- B. Any owner, person in charge or in possession of property, facility operator or person responsible for emergency response for a facility who fails to notify the Village of Northport Department of Public Works, the Northport Police Department or the Northport Village Clerk of such spillage shall, upon conviction, be subject to both fine and imprisonment.
- C. In the event of such a release of hazardous materials, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services in addition to the notification required pursuant to § 255-15A.
- D. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner, person in charge or possession, or the operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years from the date of the discharge.
- E. Any owner, person in charge or in possession of property, facility operator or person responsible for emergency response for a facility shall be fully responsible for the containment, cleanup and removal, and for all direct and indirect costs incurred resulting from such spillage.
- F. Any owner, person in charge or in possession of property, facility operator or person responsible for emergency response for a facility shall fully compensate the Village for all direct and indirect costs and expenses incurred by the Village to contain and prevent the spilled material from contaminating or degrading the environment or from causing a hazard to public health or safety, or to clean up, remove and dispose of the spilled material. The provisions of this section shall not be construed to confer any obligation upon the Village of Northport, its agents or employees to take any action other than to notify emergency response agencies.

**§ 255-16. Suspension or termination of access.**

- A. Suspension of access. The SMO may, without prior notice, suspend access to the Village's separate storm sewer system when such suspension, in the opinion of the SMO, is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, to the Village's separate storm sewer system (MS4) or to the health or welfare of persons as determined by the SMO. The SMO shall notify the person of such suspension within a reasonable time thereafter in writing of the reasons for the suspension and the corrective measures to be taken. If the

violator fails to comply with a suspension order issued in an emergency, the SMO may take such steps as he deems necessary to prevent or minimize damage to the Village's separate storm sewer system (MS4) or to persons or the environment. The owner or person in charge or in possession of the property shall reimburse the Village for all direct and indirect costs and expenses incurred by the Village within 10 days of receipt of such demand and invoice. In the event the person fails, refuses and/or neglects to pay the monies due and owing to the Village, the amount so charged shall forthwith become a lien against such lands and shall be added to and become part of the taxes next to be assessed and levied upon such lands, the same to bear interest at the same rate as taxes, and shall be collected and enforced by the same officers and in the same manner as taxes. Nothing contained in this article shall be deemed to prohibit the Village from pursuing all other available remedies in law or in equity.

B. Termination of access. Any person discharging to the Village's separate storm sewer system (MS4) in violation of this article shall have his access terminated if such termination would abate or reduce an illicit discharge.

(1) Notice of termination of access. The SMO shall notify a violator in writing of the proposed termination of its MS4 access and the reasons therefor by regular and certified mail, return receipt requested, and mailed to the last known address, or if the last known address cannot be ascertained, then mailed to the property address. The notice shall state the corrective action to be taken to abate or correct the condition and the period of time within which such remedial action shall be completed.

(2) Remedial action. The violator shall take such action as is necessary to cure the condition to the satisfaction of the SMO within the time specified in the notice, and shall allow such inspections and produce such documents as deemed necessary by the SMO to establish full compliance with the notice. Access may be restored by the SMO if the illicit discharge has ceased, the condition has been cured, and the discharger has taken steps to prevent its recurrence.

(3) Petition for reconsideration. In the alternative, the violator may petition in writing for reconsideration of the SMO's notice and for a hearing by filing a request with the Northport Village Clerk within five days of receiving such notice. The petition shall state all facts deemed relevant or necessary by the violator, and shall be submitted with all documentation supporting the claim, together with a filing fee of \$150.

(4) Hearing. The Village Board, by a hearing officer designated by the Mayor, shall conduct a hearing and make findings for all purposes under this article. The violator may be represented by counsel and present such evidence as he deems necessary in support of his

claim. The hearing officer shall file his report in the office of the Village Clerk and provide the violator, or his counsel, with a copy of the report no later than 10 business days following the close of the hearing. The hearing officer may restore access if the illicit discharge has ceased, the condition has been cured and the discharger has taken steps to prevent its recurrence as he deems necessary, and may make such other recommendations as are warranted by the circumstances. Denial of access may be continued if the hearing officer determines that the illicit discharge has not ceased or is likely to recur.

- (5) Village Board action. The Village Clerk shall forward the hearing officer's report and recommendations to the Village Board for its consideration with a copy to the Village Attorney. The Village Board shall retain sole authority to make a final determination and may adopt or reject, in whole or in part, the hearing officer's recommendations, and may establish such conditions as it deems necessary under the circumstances.

- C. Violation. It shall be a violation of this article to reinstate access to premises terminated or suspended pursuant to this article without the prior written approval of the SMO.

**§ 255-17. (Reserved)**

**§ 255-18. Notice of violation.**

When the SMO finds that a person has violated any provision of this article, he may order compliance by written notice of violation to the property owner, person in charge or in possession of, or operator of the property. Such notice of violation may require without limitation:

- A. The elimination of illicit connections or discharges;
- B. That the discharge practice or operation violative of this article cease and desist;
- C. The performance of monitoring, analyses, and reporting activities;
- D. The implementation of source control or treatment BMPs; and
- E. The abatement or remediation of stormwater pollution, contamination, or hazards and the restoration of any affected property. If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise the violator and owner or person in charge or possession that should he fail to remediate or restore within the established deadline, the work will be done by the Village and the direct and indirect expenses thereof shall be charged against the property. Restoration of land to its undisturbed condition shall include adjoining properties, utilities and both subsurface and surface waterways. In the event the person fails,

refuses and/or neglects to pay the monies due and owing to the Village, the amount so charged shall forthwith become a lien against such lands and shall be added to and become part of the taxes next to be assessed and levied upon such lands, the same to bear interest at the same rate as taxes, and shall be collected and enforced by the same officers and in the same manner as taxes.

**§ 255-19. Enforcement; penalties for offenses.**

- A. For each violation of the provisions of this article, including but not limited to violations of conditions imposed by the Village Board or SMO, the property owner, person in charge or in possession of, or operator of the premises where such violation has been committed or exists shall be held liable, on conviction thereof, to a fine or penalty of not less than \$500, nor more than \$5,000 for a conviction of a first offense; upon conviction of a second violation where the offense is committed within a period of five years of the first offense, a fine of not less than \$1,000 nor more than \$10,000; and the conviction of a third or subsequent violation where the offense is committed within a period of five years of the first and second offenses shall constitute a misdemeanor punishable by a fine of not less than \$1,500, nor more than \$15,000, or imprisonment not to exceed six months, or both. Each day or part thereof such violation continues following notification by the Village or service of a summons shall constitute a separate offense punishable in a like manner.
- B. In addition to the penalties set forth above, the Village Board may maintain an action for civil penalties in the sum of not less than \$250, nor more than \$1,500 for each offense against this article.
- C. In addition to the penalties set forth above and any other remedy available to the Village, the Village Board may maintain an action or proceeding in the name of the Village in a court of competent jurisdiction to compel compliance with or to restrain by injunction the violation of this article, and/or to recover legal fees.
- D. In the event the sums due and owing to the Village are not charged against such lands as provided in this article, the Village Board may maintain a civil action to recover such sums against the owner of the land or any other responsible party.
- E. The remedies listed in this article are not exclusive of any other remedies available under any applicable federal, state or local law, and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

**§ 255-20. Alternative remedies.**

- A. Upon violation of any provision of this article, a person may be eligible for alternative remedies in lieu of a civil penalty, upon recommendation of the Village Attorney and concurrence of the SMO, where:

- (1) The violation was unintentional.
- (2) The violator has no history of previous violations of this article.
- (3) Environmental damage was minimal.
- (4) The violator acted quickly to remedy violations.
- (5) The violator fully cooperated in the investigation and resolution of the condition.

B. Alternative remedies shall consist of one or more of the following:

- (1) Attendance at compliance workshops.
- (2) Storm drain stenciling or storm drain marking.
- (3) River, stream, creek, beachfront or shoreline cleanup activities.

**§ 255-21. Violations deemed public nuisance.**

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this article is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.



ARTICLE II  
**Erosion and Sediment Control**

**§ 255-22. Legislative intent.**

In addition to the legislative intent as set forth in Article I of this chapter, the Village Board intends to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety and welfare of the citizens of the Village of Northport, and makes the following findings of fact:

- A. Land development activities and associated increases in site-impervious cover often alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, or sediment transport and deposition;
- B. This stormwater runoff contributes to increased quantities of waterborne pollutants, including siltation of aquatic habitats for fish and other desirable species;
- C. Clearing and grading during construction tends to increase soil erosion and add to the loss of native vegetation necessary for terrestrial and aquatic habitats;
- D. Improper design and construction of stormwater management practices can increase the velocity of stormwater runoff, thereby increasing streambank erosion and sedimentation;
- E. Impervious surfaces allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream baseflow;
- F. Substantial economic losses can result from these adverse impacts on the waters of the Village of Northport and the State of New York;
- G. Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activities;
- H. Regulation of land development activities by means of performance standards governing stormwater management and site design will produce development compatible with the natural functions of a particular site or an entire watershed and thereby mitigate the adverse effects of erosion and sedimentation from development.

**§ 255-23. Objectives.**

In order to address the above-enumerated findings of fact, the Village Board intends to achieve the following objectives:

- A. Meet the requirements of minimum measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, as amended or revised;

- B. Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities, Permit No. GP-02-01, as amended or revised;
- C. Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;
- D. Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;
- E. Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- F. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices, and to ensure that these management practices are properly maintained and eliminate threats to public safety.

**§ 255-24. Legislative authority; applicability.**

- A. This article is enacted pursuant to the authority invested in the Village Board pursuant to § 10 of the Municipal Home Rule Law of the State of New York and shall be applicable to all land development activities affecting 43,560 square feet (one acre) or more; or activities disturbing less than one acre of land if part of a larger common plan of development or sale, even though multiple separate and distinct land development activities may take place at different times on different schedules.
- B. All land development activities subject to review and approval by the Planning Board or Department shall be reviewed for compliance with this article unless otherwise exempted.
- C. All relevant applications for building permits, unless the stormwater pollution prevention plan (SWPPP) has already been approved by the Planning Board, shall be reviewed by the Building inspector for compliance with this article.

**§ 255-25. Exemptions.**

The following activities may be exempt from review under this article:

- A. Any subdivision plat or site plan which has received final approval by the Planning Board, and any development for which an unexpired building permit has been issued by the Building Inspector on or prior to January 1, 2008.

- B. Those activities of an individual engaged in gardening of flowers and/or vegetables for personal use on residentially utilized lots developed by one- or two-family housing.
- C. Routine maintenance activities that disturb less than five acres and are performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility.
- D. Amendments to any stormwater management practice, or repairs or alterations to a system deemed necessary by the Stormwater Management Officer.
- E. Emergency activities undertaken to protect life, property or natural resources from imminent harm or danger as determined by the SMO or his designee.
- F. Installation of fencing, signs, telephone and utility poles or posts.
- G. Landscaping and horticultural activities in connection with an existing structure except such instances which require permits pursuant to the Village Code.
- H. Agricultural activity as defined in this article.
- I. Cemetery graves.

**§ 255-26. Definitions and word usage.**

For the purpose of this article, certain terms and words are hereby defined. Words used in the present tense include the future, words in the singular include the plural, and words in the plural include the singular; the word "shall" is mandatory. For the purpose of this article, the following terms and phrases shall have the meanings set forth below:

**AGRICULTURAL ACTIVITY** — The use of land for the production of vegetative crops, such as but not limited to grains, field crops, market-garden crops, fruits, sod and fiber plants, and in which the maintenance or keeping of poultry or farm animals is accessory and incidental to the use of the premises for agricultural purposes. Farming shall not include the commercial raising of dogs, cats, fur-bearing animals or dairy cattle. For the purposes of this article, the operation of greenhouses shall not be considered as farming.

**BUILDING** — Any structure, either temporary or permanent, having walls and a roof, designed for the shelter of any person, animal, or property, and occupying more than 100 square feet of area.

**CHANNEL** — A natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

**CLEARING** — Any activity that removes the vegetative surface cover.

**COVENANT AND RESTRICTION** — A legally recorded document that acts as a property deed restriction.

**DEDICATION** — The deliberate appropriation of property by its owner for general public use.

**DESIGN MANUAL** — The New York State Stormwater Management Design Manual, most recent version, including applicable updates, that serves as the official guide for stormwater management principles, methods and practices.

**DEVELOPER** — A person who undertakes land development activities.

**EROSION CONTROL MANUAL** — The most recent version of the New York Standards and Specifications for Erosion and Sediment Control Manual, commonly known as the "Blue Book."

**GRADING** — Excavation or fill of material, including the resulting conditions thereof.

**IMPERVIOUS COVER** — Those surfaces, improvements and structures that cannot effectively infiltrate rainfall, snowmelt and water (e.g., building rooftops, pavement, sidewalks, driveways, etc.).

**INDUSTRIAL STORMWATER PERMIT** — A State Pollutant Discharge Elimination System permit issued to a commercial industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

**INFILTRATION** — The process of percolating stormwater into the subsoil.

**JURISDICTIONAL WETLAND** — An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as "hydrophytic vegetation."

**LAND DEVELOPMENT ACTIVITY** — Construction activity, including clearing, grading, excavating, soil disturbance or placement of fill, that results in land disturbance of equal to or greater than one acre of land, or activities disturbing less than one acre of total land area that is part of a larger common plan of development or sale, even though multiple separate and distinct land development activities may take place at different times on different schedules.

**NONPOINT SOURCE POLLUTION** — Pollution from any source other than from any discernible, confined and discrete conveyances, and shall include but not be limited to pollutants from agricultural, silvicultural, mining, construction, subsurface disposal and urban runoff sources.

**NYSDEC** — The New York State Department of Environmental Conservation, the agency responsible for the administration and enforcement of state environmental laws and regulations.

**PHASING** — Clearing a parcel of land in distinct pieces or parts, with the stabilization of each piece completed before the clearing of the next.

**POLLUTANT OF CONCERN** — Sediment or a water quality measurement that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of

impairment of any water body that will receive a discharge from the land development activity.

**PROJECT** — Land development activity.

**RECHARGE** — The replenishment of underground water reserves.

**SEDIMENT CONTROL** — Measures that prevent eroded sediment from leaving the site.

**SENSITIVE AREAS** — Cold-water fisheries, shellfish beds, swimming beaches, groundwater recharge areas, water supply reservoirs, and habitats for threatened, endangered or special-concern species.

**SPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES GP-02-01** — A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to developers of construction activities to regulate disturbance of one or more acres of land.

**SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM MUNICIPAL SEPARATE STORMWATER SEWER SYSTEMS GP-02-02** — A permit under the New York State Pollutant Discharge Elimination System (SPDES) issued to municipalities to regulate discharges from municipal separate storm sewers for compliance with EPA-established water quality standards and/or to specify stormwater control standards.

**STABILIZATION** — The use of practices that prevent exposed soil from eroding.

**STOP-WORK ORDER** — An order issued which requires that all construction activity on a site be stopped.

**STORMWATER** — Rainwater, surface runoff, snowmelt and drainage.

**STORMWATER HOTSPOT** — A land use or activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies.

**STORMWATER MANAGEMENT** — The use of structural or nonstructural practices that are designed to reduce stormwater runoff and mitigate its adverse impacts on property, natural resources and the environment.

**STORMWATER MANAGEMENT OFFICER** — The person or persons designated to administer, implement and enforce the provisions of this article, who shall accept and review stormwater pollution prevention plans, forward the plans to the applicable department and inspect stormwater management practices.

**STORMWATER MANAGEMENT PRACTICES (SMPs)** — Measures, either structural or nonstructural, that are determined to be the most effective, practical means of preventing flood damage and preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.

**STORMWATER MANAGEMENT SYSTEM** — One or a series of stormwater management practices installed, stabilized and operating for the purpose of controlling stormwater runoff.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP)** — A plan for controlling stormwater runoff and pollutants from a site during and after construction activities.

**STORMWATER RUNOFF** — Flow on the surface of the ground resulting from precipitation.

**SURFACE WATERS OF THE STATE OF NEW YORK** — Lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic Ocean within the territorial seas of the State of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction. Storm sewers and waste treatment systems, including treatment ponds or lagoons which also meet the criteria of this definition, are not waters of the state. This exclusion applies only to man-made bodies of water which neither were originally created in waters of the state (such as a disposal area in wetlands), nor resulted from impoundment of waters of the state.

**WATERCOURSE** — A permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

**WATERWAY** — A channel that directs surface runoff to a watercourse or to the public storm drain.

#### **§ 255-27. Responsibility for administration.**

The Superintendent of the Department of Public Works or such other person as shall be designated by the Mayor shall be designated as the Stormwater Management Officer for the purpose of this article. The Stormwater Management Officer or duly authorized deputies, agents, or representatives shall inspect stormwater management practices, review all stormwater pollution prevention plans for compliance with this article and all applicable laws and rules. The SMO may review the plans; forward the plans to another department for review; engage the services of a professional engineer to review the plans, specifications and related documents; or accept the certification of a professional engineer or a certified professional in erosion and sediment control (CPESC) that the plans conform to the requirements of this article.

#### **§ 255-28. Stormwater pollution prevention plans.**

##### **A. Stormwater pollution prevention plan required.**

- (1) No building permit shall be issued and no site plan or subdivision shall be approved by any Village department, agency or board for the development of land in any zoning district until the provisions of this article have been met and a stormwater pollution prevention plan (SWPPP) has been submitted.

- (2) All drawings, plans and specifications shall be signed and sealed by a licensed professional engineer.
  - (3) A copy of the SWPPP shall be retained in a conspicuous place at the site of the land development activity so as to be easily inspected during construction from the date of initiation of construction activities to the date of final stabilization, and shall not be removed until the project is completed to the satisfaction of the Village. Failure to post or retain a copy of the SWPPP on site shall be deemed a violation of this article.
- B. Contents of stormwater pollution prevention plans. All SWPPPs submitted for filing shall provide the following information and erosion and sediment controls:
- (1) Scope of the project, including location, type, and size of project;
  - (2) Site map grading plan/construction drawings for the project, including a general location map. At a minimum, the site plan map shall show the total site area; all existing and proposed improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface waters; wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and locations of the stormwater discharges. All site maps should be drawn at a scale no smaller than one inch equals 20 feet;
  - (3) Description of the soils present at the site as identified by soil borings or test pits;
  - (4) Construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance that is consistent with the New York Standards and Specifications for Erosion and Sediment Control (Erosion Control Manual);
  - (5) Description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in stormwater runoff;
  - (6) Description of construction and waste materials expected to be stored on site with updates as requested by the Village, and a description of the nature and type of controls to be implemented in order to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater and spill prevention and response;
  - (7) Temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control

for each stage of the project, from initial land clearing and grubbing to project close-out;

- (8) A site map/construction drawing specifying the locations, sizes and lengths of each erosion and sediment control practice;
- (9) Dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;
- (10) Temporary practices that will be converted to permanent control measures;
- (11) Implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and duration that each practice shall remain in place;
- (12) Maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practice;
- (13) Names of the receiving waters;
- (14) Delineation of SWPPP implementation responsibilities for each part of the site;
- (15) Description of structural practices designed to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and
- (16) Any existing data that describes the stormwater runoff at the site.

C. Additional criteria.

- (1) Land development activities meeting the following criteria shall also include water quantity and water quality controls in the SWPPP (post construction stormwater runoff controls) as set forth below:
  - (a) Criteria A. Stormwater runoff from land development activities discharging a pollutant of concern to either an impaired water identified on the Department's 303(d) list of impaired waters or a total maximum daily load (TMDL) designated watershed for which pollutants in stormwater have been identified as a source of the impairment.
  - (b) Criteria B. Stormwater runoff from land development activities disturbing five or more acres.
  - (c) Criteria C. Stormwater runoff from land development activities disturbing between one and five acres of land during the course of the project, exclusive of the construction of single-family residences and construction activities at agricultural properties.

- (2) Land development activities meeting the additional criteria set forth in § 255-28C shall also include the following information in the SWPPP:
  - (a) All information included in § 255-28B;
  - (b) Description of each postconstruction stormwater management practice;
  - (c) Site map/construction drawings showing the specific locations and sizes of each postconstruction stormwater management practice;
  - (d) Hydrologic and hydraulic analysis for all structural components of the stormwater management system for the applicable design storms;
  - (e) Comparison of postdevelopment stormwater runoff conditions with predevelopment conditions;
  - (f) Dimensions, material specifications and installation details for each postconstruction stormwater management practice;
  - (g) Maintenance schedule to ensure continuous and effective operation of each postconstruction stormwater management practice;
  - (h) Covenants and restrictions to ensure access to all stormwater management practices at the site for the purpose of inspection, repair and maintenance in accordance with the provisions of this article;
  - (i) For land disturbances meeting Criteria A, the SWPPP shall be prepared by a licensed professional engineer who must sign the plan and certify that the design of all stormwater management practices meets the requirements in this article.
- D. Other environmental permits. The applicant shall produce copies of all other applicable environmental permits that have been or will be acquired for the land development activity, and any approval issued by the Village shall be subject to the issuance and production of such permits.
- E. Contractor certification.
  - (1) Each contractor and subcontractor identified in the SWPPP who will be involved in soil disturbance and/or stormwater management practice design or installation shall sign and date a copy of the following certification statement before undertaking any land development activity: "I certify under penalty of law that I understand and agree to comply with the terms and conditions of the Stormwater Pollution Prevention Plan. I also understand that it

is unlawful for any person to cause or contribute to a violation of water quality standards."

- (2) The certification must include the name and title of the person signing the document, address and telephone number of the contracting firm, the address (or other identifying description) of the site, any other information required by the Village and the date the certification is made.

**§ 255-29. (Reserved)**

**§ 255-30. (Reserved)**

**§ 255-31. (Reserved)**

**§ 255-32. Performance and design criteria.**

All land development activities shall meet the following performance and design criteria:

- A. Technical standards. For the purpose of this article, the following documents shall serve as the official guides and specifications for stormwater management:
  - (1) The New York State Stormwater Management Design Manual (New York State Department of Environmental Conservation, most current version or its successor, hereafter referred to as the "Design Manual").
  - (2) New York Standards and Specifications for Erosion and Sediment Control, (Empire State Chapter of the Soil and Water Conservation Society, 2004, most current version or its successor, hereafter referred to as the "Erosion Control Manual").
  - (3) Regulations that may be adopted or amended from time to time by the Northport Village Planning Board or by the Building Inspector that relate to erosion and sediment control.
  - (4) The Village of Northport, Northport Village Planning Board Residential and Business Subdivision Regulations, Site Improvement Specifications, and Construction on Steep Slopes, as amended.<sup>1</sup>
- B. Water quality standards. Any land development activity shall not cause an increase in turbidity that will result in substantial visible contrast to natural conditions in surface waters of Northport or the State of New York.

**§ 255-33. (Reserved)**

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1. See Ch. A312, Subdivision Regulations, Ch. 247, Site Plan and Ch. 219, Planning Board.

**§ 255-34. Maintenance and inspection during construction.**

- A. The applicant, developer or their representative shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with the provisions of this article. Sediment shall be removed from sediment traps or sediment ponds whenever their design capacity has been reduced by 50%.
- B. For land development activities meeting Special Criteria A, B or C in § 255-28C, a qualified professional shall conduct site inspections and document the effectiveness of all erosion and sediment control practices every seven days and within 24 hours of any storm event producing 0.5 inch of precipitation or more. Inspection reports shall be maintained in a site logbook and made available upon request of the SMO or any officer of the Village of Northport authorized to enforce the Code of the Village of Northport. Failure to maintain a site logbook or make the logbook available upon request shall be deemed a violation.

**§ 255-35. (Reserved)****§ 255-36. Postconstruction action.**

- A. Maintenance after construction. The owner or operator of property where stormwater management systems are installed in accordance with this article shall ensure they are operated and maintained to achieve the goals of this article. Proper operation and maintenance shall include, at a minimum, the following:
- (1) A preventive/corrective maintenance program for all critical facilities and systems of treatment and control (or related appurtenances) which are installed or used by the owner or operator or person in charge of property to achieve the goals of this article.
  - (2) Written procedures for operation and maintenance of the stormwater management systems and the training of new maintenance personnel.
  - (3) Discharges from the SMPs shall not exceed design criteria or cause or contribute to water quality standard violations in accordance with § 255-32B.
- B. Covenants and restrictions required. Prior to the issuance of a certificate of occupancy or certificate of permitted use for properties which are required to have a stormwater management system in place, the owner shall execute covenants and restrictions that shall be binding on all subsequent landowners served by the stormwater management system.
- (1) The covenant shall provide for access to the system at reasonable times for periodic inspection by the SMO or his designee to ensure

that the system is maintained in proper working order and to ensure that it meets design standards and complies with all the provisions of this article.

- (2) The covenants and restrictions shall also provide for the long-term maintenance and continuation of stormwater control measures approved by the SMO for the particular project.
- (3) The Village of Northport, in lieu of executing a covenant and restriction providing for long-term maintenance, at its sole discretion, may accept dedication of any existing or future stormwater management system, provided such system meets all the requirements of this article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.
- (4) The applicant shall submit the required covenants and restrictions to the Village Attorney for approval as to form and content. Upon the required approval of the Village Attorney, the applicant shall record the document in the office of the Suffolk County Clerk at his or her own cost and expense and provide the Village Attorney and the Building Inspector with a copy of the recorded instrument and evidence that same has been approved by the Village Attorney before a certificate of occupancy or certificate of permitted use will be issued or released.

#### **§ 255-37. As-built plans.**

All applicants are required to submit as-built plans for any stormwater management practices (SMPs) located on site after final construction is completed. The plan must show the final design specifications for all stormwater management systems and any other detail required by the Village, and must be certified by a professional engineer or certified professional in erosion and sediment control (CPESC).

#### **§ 255-38. (Reserved)**

#### **§ 255-39. Subdivision and site plan approval.**

No subdivision or site plan shall be approved by the Planning Board unless a stormwater pollution prevention plan (SWPPP) consistent with the requirements of this article has been submitted by the applicant and approved by the Planning Board. The approved subdivision plat or site plan shall be consistent with the provisions of this article.

#### **§ 255-40. Individual residential building lots (one- or two-family residences).**

Every building permit application for the development of a one- or two-family residence shall include a stormwater pollution prevention plan (SWPPP) that meets the requirements of this article. No building permit

shall be issued until the required plan is submitted and approved by the Department of Engineering Services, and no certificate of occupancy or certificate of permitted use shall be issued or released until a SWPPP is in place.

**§ 255-41. (Reserved)**

**§ 255-42. Inspections; authority of SMO.**

**A. Erosion and sediment control inspection.**

- (1) The Stormwater Management Officer shall require such inspections as he deems necessary to determine compliance with the provisions of this article, and may either approve that portion of the work completed, or notify the applicant where the work fails to comply with the requirements of this article or the stormwater pollution prevention plan (SWPPP) as approved.
- (2) The applicant, owner or developer shall notify the SMO or his designee to schedule an inspection at least 48 hours before each of the following is accomplished:
  - (a) Start of construction.
  - (b) Installation of sediment and erosion control measures.
  - (c) Completion of site clearing.
  - (d) Completion of rough grading.
  - (e) Completion of final grading.
  - (f) Close of the construction season.
  - (g) Completion of final landscaping.
  - (h) Successful establishment of landscaping in public areas.
- (3) In the event violations are found, the SMO or his designee shall notify the applicant or developer in writing of the nature of the violation and the required corrective actions. No further work shall be conducted except for site stabilization, if necessary, until all violations are corrected and all work previously completed has received approval by the Stormwater Management Officer or other authorized Village official. Failure to take the required corrective action or to stop work shall be deemed a violation of this article.

- B. Inspection of stormwater facilities after project completion.** Inspection programs shall be established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher-than-typical sources of sediment or other contaminants or pollutants; inspections of businesses

or industries of a type associated with higher-than-usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of state or federal water or sediment quality standards or the SPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include but are not limited to reviewing maintenance and repair records; sampling discharges, surface water, groundwater as well as material or water left in drainage control facilities; and evaluating the condition of drainage control facilities and other stormwater management practices.

- C. Submission of reports. The Stormwater Management Officer may require monitoring and reporting from the property owner, person in charge or in possession of the property as are necessary to determine compliance with this article.
- D. Right-of-entry for inspection. When any new stormwater management system is installed on private property or when any new connection is made to the public stormwater system, the owner, person in charge or in possession of the property shall grant the Stormwater Management Officer the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection for compliance with this article.
- E. Certificate of occupancy and certificate of permitted use. If any building or land development activity is conducted in violation of this article, the Stormwater Management Officer may prevent the occupancy of said building or land until there is compliance with the provisions of this article.
- F. Restoration of lands. Any violator may be required to restore land to its undisturbed condition, including adjoining properties, utilities and both subsurface and surface waterways. In the event that restoration is not undertaken within a reasonable time after notice, the Village of Northport shall take necessary corrective action, the cost of which shall become a lien upon the property and collected in the same manner as real property taxes.

#### **§ 255-43. Fees for services.**

Any person undertaking land development activities regulated by this article shall pay reasonable costs at prevailing rates for review of SWPPPs, inspections, or SMP maintenance performed by the Village of Northport or performed by a third party for the Village of Northport, as the case may be. Such fees and charges shall be established by the Board of Trustees.

#### **§ 255-44. Performance guarantee.**

- A. Construction completion guarantee. In order to ensure the full and faithful completion of all land development activities and other performance requirements established by the Village as a condition of

approval of the stormwater pollution prevention plan, the Village shall require the applicant or developer to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit from an appropriate financial or surety institution which guarantees satisfactory completion of the project and names the Village of Northport as the beneficiary. The security shall be in an amount to be determined by the Village of Northport based on submission of final design plans, with reference to actual construction and landscaping costs. The performance guarantee shall remain in force until the surety is released from liability by the Village of Northport, provided that such period shall not be less than one year from the date of final acceptance or such other certification that the facilities have been constructed in accordance with the approved plans and specifications, and that a one-year inspection has been conducted and the facilities have been found to be acceptable to the Village of Northport.

- B. Maintenance guarantee. Where stormwater management and erosion and sediment control systems are to be operated and maintained by the developer or by a person who owns or manages a commercial or industrial system, the developer or other such person, prior to construction, shall be required to provide the Village of Northport with an irrevocable letter of credit from an approved financial institution or surety to ensure proper operation and maintenance of all stormwater management and erosion control systems both during and after construction, and until the systems are removed from operation. If the developer or landowner fails to properly operate and maintain stormwater management and erosion and sediment control systems, the Village of Northport may draw upon the account to cover the costs of proper operation and maintenance, including engineering and inspection costs, and all other related costs and expenses.

**§ 255-45. (Reserved)**

**§ 255-46. Recordkeeping.**

All property owners or persons in charge or in possession of property subject to the provisions of this article shall maintain full, true and complete records demonstrating compliance with this article.

**§ 255-47. Enforcement.**

- A. Notice of violation. When the Village of Northport determines that a land development activity is in violation of the provisions of this article, it shall serve a written notice of such violation upon the property owner person in charge or in possession of the property. The notice of violation shall contain:
- (1) The name and address of the landowner or person in charge or in possession of the property to whom the notice is directed;

- (2) The address, when available, or a description of the building, structure or land upon which the violation is occurring;
- (3) A statement specifying the nature of the violation;
- (4) A description of the remedial measures necessary to bring the land development activity into compliance with this article and a time schedule for the completion of such remedial action;
- (5) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;

B. Stop-work orders.

- (1) In addition to any other penalty which may be imposed, the SMO or his designee may issue a stop-work order for violations of this article. Persons receiving a stop-work order shall be required to halt all land development activities except those activities that address the violations leading to the stop-work order. The stop-work order shall be in effect until the SMO or his designee confirms that the land development activity is in compliance and the violation has been satisfactorily addressed. Failure to address a stop-work order in a timely manner may result in civil, criminal, or monetary penalties in accordance with the enforcement measures authorized by this article.
- (2) The stop-work order shall be in writing and shall state the conditions under which the work may be resumed. The violator shall be provided with a copy of the stop-work order by delivering same to him or her in person, or to their agent or person in charge of the property or work; or by posting the stop-work order in a conspicuous place on the property. In all instances a copy of the stop-work order shall be mailed by the Department to the violator or to the property owner by certified mail to the last known address.
- (3) It shall be unlawful for any person to remove, alter, obscure, deface, change or otherwise tamper with any portion of a stop-work order that has been issued by the Village. The property owner and/or violator shall be strictly liable for a violation of this section. In addition to any other penalty provided for herein, the building permit may be revoked by the SMO or Director of Engineering Services.

**§ 255-48. (Reserved)**

**§ 255-49. Penalties for offenses.**

- A. For each violation of the provisions of this article, including but not limited to violations of a directive of the SMO or his designee, the property owner, person in charge or in possession of or operator of the

premises where such violation has been committed or exists shall be held liable, on conviction thereof, to a fine or penalty of not less than \$500, nor more than \$5,000 for a conviction of a first offense; upon conviction of a second violation where the offense is committed within a period of five years of the first offense, a fine of not less than \$1,000, nor more than \$10,000; and the conviction of a third or subsequent violation where the offense is committed within a period of five years of the first and second offenses shall constitute a misdemeanor punishable by a fine of not less than \$1,500, nor more than \$15,000 or imprisonment not to exceed six months, or both. Each day or part thereof such violation continues following notification by the Village or service of a summons shall constitute a separate offense punishable in a like manner.

- B. In addition to the criminal penalties set forth herein or in other applicable law, rule or regulation, the Village Attorney is authorized to pursue civil and equitable relief, including but not limited to compensatory actions; civil penalties in the amount of up to \$250 per day, or any part thereof; an action to compel compliance with or to restrain by injunction the violation of this article; and other remedies which in the opinion of the Village Attorney may seem necessary and proper. Such civil and equitable relief may be sought in a court of competent jurisdiction or from a duly appointed hearing officer whenever permitted by law. Any civil monetary penalty awarded may be added to the tax bill of the property where the violation has occurred and shall be collected in the same manner.
- C. In any civil or equitable action or proceeding commenced in the name of the Village of Northport for violations of this article, if the Village is successful in its action or proceeding, its attorneys' fees are required to be paid in addition to other civil penalties.
- D. The remedies provided for in this article are not exclusive of any other remedies available under applicable federal, state or local law, including the alternate remedies as described in § 255-20 herein.

**§ 255-50. Other applicable code provisions.**

Nothing contained herein shall be construed to supersede or nullify any other applicable provisions of the Village Code. The remedies of these provisions shall be cumulative of any other remedies contained in the Village Code or any other law. To the extent there is any conflict between the provisions of this chapter and any other law, including this Code, which cannot be harmonized, then the stricter provisions of law shall apply.

## Appendix I

### IDDE Forms and Sampling Guides

## Attachment 1

### DRY WEATHER MONITORING/SAMPLING GUIDANCE

1. The field equipment listed below is used to conduct dry weather monitoring.
  - Clipboard, pens, pencils, Sharpie or other waterproof pens
  - MS4 GIS maps
  - Digital camera
  - Field notebook
  - Latex gloves
  - Protective eyeglasses or goggles
  - Rubber boots/protective footwear
  - Measuring tape for measuring stream width
  - Folding scale for measuring stream depth
  - Wristwatch
  - Hi-visibility safety vest
  
2. Record all qualitative observations and field testing results on the field data sheet. Estimate the flow rate (if applicable) and note any changes to standard procedures (for whatever reason). Describe any unusual or noteworthy conditions or results in detail on the bottom of the form.

### 3. Health and Safety

Dry weather water sampling may occur when the sampling environment and discharges create hazardous conditions. Use safety precautions at all times when conducting dry weather monitoring. Observe the following safety guidelines:

- Keep a first aid kit with field equipment.
- Watch out for traffic along roadways when sampling or making observations.
- Do NOT remain in open areas or stand under trees if lightning is occurring in the vicinity.
- Watch your step; the ground may be wet and slippery, steep, or unstable. Do not attempt to climb down unsafe slopes.
- Always wear clean latex rubber gloves when sampling.
- Protect eyes and skin against contact with acids and other preservatives.
- Use common sense when deciding whether to sample during adverse weather conditions. *This program is intended to assess dry weather conditions. Do not sample during dangerous conditions such as high winds, lightning storms, or flooding conditions that might be unsafe.*
- Do not enter channels during periods of high flow. The general rule of thumb is: If the product of the water depth in feet and the velocity in feet per second is greater than 10, or the level is above your waist, don't go in.
- Do not enter confined spaces

## Village of Northport Stormwater Pollution Prevention (MS4 Program) Facility General Inspection Checklist

This inspection checklist will be used by facility managers to Conduct general inspections, and Determine if additional Best Management Practices (BMPs) may be required.

<b>Village Department:</b>	<b>Date:</b>
<b>Facility Location:</b>	<b>Time:</b>
<b>Facility Staff:</b>	
<b>SWMP Personnel:</b>	

### GOOD HOUSEKEEPING

**(Circle One)**

1.	Are outside areas kept neat, clean, and orderly?	Yes	No	N/A
2.	Are storm drain inlets labeled "No Dumping"?	Yes	No	N/A
3.	Are garbage cans, waste bins, and dumpsters covered?	Yes	No	N/A
4a.	Has the stormwater conveyance system been recently altered?	Yes	No	N/A
4b.	If 'Yes', does the alteration maintain SWPPP compliance?	Yes	No	N/A
5.	Are stormwater drainage paths clear? Grates clean?	Yes	No	N/A
6a.	Are vehicles or equipment cleaned at this facility?	Yes	No	N/A
6b.	If 'Yes', is wash water being collected and disposed of properly?	Yes	No	N/A

### HAZMAT STORAGE

**(Circle One)**

7a.	Are vehicles fueled at this location?	Yes	No	N/A
7b.	If 'Yes', are fuel tanks locked and/or properly operated?	Yes	No	N/A
7c.	If 'Yes', are measures taken to protect storm drains from spills?	Yes	No	N/A
8.	Briefly Describe:			
9.	Do aboveground tanks (liquid) have secondary containment?	Yes	No	N/A
10.	Are containment structures or surface slabs liquid tight?	Yes	No	N/A
11a.	Does site store hazardous materials (e.g., solvents, pesticides or acids?)	Yes	No	N/A
11b.	If 'Yes', are containers weathertight or covered?	Yes	No	N/A
11c.	If 'Yes', are ignitable or reactive wastes stored at least 50 feet from the property line.	Yes	No	N/A
12a.	Has the facility had a hazardous waste spill since the last inspection?	Yes	No	N/A
12b.	If 'Yes', was the problem resulting in the spill corrected?	Yes	No	N/A

**OTHER BEST MANAGEMENT PRACTICES (BMPs)**

**(Circle One)**

13a.	Does this site store hazardous or other materials that could impact the storm drain such as detergent, paint, or powders?	Yes	No	N/A
13b.	If 'Yes', are they stored in a manner prohibiting exposure to rain or runoff?	Yes	No	N/A
14.	Are waste materials kept on site in closed leak-tight containers?	Yes	No	N/A
15.	Are all leaking vehicles and/or equipment equipped with drip pans?	Yes	No	N/A
16.	Are erodible soils uncovered or exposed to rainwater?	Yes	No	N/A
17a.	Is the ground surface stained by oil or significant materials?	Yes	No	N/A
17b.	If 'Yes', has the source been found and contained?	Yes	No	N/A
18.	Are truck unloading areas covered?	Yes	No	N/A
19.	Does the facility have wastes, products, salvaged materials and recyclables stored properly?	Yes	No	N/A
20a.	Does the facility have a clarifier/oil/water separator?	Yes	No	N/A
	If 'Yes', is it clean and functioning properly?	Yes	No	N/A
21a.	Has this facility received a complaint regarding stormwater discharge?	Yes	No	N/A
21b.	If 'Yes', has the problem been addressed?	Yes	No	N/A
22.	Have personnel received training on Stormwater Pollution Prevention?	Yes	No	N/A
23.	Are spill response materials on available? (Check all that apply)	Yes	No	N/A
	___ Sand ___ Rice Hulls ___ Sorbent Booms/Pillows/Blankets			
	___ Kitty Litter ___ Neutralizer ___ Drip Pans			
	Other (please List) _____			

24. Identify other significant best management practices employed to reduce pollutants in stormwater discharges (check all that apply; describe conditions if applicable):

- |  |   |
|--|---|
| <input type="checkbox"/> Good Housekeeping _____   | <input type="checkbox"/> Retention Facilities _____ |
| <input type="checkbox"/> Containment _____         | <input type="checkbox"/> Silt Fence _____           |
| <input type="checkbox"/> Berms _____               | <input type="checkbox"/> Spill Mitigation _____     |
| <input type="checkbox"/> Leachate Collection _____ | <input type="checkbox"/> Oil/Water Separator _____  |
| <input type="checkbox"/> Sand Filter _____         | <input type="checkbox"/> Dead-end Sumps _____       |
| <input type="checkbox"/> Recycling _____           |   |
| <input type="checkbox"/> Other _____               |   |

**25. Action Items**

## VILLAGE OF NORTHPORT SPILL REPORT FORM

Federal/State/Local Spill Reporting IDs		
Village Spill#:	NRC Report#:	NYSDEC Spill #:
SCPD CC#:	SCDHS#:	
Date:	Time:	Received by:
Weather:		Department:

Complainant Information	Location of Spill
Name:	Street Address:
Address:	City/Zip Code:
Phone:	District: ____ Section: ____ Block: ____ Lot: ____
E-Mail:	

Spiller Information	Spill Information
Name:	Material Spilled:
Address:	
Phone:	
Driver's License#	
	Cause of Spill:
Clean Up Company Information	
Name:	
Representative:	
Address:	Extent of Impact:
Phone:	
E-Mail:	

Agencies Notified (Date & Time)	Agencies on Scene (Date & Time)

<b>Town Personnel/Equipment/Additional Information:</b>

Submitted by \_\_\_\_\_

## VILLAGE OF NORTHPORT DRAINAGE INSPECTION FORM

Date	Time	Location	Flow Volume	Flow Source	Clarity	Debris/ Pollution Type	Debris/ Pollution Amount	Odor
<b>Inspector:</b>			<input type="radio"/> None	<input type="radio"/> Condensate	<input type="radio"/> Clear	<input type="radio"/> None	<input type="radio"/> None	<input type="radio"/> None
			<input type="radio"/> Trickle	<input type="radio"/> Groundwater	<input type="radio"/> Cloudy	<input type="radio"/> Foam, Brown	<input type="radio"/> ¼ Full	<input type="radio"/> Chemical
			<input type="radio"/> Steady	<input type="radio"/> Irrigation	<input type="radio"/> Opaque	<input type="radio"/> Foam, White	<input type="radio"/> ½ Full	<input type="radio"/> Petroleum
			<input type="radio"/> High	<input type="radio"/> Residual SW	<input type="radio"/> N/A	<input type="radio"/> Petroleum Sheen	<input type="radio"/> ¾ Full	<input type="radio"/> Sewage
				<input type="radio"/> Unknown		<input type="radio"/> Organic Material (s)	<input type="radio"/> Plugged	
				<input type="radio"/> N/A		<input type="radio"/> Sand/Soil		
						<input type="radio"/> Sewage		
						<input type="radio"/> Trash/Debris		

Precipitation in last three days: <input type="radio"/> Yes <input type="radio"/> No	
Structural Condition: <input type="radio"/> Excellent <input type="radio"/> Good <input type="radio"/> Fair <input type="radio"/> Poor	
Nearby activities that could impact storm water quality: <input type="radio"/> Yes <input type="radio"/> No	↓ (If yes, describe below) ↓
Immediate actions taken: <input type="radio"/> Yes <input type="radio"/> No	Description:
Follow-up actions required: <input type="radio"/> Yes <input type="radio"/> No	Description: