
Model Stormwater Management Program Plan



November 2011





This document was prepared for the Ontario-Wayne Stormwater Coalition by the Genesee/Finger Lakes Regional Planning Council. It is intended to act as a model to assist individual MS4s with compliance with Part IV of GP-0-10-002.

This document is a model only; it is not intended to meet full compliance requirements with Part IV of GP-0-10-002. Individual MS4s are responsible for reviewing, revising, and publishing this document accordingly to account for your individual local MS4 situation. In addition, other locally-administered components for inclusion are outlined in Appendix C.

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Ontario County SWCD
480 North Main Street
Canandaigua, New York 14424
(585) 396-1450
www.owsc.org



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Introduction

This Ontario-Wayne Stormwater Coalition (OWSC) Model Stormwater Management Program (SWMP) Plan has been developed to comply with Part IV.A. of the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (GP-0-10-002). It is a model Stormwater Management Program Plan providing policy and management guidance to the regulated municipalities and agencies that are members of the OWSC. The purpose of this plan is to maintain or improve water quality (see Appendix A for definition).

The OWSC exists by way of an inter-municipal agreement enacted through municipal resolution by each participating member, the term of which is from February 1, 2007 through January 31, 2013. These include the Towns of Farmington, Macedon, Ontario, Victor and Walworth; the Villages of Macedon and Victor; and the Ontario County and Wayne County Highway Departments. Each of these entities is a party to this Model Stormwater Management Program Plan.

Part IV.A (“Stormwater Management Program Requirements, SWMP Background”) of GP-0-10-002 states:

Covered entities must develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from small MS4s to the maximum extent practicable (“MEP”) in order to protect water quality and to satisfy the appropriate water quality requirements of the [Environmental Conservation Law] and the [Clean Water Act]. The objective of the permits is for MS4s to assume achievement of the applicable water quality standards. (page 10)

The SWMP Plan is based on the Federal Stormwater Phase II rule, issued in 1999, which requires municipal separate storm sewer system (MS4) owners and operators, in U.S. Census-defined urbanized areas as well as in additionally designated areas, to develop a Stormwater Management Program. There are six program elements designed to reduce the discharge of pollutants to the maximum extent practicable (MEP). The program elements, titled Minimum Control Measures (MCMs), include:

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

This document describes each MCM and the Best Management Practices (BMPs) that have been implemented to maintain compliance with the NYSDEC GP-0-10-002. Responsibilities to achieve and sustain compliance are clearly defined for each BMP. Portions of the work necessary are provided through the collective efforts of the Ontario-Wayne Stormwater Coalition members. The remaining work is the responsibility of the various departments within the regulated MS4, to be coordinated by the designated Stormwater Management Officer. To this end, assistance is readily available from Coalition staff upon request. Refer to www.owsc.org for contact info.



Certain components of this program have been codified into local law within applicable MS4s. Refer to the Local Law for Stormwater Management and Erosion and Sediment Control and the Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems for more information. These laws were adopted by each MS4 in 2007.

This SWMP Plan should be reviewed on an annual basis and updated as necessary in order to take into consideration the latest technologies and information to maintain compliance with the NYSDEC GP-0-10-002, as well as to account for progress made.

Note: It is the responsibility of the designated local Stormwater Management Officer to ensure that all pertinent departments and department heads within the MS4 are made aware of any required information, activities or functions associated with permit compliance. Other program designees may include (but are not limited to):

- ◆ Elected Officials
- ◆ Superintendent of Parks
- ◆ Director of Public Works/Highway Superintendent
- ◆ Superintendent of Buildings, Grounds & Maintenance
- ◆ Animal Control
- ◆ Sewer/Water District Manager
- ◆ Code Enforcement Officer
- ◆ Other relevant departments



Minimum Measure 1: Public Education and Outreach on Stormwater Impacts

An informed and knowledgeable community 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 greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program; and
- ◆ *Greater compliance* with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.¹

1.1 Description of Minimum Control Measure

The Public Education and Outreach MCM consists of BMPs that focus on the development of educational materials designed to inform the public about the impacts that stormwater discharges have on local water bodies. The educational materials contain specific actions as to how the public, as individuals or collectively as a group, can participate in reducing pollutants and their impact on the environment. The Public Education and Outreach program and BMPs, in combination, are expected to reach all of the constituents within the MS4's permitted boundary. The target pollutant sources are construction site runoff, impacts from new and re-development projects, illicit discharges and local/regional POCs.

1.2 General Permit Requirements²

To satisfy this MCM, the operator of a regulated small MS4 needs to:

- ◆ Implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of stormwater discharges on local waterbodies and the steps that can be taken to reduce stormwater pollution; and
- ◆ Determine the appropriate BMPs and measurable goals for this minimum control measure.

An MS4 must, at a minimum:

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

¹ Adapted from US EPA Fact Sheet 833-F00-005, "Public Education and Outreach Minimum Control Measure." January 2000 (revised December 2005). See EPA's Publications search page online at http://cfpub.epa.gov/npdes/pubs.cfm?program_id=0

² Information within text box derived from US EPA Fact Sheet 833-F-00-005. Other information derived from GP-0-10-002.



- b. Develop and implement an ongoing public education and outreach program designed to describe to the general public and target audiences:**
 - i. the impacts of stormwater discharges on waterbodies;
 - ii. POCs and their sources;
 - iii. steps contributors of these pollutants can take to reduce pollutants in stormwater runoff; and
 - iv. steps contributors of non-stormwater discharges can take to reduce pollutants (non-stormwater discharges are listed below);
- c. Develop, record, periodically assess, and modify as needed, measurable goals; and**
- d. Select appropriate education and outreach activities and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.**

Non-stormwater discharges are defined in the MS4 General Permit (GP-0-10-002) Part I.A.2 and include:

- | | |
|--|---|
| ◆ Waterline flushing | ◆ Footer Drains |
| ◆ Landscape irrigation | ◆ Lawn and landscape watering runoff provided that all pesticides and fertilizers have been applied in accordance with the manufacturer's product label |
| ◆ Diverted stream flows | ◆ Water from individual residential car washing |
| ◆ Rising ground waters | ◆ Flows from riparian habitats and wetlands |
| ◆ Uncontaminated ground water infiltration | ◆ De-chlorinated swimming pool discharges |
| ◆ Uncontaminated ground water | ◆ Residual street wash water |
| ◆ Discharges from potable water sources | ◆ Discharges or flows from fire fighting activities |
| ◆ Foundation drains | ◆ De-chlorinated water reservoir discharges |
| ◆ Air conditioning condensate | ◆ Any SPDES permitted discharge |
| ◆ Irrigation water | |
| ◆ Springs | |
| ◆ Water from crawl space and basement sump pumps | |

1.3 Methodology for Compliance with Permit Requirements

The OWSC has developed many of the BMPs necessary for this MCM. These have included brochures, a webpage, and a display for community events. These BMPs will be evaluated by the OWSC on an annual basis and updated or enhanced as necessary. All information is made available to each MS4 that is a member of the OWSC and is posted online on the OWSC website at <http://owsc.org>.



1.4 Best Management Practices Implemented or Underway

1.4.1 Stormwater Pollution Prevention Brochures

Description/Methodology of BMP

Develop public education brochures addressing stormwater pollution prevention for distribution to the general public, target businesses/activities and schools. Three brochures have been developed and are titled as follows:

- ◆ Moving Dirt? Building Something?
- ◆ Stormwater Pollution Prevention: You can make a difference!
- ◆ Living Next to Stormwater Management Ponds

The brochures are available on the OWSC webpage <http://owsc.org> along with other information for businesses, municipalities, schools, and the general public, all of whom can request brochures or download the brochures directly.

Additional brochures will be developed in the future to address other SWPPP related activities.

Annual Compliance Requirements

OWSC

- ◆ Distribute relevant brochures to targeted stakeholders, the general public and others;
- ◆ Identify entities and/or events for targeted distribution of materials;
- ◆ Provide additional brochures to local MS4s upon request; and
- ◆ Update and enhance educational materials and distribute to MS4s.

Stormwater Management Officer (or Designee)

- ◆ Display public education materials in county/town/village hall;
- ◆ Inventory existing stock of brochures and replenish as needed;
- ◆ Identify entities and/or events for targeted distribution of materials; and
- ◆ Maintain records of number of educational materials distributed.

Additional Information/Resources can be found in the OWSC Stormwater Toolbox

1.4.2 Webpage

Description/Methodology of BMP

Develop and maintain a coalition webpage designed to educate businesses, municipalities, schools, and the general public regarding the impacts that stormwater runoff has on local water bodies. The webpage URL is:

<http://owsc.org>

A variety of subjects are posted regularly on the webpage, including (but not limited to) the following:



- ◆ Coalition meeting minutes and agendas
- ◆ Upcoming training opportunities for Coalition members
- ◆ Important forms and resources for citizens and MS4s, including
 - ◆ *Water quality impacts of stormwater runoff to local water bodies*
 - ◆ *Steps the public can take to reduce stormwater pollution*
 - ◆ *Public involvement programs*
 - ◆ *Progress and achievements made*
 - ◆ *Future Goals*

Annual Compliance Requirements

OWSC

- ◆ Update and maintain the webpage as necessary.

Stormwater Management Officer (or Designee)

- ◆ Update and maintain a local MS4 webpage as necessary. At the very least, provide a link to the primary OWSC webpage on the local municipal webpage.

1.4.3 Public Education Display and Community Events

Description/Methodology of BMP

A public education display addressing general stormwater pollution prevention has been developed for use by MS4s at their community events. The display is maintained by the OWSC. The display is available upon request for outreach and community events and has been used in venues such as open houses, county fairs and other similar venues. A comprehensive education and outreach package is created when combined with other materials such as EPA, NYSDEC and OWSC brochures and a knowledgeable OWSC representative.

The request system will function on a first come first serve basis and every effort will be taken to avoid potential conflicts between municipalities or agencies requesting the display for the same time period. It will be each municipality's responsibility to obtain the display from OWSC and return it promptly.

Annual Compliance Requirements

OWSC

- ◆ Maintain the display, prepare for each MS4 and manage the reservation system;
- ◆ Conduct outreach and education at community events on behalf of OWSC membership as needed.

Stormwater Management Officer (or Designee)

- ◆ Incorporate stormwater public education into community events and programs;
- ◆ In the absence of such programs, the MS4 can identify secure public locations – such as libraries or other community facilities – where the display can be mounted and left for a period of time.

Additional Information / Resources can be found in the OWSC Stormwater Toolbox



1.4.4 Multi-Media Training Kits

Description/Methodology of BMP

The OWSC has purchased two multi-media training kits for use by Coalition members. These kits are available for sign-out on a first-come, first-serve basis to MS4s. Members are encouraged to arrange training sessions for department staff so that they may view and discuss these materials in a group setting. The kits are also ideal for new employees or other individuals who wish to learn more about stormwater requirements and BMPs.

◆ Training Kit: SWPPP for Construction Sites: Ground Control

This employee training kit is designed to show employees how erosion, sediments and other potential surface water pollutants are controlled at construction sites. The program focuses on Best Management Practices (BMPs) that are widely used at most construction sites including: silt fence, stabilized entrances/exits, drop inlet protectors and others. The program illustrates how these BMPs work and how they can fail. Employees are encouraged to promptly report any failing BMPs. By making all employees "look-outs" for BMP problems, this training program is an important part of the required BMP maintenance program.

Kit includes

Video, CD-ROM or DVD: "Ground Control: Stormwater Pollution Prevention for Construction Sites" (14-1/2 minutes)
Trainer's Guide
Employee quizzes
Training sign-off forms

◆ Training Kit: Stormwatch: Municipal Stormwater Pollution Prevention

This 20-minute video training kit helps regulated municipalities (Phase I and Phase II) train their employees as required under their Permit. The video focuses on BMPs that are important to many municipal operations such as good housekeeping, spill response, materials storage and handling, landscape maintenance and street maintenance. Employees working in fleet maintenance, garages, parks, recreation facilities, street maintenance and other departments can all benefit from this training video. The video also shows employees how to spot potential "illicit discharges" occurring around town.

Kit includes

Video, CD-ROM or DVD: "Storm Watch: Municipal Stormwater Pollution Prevention" (20 minutes)
Trainer's Guide
Employee quizzes
Acknowledgment of Training forms
Storm Water Best Management Practices Guidebooks (5)

Annual Compliance Requirements

OWSC

- ◆ Maintain the training kits, prepare for each MS4 and manage the reservation system.
- ◆ Explore the possibility of adding new kits to the resource library, as necessary and prudent

Stormwater Management Officer (or Designee)

- ◆ Publicize training kit availability with municipality; encourage municipal departments to set aside time for kit use/viewing;
- ◆ Incorporate use of kits into community events and programs; and
- ◆ Evaluate effectiveness of training kits and identify future additional needs.



1.5 Best Management Practices for Future Consideration

At the request of Coalition members and as time and resources allow, the following BMPs will be considered for future exploration and implementation by the OWSC. Individual MS4s may wish to explore the implementation of these BMPs locally on an individual basis. Coalition staff can assist upon request.

1.5.1 Public Education Posters

Description/Methodology of BMP

Prepare public education posters that can be placed within municipal buildings, libraries, and schools.

Implementation Steps

OWSC/ Stormwater Management Officer (or Designee)

- ◆ Identify need, demand, subject(s) to be addressed and potential locations for posting;
- ◆ Update posters as needed and deliver to each specified location (which may include public buildings, schools and all public libraries; and
- ◆ Check posters for damage and outdated information. Replace outdated or damaged posters with new posters as they become available from the OWSC.

Additional Information / Resources can be found in the OWSC Stormwater Toolbox

1.5.2 Project WET

Description/Methodology of BMP

Project WET (Water Education for Teachers) is a collection of innovative, water-related activities that are hands-on, easy to use and fun for school aged children. Project WET activities are easily incorporated into a school's existing curricula. Project WET is intended for teachers and non-formal educators working with young people in grades K-12. The program focuses on peoples' relationship to water throughout their lives. Students learn that water is a shared resource as well as a shared responsibility. Project WET is easily integrated into a schools existing curricula. It also meets the curricular needs of nature centers, museums, teacher trainings, pre-service classes, and community organizations. The goal of Project WET is to facilitate and promote awareness, appreciation, knowledge, and stewardship of water resources through the development and dissemination of classroom ready teaching aides, and through the establishment of internationally and state sponsored Project WET programs.³

Implementation Steps

OWSC/ Stormwater Management Officer (or Designee)

- ◆ Ascertain demand across the local school districts that intersect the boundaries of the OWSC MS4s;
- ◆ Conduct outreach to schools and create a list of educators interested in participating; and

³ Information pertaining to Project Wet was retrieved from the Education Section of the NYS DEC website. See the following link: <http://www.dec.ny.gov/education/1902.html>



- ◆ If significant demand exists, begin to arrange training session(s) with the Project WET coordinators at the DEC.

1.5.3 Public Information Press Package

Description/Methodology of BMP

A public information press package can be prepared and distributed to local news agencies and the MS4s. The press package can include, but is not limited to the following items:

- ◆ Information targeting stormwater pollution prevention for households;
- ◆ Printed public service announcements;
- ◆ Invitations for public participation at open OWSC meetings;
- ◆ Invitations for the public to review the SWMP;
- ◆ Invitations for the public to review draft Annual Reports; and
- ◆ Invitations to Community Cleanup Events or other similar events.

Information in the press package can be generic relative to dates and times with more specific dates and times being developed by the OWSC and each municipality. Not all components developed for the press package should be released with each announcement. For example, the invitation for public participation at the OWSC meetings or public review of the draft SWMP would not require any video or audio material. Appropriate material will be distributed as needed.

Implementation Steps

OWSC/ Stormwater Management Officer (or Designee)

- ◆ Produce at least two press releases per year to report on the open OWSC meetings and public reviews of draft Annual Reports;
- ◆ Consider the distribution of printed, video or audio public service announcements to local news agencies and the MS4s; and
- ◆ Document the distribution, content and use of press materials.

Additional Information / Resources can be found in the OWSC Stormwater Toolbox

1.6 Minimum Reporting Requirements

At a minimum, the permittee shall report on the items below:

- List education / outreach activities performed for the general public and target audiences and provide any results (for example, number of people attended, amount of materials distributed, etc.);**
- Permittees performing the education and outreach activities required by other MCMs (listed below), may report on those activities in MCM 1 and provide the following information applicable to their program. This may include the following:**



- ◆ IDDE education activities planned or completed for public employees, businesses, and the general public, as required by Part VII.A.3 of GP-0-10-002;
- ◆ Construction site stormwater control training planned or completed, as required by Part VII.A.4 of GP-0-10-002;
- ◆ Employee pollution prevention / good housekeeping training planned or completed, as required by Part VII.A.6 of GP-0-10-002.

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

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



Minimum Measure 2: Public Involvement and Participation

The EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal stormwater management program 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 is crucial to the success of a stormwater management program because it allows for:

- ◆ **Broader public support** since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation;
- ◆ **Shorter implementation schedules** due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers;
- ◆ **A broader base of expertise and economic benefits** since the community can be a valuable, and free, intellectual resource; and
- ◆ **A conduit to other programs** as 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 a stormwater program on a watershed basis, as encouraged by EPA.⁴

2.1 Description of Minimum Control Measure

The Public Involvement and Participation MCM consists of a set of BMPs that are focused on getting members of the local community involved in the MS4's municipal stormwater management program. Compliance with State and local public notice requirements will be maintained whenever public participation is sought or required. The BMPs include a number of practices designed to seek public input on the SWMP and Annual Report accomplishments in addition to describing specific activities that encourage public participation. The target audiences for the public involvement program are key individuals and groups that may have an interest in the particular BMPs as well as the general public located within the permitted boundary.

2.2 General Permit Requirements⁵

To satisfy this minimum control measure, the operator of a regulated small MS4 must:

- ◆ Comply with applicable State, Tribal, and local public notice requirements; and
- ◆ Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure. Possible implementation approaches, BMPs (i.e., the program actions and activities), and measurable goals are described below.

⁴ Adapted from US EPA Fact Sheet 833-F-00-006, "Public Participation/Involvement Minimum Control Measure." January 2000 (revised December 2005). See EPA's Publications search page online at http://cfpub.epa.gov/npdes/pubs.cfm?program_id=0

⁵ Information within text box derived from US EPA Fact Sheet 833-F-00-006. Other information derived from GP-0-10-002.



An MS4 must, at a minimum:

- a. **Comply with the State Open Meetings Law and local public notice requirements, such as Open Meetings Law, when implementing a public involvement / participation program;**
- b. **Develop and implement a public involvement/participation program that:**
 - ◆ Identifies key individuals and groups, public and private, who are interested in or affected by the SWMP;
 - ◆ Identifies types of input the permittee will seek from the key individuals and groups, public and private, to support development and implementation of the SWMP and how the input will be used; and
 - ◆ Describes the public involvement / participation activities the permittee will undertake to provide program access to those who want it and to gather the needed input. The activities included, but are not limited to a water quality hotline (report spills, dumping, construction sites of concern, etc.), stewardship activities like stream cleanups, storm drain marking, and volunteer water quality monitoring.
- c. **Local stormwater public contact.** Identify a local point of contact for public concerns regarding stormwater management and compliance with this general SPDES permit. The name or title of this contact and the telephone number must be published in public outreach and public participation materials and kept updated with the Department on the MCC form;
- d. **Annual report presentation.** Below are the requirements for the annual report presentation:
 - i. Prior to submitting the final annual report to the Department, by June 1 of each reporting year (see Part V.C.), present the draft annual report in a format that is open to the public, where the public can ask questions about and make comments on the report. This can be done:
 - ◆ At a meeting that is open to the public, where the public attendees are able to ask questions about and make comments on the report. This may be a regular meeting of an existing board, such as planning, zoning or the town board. It may also be a separate meeting, specifically for stormwater. If multiple permittees are working together, they may have a group meeting (refer to Part V.C.2), or on the internet by:
 - Making the annual report available to the public on a webpage;
 - Providing the public the opportunity to provide comments on the internet or otherwise; and
 - Making available the opportunity for the public to request an open meeting to ask questions about and make comments on the report. If a public meeting is requested by 2 or more persons, the permittee must hold such a meeting. However, the permittee need only hold a public meeting once to satisfy this requirement.



- ii. Provide public notice about the presentation, making public the following information when noticing the presentation in accordance with the State Open Meetings Law or other local public notice requirements:
 - ◆ The placement of the annual report on the agenda of this meeting or location on the internet;
 - ◆ The opportunity for public comment. This general SPDES permit does not require a specified time frame for public comments, although it is recommended that permittees do provide the public an opportunity to comment for a period after the meeting. Comments received after the final annual report is submitted shall be reported with the following year's annual report. Permittees must take into account those comments in the following year;
 - ◆ The date and time of the meeting or the date the annual report becomes available on the internet; and
 - ◆ the availability of the draft report for prior review prior to the public meeting or duration of availability of annual report on the internet.
 - iii. The Department recommends that announcements be sent directly to individuals (public and private) known to have a specific interest in the permittee's SWMP;
 - iv. Include a summary of comments and (intended) responses with the final annual report. Changes made to the SWMP in response to comments should be described in the annual report; and
 - v. Ensure that a copy of the final report and, the SWMP plan are available for public inspection.
- e. Develop, record, periodically assess and modify as needed measurable goals; and**
- f. Select appropriate public involvement/participation activities and measurable goals to ensure the reduction of POCs in stormwater discharges to the MEP.**

2.3 Methodology for Compliance with Permit Requirements

In order to comply with this MCM, each MS4 must involve the local public in their SWMP. By participating in the OWSC, each MS4 can comply with certain aspects of the SWMP such as public participation at the OWSC meetings, incorporating a feedback mechanism into their local websites and accounting for stormwater business that is covered during public meetings that are held in targeted Ontario and Wayne County communities. MS4s will be responsible for allowing public review of their individual SWMPs and the Annual Report for the OWSC, which are both posted on the OWSC website. MS4s can also request that the OWSC develop or support programs such as volunteer monitoring of outfalls, adopt-a-stream program, community cleanup events and storm sewer stenciling. These BMPs are not General Permit requirements but they do foster public involvement and may be of interest to the local MS4s for incorporating into their SWMP. Some of these BMPs mentioned have already been implemented in individual MS4s or are being considered for future implementation. BMPs can be coordinated and implemented jointly as a Coalition or on an individual basis.

2.4 Best Management Practices Implemented or Underway



2.4.1 Public Review of Annual Report

Description/Methodology of BMP

The OWSC must submit an annual report by June 1 of each year that updates the NYSDEC on the status of their stormwater management program. Before submittal of the annual report to NYSDEC, a draft report must be prepared and presented to the public for their review and comment.

Annual Compliance Requirements

OWSC

- ◆ Present the OWSC Draft Annual Report at an OWSC meeting that is open to the public and/or post the draft Annual Report on the OWSC webpage for public review and comment; and
- ◆ Provide public notice about the presentation in accordance with State Open Meetings Law or other local public notice requirements (see Section 2.2 for specific information).

Stormwater Management Officer (or Designee)

- ◆ Present the draft Annual Report at a meeting that is open to the public and/or on the internet to solicit public review and comment; and
- ◆ Provide public notice about the presentation in accordance with State Open Meetings Law or other local public notice requirements (see Section 2.2 for specific information).

2.4.2 General Education and Outreach Efforts

Description/Methodology of BMP

The stormwater display, webpage, brochures, scheduling and appearance at public events, and other similar activities are all designed to reach out to and engage members of the public regarding the importance of stormwater issues and the purpose of the Phase II program.

Annual Compliance Requirements

OWSC

- ◆ Continue to develop and/or update innovative stormwater education and outreach materials; and
- ◆ Continue to identify opportunities for citizen engagement with regard to the stormwater program.

Stormwater Management Officer (or Designee)

- ◆ Continue to develop and/or update innovative stormwater education and outreach materials; and
- ◆ Continue to identify opportunities for citizen engagement with regard to the stormwater program.

2.5 Best Management Practices for Future Consideration

2.5.1 Public Meetings to Reach Key Groups and Individuals to Promote Public Involvement Opportunities

Description/Methodology of BMP



The OWSC may wish to consider the scheduling of a public meeting to educate key individuals, groups and members of the general public who are interested in or affected by the implementation of the SWMP in the MS4s of Ontario and Wayne Counties. In addition, the meetings can be used to solicit input on the SWMP and to publicize opportunities for the public to participate and get involved in stormwater related programs. The meetings could be hosted by one or more of the MS4s and take place in locations that would result in highest attendance possible.

Implementation Steps

OWSC

- ◆ Biannually publish a notice in local papers for each public meeting held by the OWSC notifying the public of their invitation to participate.

Stormwater Management Officer (or Designee)

- ◆ Biannually assist the OWSC with the planning of the public meeting, promote the meeting to key individuals and groups within the MS4 and participate in the meeting.

2.5.2 Incorporate a Feedback Mechanism into Municipal or Coalition Website

Description/Methodology of BMP

Through either the OWSC, and/or the municipality's website, provide a means for public input/comment regarding the stormwater management program.

Implementation Steps

OWSC

- ◆ Maintain OWSC stormwater website feedback mechanism for residents to document their input/comments on the stormwater management program; and
- ◆ Document input/comments received, and actions taken.

Stormwater Management Officer (or Designee)

- ◆ Maintain MS4 stormwater website feedback mechanism for residents to document their input/comments on the MS4 stormwater management program, and
- ◆ Document input and comments received, and actions taken.

2.5.3 Public Review of Stormwater Management Program Plan

Description/Methodology of BMP

Provide the public with an ongoing opportunity to inspect the Stormwater Management Program plan by supplying copies of it to local County/Town/Village halls, libraries and posting it on the OWSC and municipal websites.

Implementation Steps

OWSC/ Stormwater Management Officer (or Designee)

- ◆ Supply local copies to local municipal buildings and libraries in addition to keeping an updated copy posted on the coalition and municipal websites.



2.5.4 Community Cleanup Events

Description/Methodology of BMP

The OWSC will develop and hold a number of community cleanup events throughout each reporting period with the idea of developing and retaining the public's interest in stormwater pollution prevention. These could include existing programs such as the Household Hazardous Waste Collection program facilitated by the NYSDEC; nationally-sponsored events such as the "Great American Cleanup" and the "International Coastal Cleanup," which can be organized locally; and the State sponsored Adopt A Highway program.

Implementation Steps

OWSC

- ◆ Publish a notice in local papers and on the OWSC website that notifies residents of their opportunity to participate in Community Cleanup Events; and
- ◆ Assist MS4s with event organization.

Stormwater Management Officer (or Designee)

- ◆ Facilitate event by availing public resources, such as gloves, trash bags, equipment, and trucks and dumpsters for waste hauling and disposal;
- ◆ Advertise these events on municipal website;
- ◆ Schedule at least one stream or roadway cleanup per year; and
- ◆ Have information on local cleanup opportunities available at each office along with an application for volunteer group sign-up.

2.5.5 Storm Drain Stenciling

Description/Methodology of BMP

The OWSC may engage in the storm drain marking of stormwater inlet structures with messages related to stormwater quality issues. While stenciling has occurred within some MS4s, the OWSC could encourage more coordinated activity and utilize the OWSC logo in the stencil design. The premise behind this is to inform and educate the public on where and why not to dump pollutants down storm drains by indicating where the drain deposits the runoff it collects.

Implementation Steps

OWSC

- ◆ Identify local groups that may be willing to participate in the storm drain stenciling program such as Boy and Girl Scout organizations, schools or other civic minded organizations; and
- ◆ Develop a slogan using the OWSC logo for stenciling stormwater inlet structures.

Stormwater Management Officer (or Designee)

- ◆ Provide necessary support for volunteer storm drain stenciling groups, (i.e. stencils, paint, rollers, traffic control, safety equipment, trash bags, and landfill access or bulk litter collection);
- ◆ Maintain records of storm drain stenciling and volunteer participation; and
- ◆ Annually report on number of storm drains stenciled by volunteers.



2.5.6 Adopt-A-Stream Program

Description/Methodology of BMP

Any OWSC MS4 can choose to implement an Adopt-A-Stream Program. In an effort to coordinate activities across the regulated area, the OWSC may wish to develop a draft agreement that would outline all procedures and practices that all parties involved would be required to sign and adhere. The Coalition would also be required to delineate specific streams that would be protected and/or need to be cleaned.

Implementation Steps

OWSC

- ◆ Designate program coordinators and identify local public organizations and businesses that may be interested in participating in the program;
- ◆ Develop stream maintenance and cleaning procedures;
- ◆ Develop draft adoption agreement documents and distribute them to the interested groups for comment;
- ◆ Develop final adoption agreement documents and guidelines based on comments that were provided; and
- ◆ Adopt final agreements with local interested groups and businesses to allow for volunteer stream cleanups to begin.
- ◆ Organize field training and site-specific procedures.

Stormwater Management Officer (or Designee)

- ◆ Inform the previously identified local public organizations and businesses that may be interested in the program about the program;
- ◆ Post signs in visible locations along adopted streams informing the public about the organization responsible for cleanings and penalties for littering the stream segment;
- ◆ Initiate, but do not facilitate the Adopt-A-Stream program. After the program coordinators are selected there should only be a need for outside assistance and oversight of the program by the SMO; and
- ◆ Annually report on the number of stream segments adopted and cleaned under this program;
- ◆ Update program and agreements as necessary.

2.5.7 Volunteer Monitoring of Stormwater Outfalls

Description/Methodology of BMP

Develop a volunteer monitoring program that recruits volunteers and provides them with the equipment and training to monitor stormwater outfalls.

Implementation Steps

OWSC

- ◆ Identify outfalls or areas safe for volunteer monitoring groups to conduct stormwater monitoring or dry weather screening;
- ◆ Identify groups that may be interested in participating in the volunteer monitoring program; and



- ◆ Coordinate with local surface water monitoring agencies to acquire proper training, equipment, and guidelines for volunteer monitoring groups.

Stormwater Management Officer (or Designee)

- ◆ Invite identified groups to participate in the volunteer monitoring program;
- ◆ Provide necessary support to the volunteer monitoring groups such as data forms and safety equipment;
- ◆ Update the Measurable Goals based on the program that is developed for the volunteer monitoring groups; and
- ◆ Annually report on volunteer monitoring activities conducted under this program.

2.6 Minimum Reporting Requirements

At a minimum, the permittee shall report on the items below:

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



Minimum Measure 3: Illicit Discharge Detection & Elimination

Federal regulations define an illicit discharge as “...any discharge to an MS4 that is not composed entirely of stormwater...” with some exceptions. These exceptions include discharges from NPDES-permitted industrial sources and discharges from fire-fighting activities. Illicit discharges are considered “illicit” because MS4s are not designed to accept, process, or discharge such non-stormwater wastes.

Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. 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.⁶

3.1 Description of Minimum Control Measure

The Illicit Discharge Detection and Elimination (IDDE) MCM consists of BMPs that focus on the detection and elimination of illicit discharges located within the MS4s. The BMPs describe outfall mapping and update procedures, the legal authority mechanism that will be used to effectively prohibit illicit discharges, enforcement procedures and actions to ensure that the regulatory mechanism is implemented, the dry weather screening program, procedures for tracking down and locating the source of any illicit discharges, procedures for locating priority areas, and procedures for removing the sources of the illicit discharges.

⁶ Duplicated from US EPA Fact Sheet 833-F-00-007, “Illicit Discharge Detection and Elimination Minimum Control Measure.” January 2000 (revised December 2005). See EPA’s Publications search page online at http://cfpub.epa.gov/npdes/pubs.cfm?program_id=0



3.2 General Permit Requirements⁷

Recognizing the adverse effects illicit discharges can have on receiving waters, the Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement and enforce an illicit discharge detection and elimination program. This program must include the following:

- ◆ A storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
- ◆ Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on non-stormwater discharges into the MS4, and appropriate enforcement procedures and actions;
- ◆ A plan to detect and address non-stormwater discharges, including illegal dumping, into the MS4;
- ◆ The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste; and
- ◆ The determination of appropriate best management practices (BMPs) and measurable goals for this minimum control measure. Some program implementation approaches, BMPs (i.e., the program actions/activities), and measurable goals are suggested below.

An MS4 must, at a minimum:

- a. **Develop, implement and enforce a program to detect and eliminate illicit discharges into the small MS4;**
- b. **Develop and maintain a map, at a minimum within the permittee's jurisdiction in the urbanized area and additionally designated area, showing:**
 - ◆ The location of all outfalls and the names and location of all surface waters of the State that receive discharges from those outfalls;
 - ◆ The preliminary boundaries of the permittee's storm sewersheds have been determined using GIS or other tools, even if they extend outside of the urbanized area (to facilitate trackdown), and additionally designated area within the permittee's jurisdiction; and
 - ◆ When grant funds are made available or for sewer lines surveyed during an illicit discharge trackdown, the permittee's storm sewer system in accordance with available State and EPA guidance.
- c. **Field verify outfall locations;**
- d. **Conduct an outfall reconnaissance inventory, as described in the EPA publication entitled *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and***

⁷ Information within text box derived from US EPA Fact Sheet 833-F-00-007. Other information derived from GP-0-10-002.



Technical Assessment, addressing every outfall within the urbanized area and additionally designated area within the permittee's jurisdiction at least once every five years, with reasonable progress each year;

- e. **Map new outfalls as they are constructed or newly discovered within the urbanized area and additionally designated area;**
- f. **Prohibit, through a law, ordinance, or other regulatory mechanism, illicit discharges into the small MS4 and implement appropriate enforcement procedures and actions.** This mechanism must be equivalent to the State's model IDDE local law "NYSDEC Model Local Law to Prohibit Illicit Discharges, Activities and Connections to Separate Storm Sewer Systems". The mechanism must be certified by the attorney representing the small MS4 as being equivalent to the State's model illicit discharge local law. Laws adopted during the GP-01-02 permit cycle must also be attorney certified as effectively assuring implementation of the State's model IDDE law;
- g. **Develop and implement a program to detect and address non-stormwater discharges, including illegal dumping, to the small MS4. The program must include: procedures for identifying priority areas of concern (geographic, audiences, or otherwise) for IDDE program; description of priority areas of concern, available equipment, staff, funding, etc.; procedures for identifying and locating illicit discharges (trackdown); procedures for eliminating illicit discharges; and procedures for documenting actions;**
- h. **Inform public employees, businesses, and the general public of the hazards associated with illegal discharges and improper disposal of waste;**
- i. **Address the categories of non-stormwater discharges or flows (listed in Section 1.2 of this document) as necessary;**
- j. **Develop, record, periodically assess, and modify as needed, measurable goals; and**
- k. **Select appropriate IDDE BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.**

3.3 Methodology for Compliance with Permit Requirements

To regulate the activities of, connections, and to prohibit illicit discharges to the MS4s within the member communities of the OWSC as well as establish enforcement procedures, such as the NYS Model Local Law to Prohibit Illicit Discharges the OWSC secured the cooperation of the Monroe County Department of Environmental Services (MC DES). Andy Sansone, an employee of the MC DES, presented information on IDDE methodologies including several field training opportunities which focused on inspection procedures, pollution prevention and good housekeeping practices. The OWSC has and will continue to provide resources to assist field staff of individual MS4s with the outfall identification and mapping process; to date the individual MS4s have assumed the responsibility of mapping their own outfalls. The status of outfall mapping for each Coalition member was initially reported in the 2008 Joint Annual Report. An update will follow in subsequent Annual Reports.



3.4 Best Management Practices Implemented or Underway

3.4.1 Outfall Mapping

Description/Methodology of BMP

Develop and maintain a map, at a minimum within the permittee's jurisdiction in the urbanized area and additionally designated area, showing:

- ◆ The location of all outfalls and the names and location of all surface waters of the State that receive discharges from those outfalls;
- ◆ The preliminary boundaries of the permittee's storm sewersheds have been determined using GIS or other tools, even if they extend outside of the urbanized area (to facilitate trackdown), and additionally designated area within the permittee's jurisdiction; and
- ◆ When grant funds are made available or when sewer lines are surveyed during an illicit discharge trackdown, the permittee's storm sewer system in accordance with available State and EPA guidance.

The map should identify each outfall with a unique identifier, and link the outfall to a table of outfall properties that records pertinent properties of each outfall.

Annual Compliance Requirements

OWSC/ Stormwater Management Officer

- ◆ It was the individual responsibility of each MS4 to review their outfall data for accuracy and provide a request to the Coalition for any additional resources or assistance; and
- ◆ As these resources become available through grants or enforcement actions, the MS4 will begin to expand the existing outfall map to include the sewershed boundaries, storm sewerlines and other storm facilities with the goal of mapping their entire storm sewer systems.

3.4.2 Adoption of the IDDE Stormwater Management Ordinance

Description/Methodology of BMP

Each member MS4 of the OWSC has adopted a stormwater management ordinance to prohibit illicit discharges, and implement enforcement procedures and actions as needed. All of the members of the OWSC chose to implement their local law based on the Model IDDE Ordinance that was developed by the NYSDEC.

Annual Compliance Requirements

OWSC

- ◆ Provide guidance on any necessary changes or revisions to the IDDE Stormwater Ordinance.

Stormwater Management Officer/Designee & Municipal Board

- ◆ Amend stormwater ordinance as necessary to maintain compliance with NYS standards and requirements; and
- ◆ Revise enforcement action procedures as needed.



3.4.3 Addressing Categories of Non-Stormwater Discharges

Description/Methodology of BMP

All Non-Stormwater Discharges listed in section 1.2 of this document as well as the following, are exempt from SPDES permit coverage as established by local law, unless the NYSDEC or the municipality has determined them to be substantial contributors of pollutants, they are as follows:

- ◆ Water line flushing or other potable water sources;
- ◆ Landscape irrigation or lawn watering;
- ◆ Existing diverted stream flows;
- ◆ Rising ground water;
- ◆ Uncontaminated ground water infiltration to storm drains;
- ◆ Uncontaminated pumped ground water;
- ◆ Foundation or footing drains;
- ◆ Crawl space or basement sump pumps;
- ◆ Air conditioning condensate;
- ◆ Irrigating water;
- ◆ Springs;
- ◆ Water from individual residential car washing;
- ◆ Natural riparian habitat or wetland flows;
- ◆ Dechlorinated swimming pool discharges;
- ◆ Residential street wash water;
- ◆ Water from fire fighting activities; and
- ◆ Any other water source not containing pollutants.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Update Non-Stormwater Discharge list as necessary such that no exempt stormwater discharge is a substantial contribution of pollutants.

3.5 Best Management Practices for Future Consideration

3.5.1 Updating Outfall Mapping/Outfall Information Management

Description/Methodology of BMP

The Coalition will update information to the base outfall map during routine maintenance visits, scheduled outfall inspections, and in response to complaints. Outfall mapping is managed by the individual MS4s of the OWSC and not all maps are in compatible formats. In the future, when funding becomes available a single OWSC map should be developed.



Implementation Steps

OWSC

- ◆ Requests for updates or revisions to the OWSC's Outfall Map can be directed to OWSC staff by any MS4; and
- ◆ Specific arrangements for mapping and field verification can be made between OWSC staff and the MS4.

Stormwater Management Officer (or Designee)

- ◆ Since each municipality is undertaking their own mapping efforts it will be the responsibility of the SMO to report on the status of updates and to convey update requests to the OWSC staff.

3.5.2 Outfall Surveillance

Description/Methodology of BMP

The OWSC may develop and implement a plan which will detect illicit discharges by conducting routine visual inspections of every mapped outfall. Also, the plan will set criteria for the inspection process. The following plan describes procedures to meet the two minimum requirements associated with outfall surveillance: Prioritizing outfalls for inspections and visual inspection procedures.

Dry Weather Outfall Inspections

The MS4s within the OWSC will conduct initial visual inspections of the outfalls mapped. These visual inspection reports will be part of the database of information compiled and included as part of the outfall map. This data will be used to prioritize outfalls for both trackdown and corrective measures as well as for the next round of required inspections. A schedule and percentage of outfalls that will be inspected will be developed annually and assessed annually.

Prioritizing Outfalls

Each municipality will be required to review the outfall mapping data and initial inspection information to rank their outfalls using the guidance information listed below and on a five tier scale in the following range:

5. Very High
4. High
3. Medium
2. Low
1. Very Low

Guidance for Prioritizing Stormwater Outfalls

The following criterion is one that may be used by, but should not limit the way in which, OWSC member MS4s prioritize their storm sewer outfalls for visual inspections:

Since the MS4s are required to trackdown and eliminate any and all identified illicit discharges from their system, any outfalls where an illicit discharge was identified during the initial inspection will be



given the highest priority. To search for these outfalls where the initial inspection identified a potential problem, the MS4 will be able to query the outfall database for areas that have identified odors, structural damage, odd colors, suspended solids, or turbidity. The comment section for the identified outfalls will provide a more detailed description of the problem.

Identifying the existing land use in the area or sewershed that the outfall drains will also help to prioritize inspections and follow-up actions. Types of land uses that will receive priority are as follows:

- ◆ *Any industrial uses – The potential for illicit connections as well as possible contamination from materials stored outside and any industrial processes and practices that take place on the premises is very high on these properties;*
- ◆ *Areas where there are businesses which have industrial stormwater permits, or any type of permitted wastewater discharge as well as any areas where there may be known business sectors with a record of enforcement actions;*
- ◆ *Heavy commercial use with large impervious parking lots and limited green space;*
- ◆ *Areas which are under development and have a significant amount of construction activity; and*
- ◆ *Older developments may predate more stringent construction codes regarding illegal connections.*
- ◆ *Older areas may also have deteriorating sewer and/or storm sewer infrastructure.*

Identify any environmentally sensitive areas downstream of the outfall by looking at the following:

- ◆ *Does the outfall discharge to a protected stream, Impaired Waters (303(d) and TMDL) or protected wetland?*
- ◆ *Is the outfall located in an area associated with public use, access or recreational facilities?*
- ◆ *Is the outfall in an area where there has been ambient water quality sampling done that identifies high levels of particular contaminants i.e.) bacteria, metals, etc.*

Outfalls located in areas where there have been repeated complaints of illegal dumping, illicit discharges from pipes and/or apparent contamination in receiving waters should receive priority.

3.6 Minimum Required Reporting

At a minimum, the permittee shall report on the items below:

- a. Number and percent of outfalls mapped;**
- b. Number of illicit discharges detected and eliminated;**
- c. Percent of outfalls for which an outfall reconnaissance inventory has been performed;**
- d. Status of system mapping;**



- e. Activities in and results from informing public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste;**
- f. Regulatory mechanism status - certification that law is equivalent to the State's model IDDE law (if not already completed and submitted with an earlier annual report); and**
- g. Report on effectiveness of program, BMP and measurable goal assessment.**



Minimum Measure 4: Construction Stormwater Management

Polluted stormwater runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in the box to the right, sediment is usually the main pollutant of concern. According to the 2000 National Water Quality Inventory, States and Tribes report that sedimentation is one of the most widespread pollutants affecting assessed rivers and streams, second only to pathogens (bacteria). Sedimentation impairs 84,503 river and stream miles (12% of the assessed river and stream miles and 31% of the impaired river and stream miles). Sources of sedimentation include agriculture, urban runoff, construction, and forestry. Sediment runoff rates from construction sites, however, are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.⁸

- | Pollutants Commonly Discharged From Construction Sites |
|--|
| ◆ Sediment |
| ◆ Solid and sanitary wastes |
| ◆ Phosphorous (fertilizer) |
| ◆ Nitrogen (fertilizer) |
| ◆ Pesticides |
| ◆ Oil and grease |
| ◆ Concrete truck washout |
| ◆ Construction chemicals |
| ◆ Construction debris |

4.1 Description of Minimum Control Measure

The Construction Site Runoff MCM consists of BMPs that focus on the reduction of pollutants to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activities disturbing less than one acre will be considered if it is part of a larger common plan of development or sale that would disturb one acre or more. The BMPs describe the legal authority mechanism that will be used to require erosion and sediment controls, enforcement procedures and actions to ensure compliance, requirements for construction site operators to implement appropriate erosion and sediment control BMPs, requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site, procedures for site plan review which incorporate the consideration of potential water quality impacts, procedures for receipt and consideration of information submitted by the public, and procedures for site inspection and enforcement of control measures.

The stormwater regulations for Construction Site Runoff Control apply to both privately-owned and managed projects, and MS4-owned and managed projects. Therefore, the BMPs described in this section have application to both types of projects.

⁸ Adapted from US EPA Fact Sheet 833-F-00-008, "Construction Site Runoff Control Minimum Control Measure." January 2000 (revised December 2005). See EPA's Publications search page online at http://cfpub.epa.gov/npdes/pubs.cfm?program_id=0



4.2 General Permit Requirements⁹

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in stormwater runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. The small MS4 operator is required to:

- ◆ Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
- ◆ Have procedures for site plan review of construction plans that consider potential water quality impacts;
- ◆ Have procedures for site inspection and enforcement of control measures;
- ◆ Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism);
- ◆ Establish procedures for the receipt and consideration of information submitted by the public; and
- ◆ Determine the appropriate BMPs and measurable goals for this minimum control measure. Suggested BMPs (i.e., the program actions/activities) and measurable goals are presented below.

An MS4 must, at a minimum:

a. Develop, implement, and enforce a program that:

- i. Provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities per the requirements of general SPDES permit (GP- 0-10-002);
- ii. Addresses stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Control of stormwater discharges from construction activity disturbing less than one acre must be included in the program if:
 - ◆ That construction activity is part of a larger common plan of development or sale that would disturb one acre or more; or
 - ◆ If controlling such activities in a particular watershed is required by the Department.
- iii. Includes a law, ordinance or other regulatory mechanism to require a SWPPP for each applicable land disturbing activity that includes erosion and sediment controls that meet the State's most up-to-date technical standards:
 - ◆ This mechanism must be equivalent to one of the versions of the "NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control"; and

⁹ Information within text box derived from US EPA Fact Sheet 833-F-00-008. Other information derived from GP-0-10-002.



- ◆ Equivalence must be documented using the NYSDEC Gap Analysis Workbook or be certified by the attorney representing the small MS4 as being equivalent to one of the versions of the sample laws if one of the sample laws is not adopted or if a modified version of the sample law is adopted.
- iv. Contains requirements for construction site operators to implement erosion and sediment control management practices;
- v. Allows for sanctions to ensure compliance to the extent allowable by State or local law;
- vi. Contains requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- vii. Describes procedures for SWPPP review that incorporate consideration of potential water quality impacts and review of individual pre-construction SWPPPs to ensure consistency with State and local sediment and erosion control requirements;
 - ◆ Ensure that the individuals performing the reviews are adequately trained and understand the State and local sediment and erosion control requirements;
 - ◆ All SWPPPs must be reviewed for sites where the disturbance is one acre or greater; and
 - ◆ After review of SWPPPs, the permittee must utilize the “SWPPP Acceptance Form” created by the Department and required by the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002) when notifying construction site owner / operators that their plans have been accepted and approved by the permittee.
- viii. Describes procedures for receipt and follow up on complaints or other information submitted by the public regarding construction site storm water runoff;
- ix. Describes procedures for site inspections and enforcement of erosion and sediment control measures including steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water;
 - ◆ The permittee must ensure that the individual(s) performing the inspections are adequately trained and understand the State and Local sediment and erosion control requirements. An adequately trained inspector is a P.E., a CPESC, a LA or others who have received inspector training by a NYS DEC sponsored or approved training; and
 - ◆ All sites where the disturbance is one acre or greater must be inspected by staff from the operator of the MS4.
- x. Educates construction site owner / operators, design engineers, municipal staff and other individuals to whom these regulations apply about the municipality’s construction stormwater requirements, when construction stormwater requirements apply, to whom they apply, the



procedures for submission of SWPPPs, construction site inspections, and other procedures associated with control of construction stormwater;

- xi. Ensures that construction site operators have received erosion and sediment control training before they do work within the permittee's jurisdiction. Small home site construction (construction where the Erosion and Sediment Control Plan is developed in accordance with Appendix E of the "New York Standards and Specifications for Erosion and Sediment Control") is exempt from the requirements below:
 - ◆ Training may be provided by the Department or other qualified entities (such as Soil and Water Conservation Districts);
 - ◆ The permittee is not expected to perform such training, but they may cosponsor training for construction site operators in their area;
 - ◆ The permittee may ask for a certificate of completion or other such proof of training; and
 - ◆ The permittee may provide notice of upcoming sediment and erosion control training by posting in the building department or distribute with building permit application.
- xii. Establishes and maintains an inventory of active construction sites, including the location of the site, owner / operator contact information;
- xiii. Develop, record, periodically assess and modify as needed measurable goals; and
- xiv. Select appropriate construction stormwater BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.

4.3 Methodology for Compliance with Permit Requirements

Each participating MS4 of the OWSC has adopted the NYS Sample Local Law for Stormwater Management and Erosion & Sediment Control. This ordinance authorizes the MS4 to enforce a program that reduces pollutant runoff from construction sites. Each MS4 will be responsible for reviewing SWPPPs, inspecting construction sites and enforcing the permit requirements on developers / owner / operators that do not comply with the regulations. The OWSC will also provide training to developers, contractors, and design engineers in order to inform them of the regulations. Training will also be provided by the OWSC to each participating MS4 personnel that will be responsible for inspecting the construction sites and enforcing the permit requirements.

4.4 Best Management Practices Implemented or Underway

4.4.1 Stormwater Ordinance

Description/Methodology of BMP

Each member MS4 of the OWSC has adopted a construction site stormwater runoff control ordinance. These ordinances establish minimum stormwater management requirements and controls to protect the general health, safety, and welfare of the public. The ordinance addresses issues relating to the following:



- ◆ Erosion and Sediment Control;
- ◆ Stormwater Management Design Requirements;
- ◆ Construction Requirements; and
- ◆ Fee structure for municipal services relating to SWPPP reviews, inspections, and maintenance.

Annual Compliance Requirements

Municipal Board

- ◆ Customize the fee structure and ordinance, if necessary to incorporate municipality's requirements. The fee structure should be referenced in Local Law however this cannot be done in a way that allows for future updates to the fee structure without having to revise the Local Law as a whole.

Stormwater Management Officer/Designee & Municipal Board

- ◆ Revise fee schedule as needed.
- ◆ Amend stormwater ordinance, as necessary, to maintain compliance with NYS stormwater standards and requirements as defined the current or any future permits pertaining to stormwater management activities.

4.4.2 Design Requirements

Description/Methodology of BMP

Evaluate current in-house design criteria and practices related to the review of project plans. Make required changes to and (when necessary) develop new policies with a focus on remaining compliant with local, state and/or federal construction stormwater regulations. Upon completion of this process communicate these new procedures to the local design and construction communities.

Many MS4-owned and managed as well as some privately-owned and managed projects have special conditions which make it impractical to implement standard pollution prevention practices as defined in the NYS Stormwater Management Design Manual. Such projects include highway reconstruction, demolition/redevelopment, waterline construction, and some types of linear-type construction. Acceptable design criteria for these special condition projects must be approved by the MS4 on a project-by-project basis, and the owner's preparation of the GP-0-10-002 Stormwater Pollution Prevention Plan (SWPPP) is the mechanism by which accepted practices are evaluated by MS4.

Annual Compliance Requirements

OWSC

- ◆ Prepare construction design and permitting guidelines, if they differ from those outlined in current State regulations, for the local design and construction communities and involved MS4 personnel; and
- ◆ If needed, distribute construction design and permitting guidelines to the local design and construction communities, and involved MS4 personnel.

Stormwater Management Officer (or Designee)

- ◆ Review construction project, planning, and design criteria to determine changes needed to comply with local, state and/or federal construction stormwater regulations.



Additional Information/Resources

- ◆ The General Permit for Construction Activity (GP-0-10-002)
- ◆ The NYS Stormwater Management Design Manual

4.4.3 Construction Plan Review, both Public and Internal

Description/Methodology of BMP

Develop a set of criteria that the member MS4 can use to verify construction plan compliance with local, state, and/or federal construction stormwater regulations.

Provide the public with an opportunity to review and comment on proposed design plans and construction sites.

Develop procedures for the public to request information, and to relay concerns to the representative of the municipality.

Prepare a checklist of items, each of which comes out of the criteria previously developed, that must be verified by the reviewer for each construction plan review. This checklist will be available to developers, contractors, engineers, and architects to assist them in preparing satisfactory plans. The check list will contain approved structural and non-structural BMPs that meet the requirements of the stormwater regulations. This list will identify if the BMP needs to be used in combination with other BMPs in order to completely satisfy all regulatory requirements.

Develop internal tracking and plan review procedures to cover the following issues:

- ◆ Conformance to local stormwater regulations;
- ◆ Appropriate use of temporary erosion controls; and
- ◆ Inclusion of any required local, state, and/or federal stormwater permit documents.

Provide training for municipal engineers, building department staff, and other municipal representatives that will be completing the construction plan reviews within each municipality.

Conduct SWPPP review for all sites within the MS4 Urbanized Area where the disturbance is one acre or greater to ensure consistency with State and local sediment and erosion control requirements:

- ◆ SWPPP Acceptance Form issued by NYSDEC, and required by the General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002), must be signed prior to obtaining permit coverage to indicate plans have been accepted and approved by the MS4. The construction site owner / operators should include the signed SWPPP Acceptance Form with the NOI submitted to NYSDEC for Permit coverage.

Annual Compliance Requirements

OWSC

- ◆ Develop criteria to verify construction plan compliance.



- ◆ Prepare a checklist of items that include approved structural and non-structural BMPs for reviewers to verify compliance with regulations.
- ◆ Continue to train municipal staff that will be completing construction plan reviews.
- ◆ Educate the local construction community on the construction plans review process.

Stormwater Management Officer (or Designee)

- ◆ Implement the construction plan review procedures for local construction sites.
- ◆ Provide notice to the public that a project will be open for review and comment. Typically, this should correspond with the Planning Board or Town Board agendas for proposed projects.
- ◆ Provide a method, either on the municipal webpage or at the municipal administration building, or both, to allow residents to comment on construction plans.
- ◆ Notify owners / operators of local construction sites who are in violation of the standards defined in GP-0-10-002.
- ◆ Train additional municipal staff as necessary and update per customized local code.
- ◆ Ensure SWPPP reviews are conducted by qualified professionals or supervised by qualified professionals; and
- ◆ Maintain records of plans reviewed and approved for construction under this program.

Additional Information

- ◆ NYS Standards and Specifications for Erosion and Sediment Control (Blue Book)
- ◆ NYS Stormwater Management Design Manual (White Book)
- ◆ SWPPP Review Check List GP-0-10-002
- ◆ SWPPP Acceptance Form GP-0-10-002
- ◆ Notice of Intent for Stormwater Discharges Associated with Construction Activity, GP-0-08-002
- ◆ Notice of Termination for Stormwater Discharges Associated with Construction Activity, GP-0-08-002
- ◆ List of approved structural and non-structural BMPs

4.4.4 Construction Inspection Procedures and Certification Program

Description/Methodology of BMP

Develop inspection forms and procedures based on the adopted local laws regulating construction sites within an MS4's urbanized area that disturb one acre of land or more. The inspection forms and procedures must keep track of, but are not limited to the following stormwater management procedures:

- ◆ Use of temporary erosion controls;
- ◆ Control of other construction related wastes;
- ◆ Operational and general prohibitions;
- ◆ Site closure and stabilization requirements;
- ◆ On-site documentation and records; and
- ◆ Enforcement actions and on-site communication issues.

Conduct and report on inspection procedures and educational efforts to familiarize municipal staff and the local construction community with local stormwater regulations relating to construction activities.



Site operators must verify at least one employee on site has received the required four hours of erosion and sediment control training within the last three years before they do work within the MS4's jurisdiction.

Develop internal procedures for tracking new and on-going construction activities.

Take action against owners and / or operators of local construction sites that are in violation of local construction stormwater regulations using the enforcement regulation outlined in the adopted local laws.

Maintain records of construction site inspections, enforcement actions, and corrective actions performed by local construction site owners and operators.

Annual Compliance Requirements

OWSC

- ◆ Develop a list of items to be incorporated in the inspection forms based on local construction stormwater regulations.
- ◆ Educate municipal staff and the local construction community with regards to local inspection procedures; and
- ◆ Ensure that all appropriate municipal staff and members of the local construction community have been trained by May 1st 2011.

Stormwater Management Officer (or Designee)

- ◆ Inspect and maintain records of all construction sites where one acre of land or more is being disturbed using appropriate inspection procedures and forms to ensure compliance with local stormwater regulations; and
- ◆ Take action against, and maintain records of developers / owners / operators of local construction sites that are not in compliance with local construction stormwater regulations using the enforcement regulation outlined in the adopted local law.
- ◆ Ensure that all construction site operators have at least one employee on site who has received required the required four hours of erosion and sediment control training within three years prior to the start of any construction within the MS4's jurisdiction. The SMO should obtain proof in the form of an attendance record or other documentation provided to attendees for the purpose of documentation (GP-0-10-002 Part VII.A.4.a.xi).
- ◆ Maintain an inventory of both active and previously active construction sites within the MS4 Urbanized Area in accordance with GP-0-10-002 Part VII.A.4.a.vii.

4.5 Best Management Practices for Future Consideration

4.5.1 Research and Establish a Joint Inspection Program

Description/Methodology of BMP

The OWSC may wish to conduct a feasibility study exploring the ramifications of a) developing a long-term funding strategy for conducting Phase II Stormwater-related programming beyond 2013, and b)



developing a cooperative construction site inspection strategy or program, whereby a centralized staff handles permitting and inspection duties for construction sites across the study area. This study could consider the distinction between enforcement solely within the urbanized area as opposed to entirely across municipal boundaries.

To date, no specific studies regarding the aforementioned issues have occurred. Coalition members have discussed the need for consideration of a long-term funding strategy and have postulated as the potential benefits of conducting construction site inspection on a cooperative basis. This project, if initiated, would help to inform this ongoing discussion and the associated decision making process.

If initiated, the outcome of this project will be a detailed feasibility study intended for Coalition members, locally-elected officials and their staff, and other associated parties, outlining specific strategies and costs associated with establishing a multi-jurisdictional long-term stormwater administration framework, including multi-jurisdictional construction site inspection services.

Implementation Steps

OWSC

- ◆ Identify grant sources to fund such a planning project;
- ◆ Prepare and submit an application for funds;
- ◆ Assist MS4s in meeting application requirements ; and
- ◆ If initiated, provide project oversight

Stormwater Management Officer (or Designee)

- ◆ Meet requirements of the application

Municipal Board

- ◆ Formally support the planning process;
- ◆ Evaluate alternative and outcomes raised in any final plan; and
- ◆ Initiate recommendations

4.6 Minimum Required Reporting

At a minimum, the permittee shall report on the items below:

- a. **Number of SWPPPs reviewed;**
- b. **Number and type of enforcement actions;**
- c. **Percent of active construction sites inspected once;**
- d. **Percent of active construction sites inspected more than once;**
- e. **Number of construction sites authorized for disturbances of one acre or more; and**



- f. Report on effectiveness of program, BMP and measurable goal assessment.**



Minimum Measure 5: Post-Construction Stormwater Management

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 waterbodies. 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 lakes, ponds, and streams. 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 waterbody during storms. Increased impervious surfaces (e.g., parking lots, driveways, and rooftops) interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.¹⁰

5.1 Description of Minimum Control Measure

The Post-Construction Stormwater Management MCM consists of BMPs that focus on the prevention or minimization of water quality impacts from both new and re-development projects that disturb one acre or more. This includes projects less than one acre that are part of a larger common plan of development or sale that discharge into the MS4. The BMPs describe structural and/or non-structural practices, the legal authority mechanism that will be used to address post-construction runoff from new development and redevelopment projects, and procedures to ensure long term operation and maintenance of BMPs.

¹⁰ Adapted from US EPA Fact Sheet 833-F-00-009, "Post-Construction Runoff Control Minimum Control Measure." January 2000 (revised December 2005). See EPA's Publications search page online at http://cfpub.epa.gov/npdes/pubs.cfm?program_id=0



5.2 General Permit Requirements¹¹

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

- ◆ Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs);
- ◆ Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law;
- ◆ Ensure adequate long-term operation and maintenance of controls; and
- ◆ Determine the appropriate best management practices and measurable goals for this minimum control measure.

An MS4 must, at a minimum:

a. Develop, implement, and enforce a program that:

- i. Provides equivalent protection to the NYS SPDES General Permit for Stormwater Discharges from Construction Activities. (GP-0-10-001);
- ii. Addresses stormwater runoff from new development and redevelopment projects to the small MS4 from projects that result in a land disturbance of greater than or equal to one acre. Control of stormwater discharges from projects of less than one acre must be included in the program if:
 - ◆ That project is part of a larger common plan of development or sale; or
 - ◆ If controlling such activities in a particular watershed is required by the NYS DEC.
- iii. Includes a law, ordinance or other regulatory mechanism to require post-construction runoff controls from new development and re-development projects to the extent allowable under State or Local law that meet the State's most up-to-date technical standards:
 - ◆ The mechanism must be equivalent to one of the versions of the "NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control"; and
 - ◆ Equivalence must be documented using the NYSDEC Gap Analysis Workbook or certified by the attorney representing the small MS4 as being equivalent to one of the sample laws if one of those sample laws is not adopted or if a modified version of one of the sample laws is adopted.

¹¹ Information within text box derived from US EPA Fact Sheet 833-F-00-009. Other information derived from GP-0-10-002.



- iv. Includes a combination of structural management practices (including, but not limited to practices from the NYS Stormwater Management Design Manual or equivalent) and / or non-structural management practices (including, but not limited to comprehensive plans, open space preservation programs, Low Impact Development (LID), Better Site Design (BSD) and other Green Infrastructure practices, land use regulations) appropriate for the permittee that will reduce the discharge of pollutants to the MEP. Permittees are encouraged to implement Green Infrastructure practices at a site level and to review, and revise where appropriate, local codes and laws that include provisions that preclude construction that minimizes or reduces pollutant loadings;
 - ◆ If a stormwater management practice is designed and installed in accordance with the New York State Stormwater Management Design Manual or has been demonstrated to be equivalent and is properly operated and maintained, then MEP will be assumed to be met for post-construction stormwater discharged by the practice.
- v. Describes procedures for SWPPP review that incorporate consideration of potential water quality impacts and review of individual pre-construction SWPPPs to ensure consistency with local post-construction stormwater requirements;
 - ◆ Ensure that the individuals performing SWPPP reviews are adequately trained, or under the supervision of a qualified professional who understand the State and Local post construction stormwater requirements;
 - ◆ All SWPPPs must be reviewed for sites where the disturbance is one acre or greater; and
 - ◆ After review of SWPPPs, the permittee must utilize the “SWPPP Acceptance Form” created by the Department and required by the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-002) when notifying construction site owner / operators that their plans have been accepted and approved by the permittee.
- vi. Establish and maintain an inventory of post-construction stormwater management practices within the permittees jurisdiction. At a minimum, include practices discharging to the small MS4 that have been installed since March 10, 2003, all practices owned by the small MS4, and those practices found to cause or contribute to water quality standard violations;
 - ◆ The inventory shall include at a minimum: location of practice (street address or coordinates); type of practice; maintenance needed per the NYS Stormwater Management Design Manual, SWPPP, or other provided documentation; and dates and type of maintenance performed; and
- vii. Ensures adequate long-term operation and maintenance of management practices identified in Part VII.5.a.vi by trained staff, including inspection to ensure that practices are performing properly.
 - ◆ The inspection shall include inspection items identified in the maintenance requirements (NYS Stormwater Management Design Manual, SWPPP, or other maintenance information) for the practice. Permittees are not required to collect stormwater samples and perform specific chemical analysis.



- b. Develop, implement, and provide adequate resources for a program to inspect development and re-development sites by trained staff and to enforce and penalize violators;**
- c. Develop, record, periodically assess and modify as needed measurable goals; and**
- d. Select appropriate post-construction stormwater BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.**

5.3 Methodology for Compliance with Permit Requirements

All participating MS4s in the OWSC have adopted the NYS Sample Local Law for Stormwater Management and Erosion & Sediment Control which includes provisions to enforce a program that reduces pollutant runoff from both newly and re-developed sites. Each MS4 will be responsible for inspecting the sites for proper operation and maintenance and enforcing the permit requirements and for properties that are not in compliance. In this manner, the MS4 can ensure adequate long-term management practices for both public and private facilities.

5.4 Best Management Practices Implemented or Underway

5.4.1 Post-Construction Stormwater Management Ordinance

Description/Methodology of BMP

Each member MS4 of the OWSC has adopted a post-construction stormwater management ordinance. This ordinance establishes minimum stormwater management requirements and controls to protect the general health, safety, and welfare of the public. The ordinance addresses issues relating to the following:

- ◆ Permanent Erosion and Sediment Controls;
- ◆ Stormwater Management Design Requirements; and
- ◆ Fee structure for municipal services relating to SWPPP reviews, inspections, and maintenance.

Annual Compliance Requirements

Municipal Board

- ◆ Customize the fee structure and ordinance, if necessary to incorporate municipality's requirements. The fee structure should be referenced in Local Law however this cannot be done in way that allows for future updates to the fee structure without having to revise the Local Law as a whole.

Stormwater Management Officer/Designee & Municipal Board

- ◆ Revise fee schedule as needed.
- ◆ Amend stormwater ordinance, as necessary, to maintain compliance with NYS stormwater standards and requirements as defined by the current or any future permits pertaining to stormwater management activities.



5.4.2 Inspection Program for Newly and Re-Developed Sites

Description/Methodology of BMP

Develop an inspection program for newly developed and redeveloped sites for compliance with the post-construction regulations. This program must include a form and procedures that includes a list of items that municipal personnel and/or members of the local building community can use to guide their operations. This list can include, but is not limited to the following items:

- ◆ Construction of controls according to approved development plans and specifications;
- ◆ Adherence to any legal commitment to operate or maintain permanent stormwater quality structures;
- ◆ Conformance to open space and landscaping requirements; and
- ◆ Conformance to local development standards.

Train inspection personnel and/or members of the local construction community on local post-construction runoff regulations and final inspection procedures.

Perform inspections on qualifying project sites using adopted inspection forms and procedures to ensure conformance with local post-construction runoff regulations.

Issue enforcement measures to owners and / or operators of local development projects that are in violation of local post-construction runoff regulations.

Develop internal tracking procedures to keep tabs on development projects that are under construction, those that have been completed and any corrective / enforcement measure that were taken.

Annual Compliance Requirements

OWSC

- ◆ Develop inspection forms and procedures necessary to inspect local new and re-development projects in order to ensure compliance with local post-construction runoff regulations and approved plans.
- ◆ Train inspection personnel and / members of the local construction community on local post-construction runoff regulations and final inspection procedures.

Stormwater Management Officer (or Designee)

- ◆ Maintain an inventory of projects that qualify for inspection under local post-construction runoff regulations in accordance with GP-0-10-002 Part VII.A.5.a.vi.;
- ◆ Inspect qualifying development project sites using adopted inspection forms and procedures to ensure conformance with local post-construction runoff regulations in accordance with GP-0-10-002 Part VII.A.5.a.vii. ;
- ◆ Issue enforcement measures to owners or operators of local development projects that are not in compliance with local post-construction runoff regulations; and
- ◆ Record and report on current and past qualified construction sites as well as any corrective and enforcement actions taken.



5.5 Best Management Practices for Future Consideration

5.5.1 Asset Management Program for Existing Storm Drainage Facilities

Description/Methodology of BMP

Develop and implement an asset management program for all existing public storm drainage systems identifying the location of each storm drainage facility including:

- ◆ Open or closed;
- ◆ Tributary drainage area; and
- ◆ Current Condition

Develop a list of existing facilities and a form that includes performance indicators that will enable a measurable evaluation of the system. Create a weighted value system with thresholds for each indicator that would prioritize sites for maintenance, rehabilitation, or replacement.

Develop a comprehensive list of approved maintenance, rehabilitation, and replacement practices.

Implementation Steps

OWSC

- ◆ Assist in identifying resources that can be used to implement such a program; and
- ◆ Assist in identifying methodology for conducting such an analysis

Stormwater Management Officer (or Designee)

- ◆ Identify the existing storm facilities;
- ◆ Develop the performance indicators, inspection forms, and procedures; and
- ◆ Record and report on inspection and maintenance efforts

5.5.2 Flood Hazard Mitigation Plan

Description/Methodology of BMP

The MS4 can develop a Flood Hazard Mitigation Plan that addresses flooding issues throughout their municipality. The plan should articulate a comprehensive strategy for implementing technically feasible flood mitigation activities. At a minimum, the plan should include the following elements:

- ◆ A description of the planning process and public involvement that went into developing the plan including any workshops, public meetings, or public hearings that took place throughout the process;



- ◆ A description of any existing flood hazards and identification of the flood risks, this includes estimates of the number and type of structures at risk, repetitive loss of property, etc;
- ◆ An identification and evaluation of cost-effective and technically feasible mitigation actions that are being or have been considered; and
- ◆ Documentation describing the formal adoption of the plan by the MS4 submitting the plan.

Use of the Planning Guidelines required by the Community Rating System (CRS) of the National Flood Insurance Program (NFIP) is recommended for use in the completion of community flood mitigation plans.

Implementation Steps

OWSC

- ◆ Assist in the identification of local needs; and
- ◆ Assist in the identification of existing reports and studies applicable to the issue

Stormwater Management Officer (or Designee)

- ◆ Apply for grants for preparing a Flood Hazard Mitigation Plan;
- ◆ Build a Flood Hazard Mitigation Plan using municipal staff or consultants; and
- ◆ Review the Flood Hazard Mitigation Plan and develop funding sources through grants, or municipal budgets for project implementation.

Municipal Board

- ◆ Formally adopt the plan by resolution with the governing municipal board.

5.6 Minimum Required Reporting

At a minimum, the permittee shall report on the items below:

- 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;**



- e. Number and type of post-construction stormwater management practices maintained;**
- f. Regulatory mechanism status - certification that regulatory mechanism is equivalent to one of the “NYSDEC Sample Local Laws for Stormwater Management and Erosion and Sediment Control” (if not already done); and**
- g. Report on effectiveness of program, BMP and measurable goal assessment**



Minimum Measure 6: Pollution Prevention and Good Housekeeping for Municipal Operations

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small 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: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the small MS4 operator, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.¹²

6.1 Description of Minimum Control Measure

The Pollution Prevention and Good Housekeeping MCM consists of BMPs that focus on training and on the prevention or reduction of pollutant runoff from municipal operations. The BMPs describe the following:

- ◆ Training programs;
- ◆ Specific municipal operations that are impacted by the proposed operation and maintenance programs;
- ◆ Maintenance activities;
- ◆ Schedules and long term inspection procedures for controls to reduce suspended solids and other pollutants;
- ◆ Procedures for the proper disposal of waste removed from the MS4 and municipal operations including:
 - Dredge spoil;
 - Accumulated sediments; and
 - Suspended solids and other debris.
- ◆ Controls for reducing or eliminating the discharge of contaminants from the following:
 - Streets;
 - Roads;
 - Highways;
 - Municipal parking lots;
 - Maintenance and storage yards;
 - Waste transfer stations;

¹² Adapted from US EPA Fact Sheet 833-F-00-010, "Pollution Prevention/Good Housekeeping Minimum Control Measure." January 2000 (revised December 2005). See EPA's Publications search page online at http://cfpub.epa.gov/npdes/pubs.cfm?program_id=0



- Outdoor storage areas; and
- Salt and / or sand storage locations. ,

6.2 General Permit Requirements¹³

Recognizing the benefits of pollution prevention practices, the rule requires an operator of a regulated small MS4 to:

- ◆ Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system;
- ◆ Include employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State or Tribe, or relevant organizations;
- ◆ Determine the appropriate BMPs and measurable goals for this minimum control measure. Some program implementation approaches, BMPs (i.e., the program actions/activities), and measurable goals are suggested below.

An MS4 must, at a minimum:

- Develop and implement a pollution prevention / good housekeeping program for municipal operations and facilities that:**
 - Addresses municipal operations and facilities that contribute or potentially contribute POCs to the small MS4s. The operations and facilities may include, but are not limited to: street and bridge maintenance; winter road maintenance; stormwater system maintenance; vehicle and fleet maintenance; park and open space maintenance; municipal building maintenance; solid waste management; new construction and land disturbances; right-of-way maintenance; marine operations; hydrologic habitat modification; or other;
 - At a minimum frequency of once every three years, perform a self assessment of all municipal operations addressed by the SWMP to:
 - ◆ Determine the sources of pollutants potentially generated by the permittee's operations and facilities; and
 - ◆ Identify the municipal operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already.

¹³ Information within text box derived from US EPA Fact Sheet 833-F-00-010. Other information derived from GP-0-10-002.



- iii. Determines management practices, policies, procedures, etc. that will be developed and implemented to reduce or prevent the discharge of (potential) pollutants. Refer to management practices identified in the “NYS Pollution Prevention and Good Housekeeping Assistance Document” and other guidance materials available from the EPA, State, or other organizations;
 - iv. Prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and permittee’s capabilities;
 - v. Addresses pollution prevention and good housekeeping priorities;
 - vi. Includes an employee pollution prevention and good housekeeping training program and ensures that staff receive and utilize training;
 - vii. Requires third party entities performing contracted services, including but not limited to street sweeping, snow removal, lawn / grounds care, etc., to meet permit requirements as the requirements apply to the activity performed ; and
 - viii. Requires municipal operations and facilities that would otherwise be subject to the NYS Multisector General Permit (MSGP, GP-0-06-002) for industrial stormwater discharges to prepare and implement provisions in the SWMP that comply with Parts III. A, C, D, J, K and L of the MSGP. The permittee must also perform monitoring and record keeping in accordance with Part IV. of the MSGP. Discharge monitoring reports must be attached to an MS4s annual report. For those operations or facilities that 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.
- b. Develop, record, periodically assess and modify as needed any and all measurable goals; and**
- c. Select appropriate pollution prevention and good housekeeping BMPs and measurable goals to ensure the reduction of all POCs in stormwater discharges to the MEP.**

6.3 Methodology for Compliance with Permit Requirements

The OWSC will provide training to the municipal personnel of participating MS4s. These personnel will be responsible for implementing the BMPs in their everyday activities. To date, the OWSC has held good housekeeping/pollution prevention workshops for Coalition members in the past and will evaluate the need of doing so again in the future. The Coalition will develop a guidance documents for Coalition members that can be posted conspicuously in maintenance departments and other logical locations in order to publicize the importance of reducing and preventing the discharge of pollutants to the MEP from municipal activities.

6.4 Best Management Practices Implemented or Underway



6.4.1 Municipal Training Program

Description/Methodology of BMP

Institute a program that provides training to each member of the municipality whose work may potentially impact stormwater. This includes highway, water, buildings and grounds, sewer, parks, and recreation departments. The training program will be developed such that one or two members of each municipality are trained through the OWSC. These individuals will then become responsible for training the remaining members of their municipality.

Annual Compliance Requirements

OWSC

- ◆ Conduct training sessions for the municipal employee(s) that have been designated to teach the remaining members of the municipality; and
- ◆ Continue to identify new training opportunities and bring these opportunities to the attention of OWSC members.

Stormwater Management Officer (or Designee)

- ◆ Train municipal employees whose job duties impact stormwater management;
- ◆ Identify new BMPs;
- ◆ Develop and / or modify inspection checklists; and
- ◆ Develop and / or implement SOP's.

6.4.2 Vehicle, Equipment Maintenance and Maintenance Facilities Procedures

Description/Methodology of BMP

Develop and maintain an inventory of municipal owned vehicles and maintenance records. Maintain all MS4 owned vehicles and maintenance facilities using an identified maintenance plan that includes, but not limited to the following procedures:

- ◆ Maintain and / or wash all municipal owned vehicles indoors whenever possible and according to manufacturer's specifications. If maintenance must be performed outside, guard against spillage of materials that could discharge to storm receivers;
- ◆ Identify and eliminate vehicle fluid leaks. If leak occurs clean it up immediately using a "dry" method;
- ◆ Perform cleaning with pressurized cold water, without the use of soaps, if wastewaters will flow to a storm sewer system;
- ◆ Use minimal amounts of biodegradable soaps only if wastewaters will discharge to a sanitary sewer system;
- ◆ Seal floor drains that discharge directly to the environment or install pretreatment systems, i.e.) oil/water separators where necessary in sewer lines to capture contaminants such as oil and / or grit and obtain a wastewater discharge permit from a regulatory agency, maintain as system as needed;



- ◆ Initiate single purpose use of vehicle bays – dedicate one (or more) bays that have no (or sealed) floor drains for repairs/maintenance;
- ◆ Never leave vehicles unattended while refueling;
- ◆ Identify appropriate recycling/disposal options for wastes; and
- ◆ Review vehicle inspection and maintenance records on an annual basis to evaluate conformance to vehicle manufacturer service specifications.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Maintain vehicles and maintenance facilities in accordance with maintenance plan;
- ◆ Conduct routine inspection on all municipal vehicles according to manufacturers' specifications, also inspecting vehicle for the presence of fluid leaks;
- ◆ Identify the need for cleaning of catch basins, oil/water separators;
- ◆ Schedule repairs for vehicles determined to have fluid leaks; and
- ◆ Maintain/update as necessary any inventories and plans that effect municipally owned vehicles, equipment and maintenance facilities.

6.4.3 Building Maintenance

Description/Methodology of BMP

Conduct building maintenance activities such that they do not impact the stormwater systems and local water bodies whenever possible.

Develop a list of the maintenance activities required inside and outside of each municipal building.

Identify which activities have an impact on stormwater.

Develop mitigation measures for each activity that impacts stormwater.

Review the maintenance activity lists on an annual basis to determine if any improvements are necessary.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Implement the mitigation measures for each activity;
- ◆ Review the maintenance activity list and update as necessary;
- ◆ Review the mitigation measures for each activity and revise as necessary; and
- ◆ Maintain/update as necessary an inventory of all municipally owned facilities and material storage areas.

6.4.4 Hazardous Waste and Materials Management

Prevent the discharge of hazardous waste and materials from impacting municipal stormwater systems and local waterbodies by doing the following:



- ◆ Post “no dumping” signs, illuminate and / or prevent access to stormdrain areas if possible.
- ◆ Identify the byproducts and / or wastes that should be recycled such as paper and / or cardboard and where they can be legally disposed of on municipal lands by referencing NYSDEC regulations (6NYCRR PART 360); and
- ◆ Ensuring that all municipal hazardous waste and materials are stored in closed, labeled containers – if stored outside, drums should be placed on pallets, away from storm receivers – inside storage areas should be located away from floor drains.
- ◆ Eliminate floor drain systems that discharge to storm drains; or
- ◆ Use a pretreatment system to remove contaminants prior to discharge.
- ◆ Reduce stock of materials “on hand” – use “first in/first out” management technique.
- ◆ Use the least toxic material (i.e. non hazardous) to perform the work.
- ◆ Install and / or use secondary containment devices where appropriate.
- ◆ Eliminate waste by reincorporating coating and / or solvent mixtures into the original coating material for reuse.

If spills occur all member MS4s of the OWSC will comply with federal and state spill prevention control and counter measures plan regulations, and review spill response procedures to ensure stormwater quality protection measures are considered during spill response. This will be done by, but not limited to the follow procedures:

- ◆ Develop and/or maintain SPCC plans for permittee owned facilities that require plans;
- ◆ Evaluate each municipally owned facility and determine if Spill Prevention Control and Countermeasures plans (SPCC) are required; and
- ◆ Comply with SPCC plan requirements at qualifying municipally owned facilities, including consideration of the following:
 - Conduct employee training.
 - Maintain spill prevention equipment.
 - Keep all materials properly stored in closed, labeled containment systems.
 - Use secondary containment systems where appropriate.
 - Obtain spill recovery materials for immediate response to a spill.
 - Maintain SPCC records.
 - Update and re-certify the SPCC plan according to SPCC regulations
 - Annually report on the number of facilities with SPCC plans and the current status of each SPCC plan.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Implement plan for proper storage of all hazardous and waste materials.
- ◆ Inspect secondary containment systems and oil/water separators; and
- ◆ Inspect containers for leaks, areas near storm receiver inlets and outlets, floor drains for indication of spills.
- ◆ Pump out oil water separators as needed.
- ◆ Protect drains with oil absorbent materials; and
- ◆ Clean out receivers on regular schedule.
- ◆ Remove spilled salt from salt loading area.



6.4.5 Roadway and Bridge Maintenance

Description/Methodology of BMP

Develop, assess, and implement roadway and bridge maintenance activities and modify procedures to reduce stormwater quality impacts using, but not limited to the following activities:

- ◆ Be on the lookout for new and / or alternative practices that would reduce the discharge of salt, construction and other debris during construction or maintenance activities;
- ◆ Calibrate salt spreaders to provide the proper application of road salt to reduce the impact of salt on plants, aquatic life, and the local waterbodies;
- ◆ Store salt indoors and at as high an elevation as possible, to mitigate negative stormwater impacts;
- ◆ Pave in dry weather only;
- ◆ Consider alternative deicing materials (i.e. calcium chloride, magnesium chloride);
- ◆ Incorporate preventive maintenance and planning such covering catch basins during regular operations & maintenance activities including but limited to resurfacing, when patching and filling potholes;
- ◆ Clean up fluid leaks or spills that occur during regular maintenance activity from paving equipment/materials immediately;
- ◆ Use porous asphalt for pothole repair and shoulder work whenever possible;
- ◆ Sweep and vacuum paved roads shoulders and bridges regularly to remove debris and particulate matter;
- ◆ Maintain roadside vegetation; select vegetation with a high tolerance to road salt;
- ◆ Control particulate wastes from bridge sandblasting operations;
- ◆ Clean out bridge scuppers and catch basins regularly;
- ◆ Direct water from bridge scuppers to vegetated areas;
- ◆ Identify the type of roadways that can be swept to remove sediment and other pollutants;
- ◆ Schedule and implement street sweeping of identified roadways; and
- ◆ Prior to road reconstruction, consider/evaluate the use of “shouldered roads” instead of “curbed roads”.

Maintain records of all road maintenance activities and the use of alternative maintenance practices.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Evaluate roadway maintenance program and revise roadway maintenance specifications according to identified alternative practices.
- ◆ Implement street sweeping in accordance with the identified schedule.
- ◆ Inspect salt piles and storage shed for leaks, clumping or other problems and repair as needed.
- ◆ Inspect equipment to verify proper operation. Service trucks and calibrate spreaders regularly to ensure accurate, efficient distribution of salt.



- ◆ Maintain and / or update as necessary an inventory of all municipally owned infrastructure – it is essential to include underground infrastructure i.e.) ditches, underground storm piping, septic systems, UST's, oil/water separators, catch basins/sewers, etc.
- ◆ Maintain records of all road maintenance activities and the use of alternative maintenance practices.

6.4.6 Catch Basin and Storm Drain Cleaning

Description/Methodology of BMP

The purpose of this BMP is to reduce sediment and suspended solid discharges by routinely cleaning municipal catch basins and stormwater inlet structures. The MS4 will do this by:

- ◆ Identifying areas where catch basins, surface inlets, and / or storm sewer manholes that should be periodically cleaned to reduce discharge of suspended solids, sediment, and other materials;
- ◆ Developing a schedule for cleaning inlet structures, catch basins, and manholes based on the previous assessment;
- ◆ Implement the catch basin cleaning program according to the developed schedule; and
- ◆ Evaluate the catch basin cleaning schedule on an annual basis.

Catch basins and floor drain systems inside of buildings should be either:

- ◆ Sealed to prevent discharge;
- ◆ Permitted by NYSDEC; or
- ◆ Discharged to sanitary sewers

Repair/replace storm drain receiver and catch basin receiver grates as necessary.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Implement the catch basin cleaning program according to the developed schedule;
- ◆ Evaluate the catch basin cleaning program to identify improvements and/or modifications.
- ◆ Maintain and / or update, as necessary an inventory of all municipally owned infrastructure – it is essential to include underground infrastructure (i.e. septic systems, UST's, oil/water separators, catch basins/sewers, etc.)

6.5 Best Management Practices for Future Consideration

6.5.1 Pet Waste Collection

Description/Methodology of BMP

House all animals in an enclosed, roofed shelter. Identify and utilize permitted waste disposal facilities for animal wastes. Post signage and possibly develop an ordinance that dissuades the public from leaving excrement from their pets on public property. Where possible encourage community organizations to install pet waste stations and signage along frequent walking routes or in parks.



Implementation Steps

Stormwater Management Officer (or Designee)

- ◆ Remove spilled food and / or animal waste upon request.

6.5.2 Alternative Discharge Options for Chlorinated Water

Description/Methodology of BMP

Prevent the discharge of chlorinated water from impacting municipal stormwater systems and local waterbodies by doing the following:

- ◆ Dechlorinate pool water before any discharge, be it over land or to the sanitary sewer, or allow the “disinfectant” to dissipate with sunlight, use, etc. prior to discharge; and
- ◆ Use ultraviolet radiation or osmosis to disinfect water/wastewater.
- ◆ Backwash water should be discharged to the sanitary sewer, if available. If not available, discharge water over vegetated areas, not to surface waters

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Check chlorine residuals in municipal pools prior to discharge;
- ◆ Do not discharge chlorinated water into the sanitary sewer system during periods of high flow;
- ◆ Maintain proper levels of chlorine residuals in pools;
- ◆ Allow disinfectant to dissipate prior to discharge of pool waters;
- ◆ Obtain permission from the municipal Publicly Owned Treatment Works (POTW) prior to discharging any chlorinated pool waters to a sanitary sewer system; and
- ◆ ID opportunities to change current maintenance practices to incorporate ways to abate the potential for stormwater contamination such as disinfecting water with osmosis or UV light.

6.5.3 Septic System Management

Description/Methodology of BMP

Prevent improperly treated wastewaters from septic systems from impacting municipal stormwater systems and local waterbodies by:

- ◆ Diverting stormwater runoff (i.e.) from roof drains away from septic system;
- ◆ Diverting groundwater and / or sump pump discharges away from septic system;
- ◆ Locating swimming pools away from the septic system (i.e.) at least 20’ from the septic tank and at least 35’ from the closest edge of the leach field or sand filter system;
- ◆ Preventing problems caused by vegetation such as growth of woody plants on the system; and
- ◆ Preventing hydraulic overloading by “Spreading out” the use of devices which use large volumes of water across the entire day for uses such as clothes washing, dish washing, and bathing.
Repair leaky fixtures.



- ◆ Minimizing water usage by using flow restrictors on potable water distribution devices i.e.) shower heads, water faucets

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Determine the interval for pumping out each municipal septic tank; and
- ◆ Maintain/update as necessary an inventory of all municipally owned septic systems and corresponding dates of service for each.

6.5.4 Pest Control

Description/Methodology of BMP

Reduce the discharge of pesticides from municipally owned facilities as they may harm aquatic life and may contaminate local water bodies and sediment. This may be accomplished by the following:

- ◆ Developing an inventory of areas designated for herbicide and pesticide application including the following:
 - Area of application;
 - Type of pesticide or herbicide applied;
 - Purpose of application; and
 - Prepare a pesticide and herbicide application schedule.
- ◆ Comply with local, state, and federal regulations associated with pesticide and herbicide application i.e.) licensing regulations;
- ◆ Purchase only enough pesticides necessary for one year – store properly to avoid waste generation (spills, leaks, product deterioration);
- ◆ Minimize/eliminate pesticide application, use lowest toxicity pesticides;
- ◆ Do not apply pesticides immediately prior to or during rain events;
- ◆ Ensure that employees are properly trained and certified in pesticide application techniques and safety.
- ◆ Eliminate food, water, and shelter for pests;
- ◆ Adopt integrated pest management (IPM) techniques; and
- ◆ Adopt alternatives to pesticides options (use physical, mechanical, or biological controls)

Annual Compliance Requirements

Stormwater Management Officer (or Designee)

- ◆ Inspect pest traps regularly to remove and properly dispose of dead pests;
- ◆ Block and / or eliminate access to buildings and / or structures for pests;
- ◆ Remove pests; and
- ◆ Review pesticide application at all facilities and / or lands and incorporate new methodologies for application, or determine if pesticide application can be discontinued at sites.

6.5.5 Hydrologic Habitat Modification



Description/Methodology of BMP

Develop requirements for the municipal work crews to abide by during hydrologic habitat modification such as stream and ditch cleaning, and wetland disturbance. Provide training to the local municipal work crews regarding the previously mentioned requirements associated with any habitat modification. Identify any potential habitat modification to the NYSDEC and USACE through their Joint Application for Permit Program. Comply with all requirements of the NYSDEC and USACOE permits for work within freshwater wetlands and streams permits. Comply with the construction and post-construction requirements within the stormwater regulations.

Annual Compliance Requirements

OWSC

- ◆ Annually provide additional training as necessary to the municipal work crews.

Stormwater Management Officer (or Designee)

- ◆ Provide the NYSDEC and USACOE with the required information in the Joint Application for Permit to obtain their approval prior to proceeding; and
- ◆ Comply with all requirements of the NYSDEC and USACOE permits.

6.5.6 Landscaping and Lawn Care

Description/Methodology of BMP

Reduce the discharge of landscaping and lawn care waste from MS4 owned facilities through the use of the following methods:

- ◆ Developing an inventory of landscaping and lawn care areas that are owned by the MS4;
- ◆ Evaluate current landscaping and lawn care activities in order to identify opportunities to reduce the discharge of the following:
 - Fertilizers
 - Leaf litter and tree trimmings
 - Litter and floatable materials
 - Equipment fluids
- ◆ Ensure that proper litter collection is scheduled prior to any mowing activities;
- ◆ Use slow release or naturally derived and / or organic all herbicides, pesticides, and fertilizers and in accordance with manufacturers' instructions for application rates and quantities;
- ◆ Purchase only enough lawn care products necessary for one year – store properly to avoid waste generation (spills, leaks);
- ◆ Train employees in the proper application of lawn care products;
- ◆ Consider alternative landscape techniques i.e.) naturescaping, xeriscaping, and rain gardens;
- ◆ Plant trees away from sewer lines or other underground utilities;
- ◆ Use drip irrigation techniques for landscaping; and
- ◆ Report annually on the activities conducted under this program.

Annual Compliance Requirements

Stormwater Management Officer (or Designee)



- ◆ Review monitoring and maintenance program and revise as necessary; and
- ◆ Maintain and / or update as necessary an inventory of all municipally owned lands that are and / or will be subject to landscaping and lawn care activities.

6.6 Minimum Reporting Requirements

At a minimum, the permittee shall report on the items below:

- a. **Indicate the municipal operations and facilities that the pollution prevention and good housekeeping program assessed;**
- b. **Describe, if not done so already, the management practices, polices and procedures that have been developed, modified, and / or implemented and report, at a minimum, on the items below that the permittee's pollution prevention and good housekeeping program addressed during the reporting year:**
 - ◆ Acres of parking lot swept;
 - ◆ Miles of street swept;
 - ◆ Number of catch basins inspected and, where necessary, cleaned;
 - ◆ Post-Construction control stormwater management practices inspected and, where necessary, cleaned;
 - ◆ Pounds of phosphorus applied in chemical fertilizer;
 - ◆ Pounds of nitrogen applied in chemical fertilizer; and
 - ◆ Pounds of pesticides / herbicides applied as pure product.
- c. **Staff training events and number of staff trained; and**
- d. **Report on effectiveness of program, BMP and measurable goal assessment. If the pollution prevention and good housekeeping program addresses other operations than what is listed above in Part VII.A.6.a(ii), the permittee shall report on items that will demonstrate program effectiveness.**



Appendices



Appendix A: General Definitions and Requirements

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

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

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

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

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

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

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

Groundwater –All of the water contained in void space beneath the earth’s surface.

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

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

Industrial Waste – Unwanted materials from an industrial operation, this may include liquids, sludge, solids, or hazardous waste.

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

Maintain or Improve Water Quality – This statement is to mean that no MS4 shall allow for an increase in turbidity to local waters that will cause a substantial visible contrast to natural conditions; the MS4s shall not allow suspended, colloidal and settleable solids from sewage, industrial wastes or other



wastes that will cause deposition or impair local waters for their best usages; and no MS4 shall allow residue from oil and floating substances attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules or grease.

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

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

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

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

National Pollutant Discharge Elimination System (NPDES) – This is the EPA’s regulatory program to control the discharge of pollutants to waters and waterways of the United States.

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

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

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

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

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



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

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

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

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

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

Small Municipal Separate Storm Sewer Systems (SMS4s) – Are MS4s that are not merely determined by population, but are much broader in scope, they are land areas with conveyances that are designated because of one or more of the following criteria: 1) they discharge to sensitive waters; 2) they are experiencing high growth or have a high growth potential; 3) they are contiguous to urbanized areas and other MS4s; 4) they are a significant contributor of pollutants to the waters of the U. S.; or 5) they have ineffective protection of water quality through other programs.

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

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

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

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

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

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

Surface Runoff – Is the flow of water across the land surface that occurs when the rainfall rate exceeds the ability of the soil to absorb the water. This is of primary concern when dealing with impervious surfaces, such as parking lots, roofs, roads, or driveways where water cannot infiltrate at all.

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



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

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

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

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

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

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



Appendix B: List of Commonly Used Abbreviations

BMPs – Best Management Practices

CWA – Clean Water Act

EPA – U.S. Environmental Protection Agency

MCC – Municipal Compliance Certification form

MCM – Minimum Control Measure

MEP – Maximum Extent Practicable

MS4 - Municipal Separate Storm Sewer System

NOI – Notice of Intent

NPS – Non-Point Source Pollutants

NPDES – National Pollution Discharge Elimination System

NYSDEC – New York State Department of Environmental Conservation

POC – Pollutants of Concern

SMO – Stormwater Management Officer

SOP – Standard Operating Procedures

SPCC – Spill Prevention and Control Countermeasures

SPDES – State Pollution Discharge Elimination System

SWMP – Stormwater Management Program

SWPP – Stormwater Pollution Prevention

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

USEPA – United States Environmental Protection Agency



Appendix C: List of Documents for Inclusion by Individual MS4s

This list was compiled from page 74 of the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (GP-0-10-002). It is not necessarily limited to all actions and documents for inclusion. It is the responsibility of the MS4 and the assigned Stormwater Management Officer to address the following components of the SWMP plan and any other required actions and documents for inclusion that may be required but are not present on this list.

The SWMP plan shall be made readily available to the permittee's staff, the general public and regulators, such as DEC and EPA staff. Portions of the SWMP plan, primarily policies and procedures, must be available to the management and staff of a permittee that will be called upon to use them.

Actions and Documents for Inclusion in the SWMP Plan

- **All applicable local laws (MCMs 3, 4 & 5)**
- **Inter-municipal agreements and other legal authorities**
- **Staffing and staff development programs and organization charts**
 - Organization charts should detail the applicable offices and/or individuals which are responsible for implementing various components of the permit
- **Program budget**
- **Policy, procedures, and materials for each minimum measure**
 - This item is largely satisfied by the body of this document; if, however, an MS4 wishes to elaborate or expand upon elements in Sections 1-6, it should do so.
- **Outfall and small MS4 system maps**
- **Stormwater management practice selection and measurable goals**
 - This item is largely satisfied by the body of this document; if, however, an MS4 wishes to elaborate or expand upon elements in Sections 1-6, it should do so.
- **Operation and maintenance schedules**
- **Documentation of public outreach efforts and public comments**
 - This item is largely satisfied by the body of this document; if, however, an MS4 wishes to elaborate or expand upon public outreach efforts detailed in Sections 1-6, or if it has received any public comments pertaining to implementation of MCMs 1-6, it should do so.
- **Submitted construction site SWPPPs and review letters and construction site inspection reports**