

Town of Queensbury MS4 Stormwater Management Program Plan

State Pollution Discharge Elimination System ID#: NYR20A112



This Plan is a requirement under NYSDEC General Permit for Stormwater Discharges, Permit # G-O-10-002

February 2012

Introduction

The Town of Queensbury (Town) is categorized as a traditional Municipal Separate Storm Sewer System (MS4), under Part IV.A. of the New York State Department of Environmental Conservation General Permit for MS4 Stormwater Discharges (G-0-10-002). Under this mandate, the Town must have a working Program Plan which outlines their activities to address stormwater education, outreach, and implementation under the state requirements. The MS4 area designated by the NYS DEC is the full boundary of the Town.

This Stormwater Management Program Plan (SWMPP) documents the efforts currently undertaken and planned by the Town under this program. These requirements correspond to the Town infrastructure and properties (roads, bridges, drainage infrastructure and facilities), but also include public information and outreach on stormwater issues and construction/post-construction stormwater runoff. The ultimate purpose of this plan is to protect and improve water quality of the lakes and streams in the MS4 area.

The SWMPP Plan is based on the Federal Stormwater Phase II rule, issued in 1999, which requires MS4 owners and operators, in U.S. Census-defined urbanized areas as well as in additionally designated areas, to develop a Stormwater Management Program. As of March 10, 2003, these new regulations and requirements came into effect. There are six program elements designed to reduce the discharge of pollutants to the maximum extent practicable. 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. The Town has contracted with the Warren County Soil and Water Conservation District (SWCD) to provide administration of this MS4 stormwater program and to undertake a variety of stormwater management tasks to achieve full compliance with these regulations. The primary entity responsible for the Town's MS4 program is the Warren County SWCD District Manager, who has been designated as the Town's MS4 Stormwater Management Officer.

This Plan will be updated as needed to address the latest technologies and information to maintain compliance with the NYSDEC GP-0-10-002, as well as to account for progress made.

There are several key personnel involved in the Town's Stormwater Management Program;

Key:

SMO = Town Stormwater Management Officer

SWCD = Warren County Soil and Water Conservation District staff

HD = Town Highway Department

CEO = Town Code Enforcement Officer

B&G = Town Building and Grounds Crew

TD = Town Information Technology Department

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

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

Pollutants of Concern:

On a regional level:

- Silt/Sediment
- Dissolved oxygen/ oxygen demand
- Phosphorus
- Pathogens

On a localized level:

- Floatables
- Oil and Grease
- Pet Waste

Waterbodies of Concern:

NYS DEC 2010 Section 303(d) Impaired Waterbodies List

(1) Tribs to Lake George, East Shore

(2) Wood Creek/Champlain Canal and Tribs

- Halfway Brook begins in the Town of Queensbury and runs through the most commercially developed area of the Town. It then crosses county lines into the Town of Fort Ann, where it discharges into the Champlain Canal.

Within the Town there are also a number of small lakes with stormwater pollutant concerns. These include;

Glen Lake

Lake Sunnyside

Geographic area of Concern:

- Residential areas along the shores of Lake George and other waterbodies
- Heavily commercialized areas in the southern portion of the Town

Target Audiences:

- Residential
- Businesses
- Contractors/Developers
- General Public

Minimum Control Measure 1: Public Education and Outreach on Stormwater Impacts

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 Town’s permitted boundary. The target pollutant sources are construction site runoff, illicit discharges and local/regional Pollutants of Concern (POCs).

An MS4 must, at a minimum:

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

The table below depicts the BMPs that the Town currently performs or plans to perform for MCM 1, the responsible parties and any applicable deadlines.

MCM 1 - PUBLIC EDUCATION AND OUTREACH BMPS		RESPONSIBLE PARTY	TIMELINE
1.	Participate in educational events for the general public and waterbody specific audiences related to water quality and stormwater runoff issues. <i>Measurable Goal: Participate in two educational events</i>	SWCD	Annually
2.	Work with the media to get articles in the Glens Falls Post Star and the Chronicle newspapers about stormwater projects, roadside clean-ups and other important water quality issues. <i>Measureable Goal: Achieve at least five articles in the newspapers related to stormwater management issues and projects</i>	SMO, SWCD	Annually
3.	Place “clean up after your pet” signs and pet waste bag distribution stations in Town parks.	SMO, HD, B&G	Annually

	<i>Measurable Goal: Expand signage by 2 signs every year Place 2 dog waste bag distribution stations in Town parks every year.</i>		
4.	Utilize and disperse existing brochures and other literature developed by the Lake Champlain-Lake George Regional Planning Board, the DEC and the EPA regarding stormwater runoff. <i>Measurable Goal: Keep at least 10 copies of all printed literature available for the public at all times. Update literature as new brochures become available.</i>	SMO, SWCD, Town Clerk	Continuously
5.	Distribute stormwater educational flyer in tax bills. <i>Measurable Goal: Educate homeowners on stormwater runoff and water conservation through one direct mailing.</i>	SMO, Town Clerk	Annually
6.	Maintain updated electronic files of stormwater outreach brochures on the Town and SWCD websites. <i>Measurable Goal: Educate the public through the use of the Town and SWCD websites.</i>	SMO, SWCD, TD	As needed

Minimum Control Measure 2: Public Involvement and Participation

The Public Involvement and Participation MCM consists of activities 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 SWMPP 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.

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, beginning in 2009, 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.

The table below depicts the BMPs that the Town currently performs or plans to perform for MCM 2, the responsible parties and any applicable deadlines.

MCM 2 - PUBLIC INVOLVMENT AND PARTICIPATION BMPS	RESPONSIBLE	TIMELINE
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		PARTY	
1.	Set up and advertise a water quality hotline for the public to report spills, dumping, illegal pipes, etc. The HD Clerk will be responsible for taking all calls, and will set up an answering machine for post-operating hours calls. Refer all substantive calls to the SMO, who will follow up with site investigations as appropriate. <i>Measurable Goal: Set a Town protocol for receiving and responding to public calls. Respond to all reasonable calls.</i>	SMO, HD Clerk	By June 2012
2.	Develop a program to work with various municipal and stakeholder groups to undertake a storm drain marking program for key areas within the Town. <i>Measurable Goal: Prioritize storm drains within the Town. Place at least 10 storm drain markers per year.</i>	SWCD, HD	By June 2012
3.	Engage the public in the Adopt-A-Highway program, and work to expand the mileage of Town roads covered by this initiative. This program is a beneficial means of addressing roadside litter while helping to educate the public about environmental issues. <i>Measurable Goal: Keep an updated list of all participants and cleanup sites. Expand the program by one mile per year.</i>	SWCD, HD	Annually
4.	Participate in a Lake/Stream Cleanup Day once per year. Outreach this effort through the media, and encourage volunteer participation, including the Lake George Association and other lake associations. <i>Measurable Goal: Obtain volunteers for the event. Remove and properly dispose of all floatable debris. Measure and record water quality parameters at the cleanup site.</i>	SMO, SWCD, HD, B&G	Annually
5.	Develop a volunteer water quality monitoring program for designated outfalls along priority waterbodies. Train volunteers in proper water quality testing techniques and provide volunteers with necessary supplies. <i>Measurable Goal: Develop protocols for testing at Town outfalls. Prioritize outfalls within the Town based on possible discharges into the storm sewer system. Obtain various testing materials. Obtain volunteers.</i>	SMO, SWCD, HD	By September 2013
6.	Implement volunteer water quality monitoring program <i>Measurable Goal: Train all volunteers on testing techniques. Supply volunteers with necessary equipment and supplies. Once program is established, obtain dry weather discharge water quality data from at least 10 outfalls per year.</i>	SWCD, HD	Beginning October 2013
7.	Host at least 1 community meeting per year to discuss either regional or town-wide stormwater issues <i>Measurable Goal: Solicit input from the community on local and regional stormwater issues.</i>	SMO, Town Board	Annually
8.	Incorporate Green Infrastructure concepts into new landscaping techniques and maintenance activities on town property <i>Measurable Goal: Develop new landscaping techniques based on the DEC Design Manual, Chapter 5, Green Infrastructure. Replace non-native plants with native plant species as appropriate</i>	SWCD, B&G	By May 2013
9.	If the opportunity becomes available, the Town will participate in a	SMO, SWCD,	When

	Household Hazardous Waste Collection program facilitated by NYS DEC. <i>Measurable Goal: Collect household hazardous waste so it is not released into the storm drain system or waterways</i>	HD	possible
10.	Prepare and present the Annual Report for public review, by May 1 of every year. Present this report to the Town Board in May of every year, and publicly notice this meeting as required by Open Meetings Law. Provide DEC will public comments. <i>Measurable Goal: Record all public comments received on Annual Report. Update SWMPP to incorporate applicable public comments.</i>	SMO	May 1, annually
11.	Host Annual Report on the Town website in an easily findable location for public review and use. Provide opportunity for public comment. <i>Measurable Goal: Provide public access to the Annual Report.</i>	SMO, TD	Annually
12.	Host the SWMPP on the Town website in an easily findable location for public review and use. Provide opportunity for public comment. <i>Measurable Goal: Provide public access to the SWMPP.</i>	SMO, TD	By April 2012

Minimum Control Measure 3: Illicit Discharge Detection & Elimination

The Illicit Discharge Detection and Elimination (IDDE) MCM consists of BMPs that focus on the detection and elimination of illicit discharges located within the Town. The Town has adopted the NYS Department of Environmental Conservation Model IDDE Law, giving the Town the authority to locate and remove or cause to remove sources of the illicit discharge.

An MS4 must, at a minimum:

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

b. *Develop 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;*
- *By March 9, 2010, the preliminary boundaries of the permittee's storm sewersheds determined using GIS or other tools, even if they extend outside of the urbanized area (to facilitate trackdown), and additionally designated area within the 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 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-02-02 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 I.A.2 of GP 0-10-002) 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.

The table below depicts the BMPs that the Town currently performs or plans to perform for MCM 3, the responsible parties and any applicable deadlines.

MCM 3 – ILLICIT DISCHARGE DETECTION & ELIMINATION BMPS		RESPONSIBLE PARTY	TIMELINE
1.	As the MS4 program boundary has expanded, undertake a new mapping of the stormwater outfalls within the outermost boundaries of the Town. Include the names and DEC classification of any streams which receive stormwater discharge from a Town outfall. <i>Measurable Goal: Complete 75% of mapping in 2012 Finish remaining 25% of mapping in 2013</i>	SMO, SWCD, HD	By June 2013
2.	Develop, approve and implement a new town-wide law eliminating the use of phosphorus in fertilizers. <i>Measurable Goal: A new law in place and outreach to public</i>	Town Board, Town Attorney	Law adopted Sept 2011
2.	Map all outfalls within the designated area as they are constructed or newly discovered within the urbanized area. <i>Measurable Goal: Updated GIS maps of all Town outfalls.</i>	SWCD, HD	As needed
3.	Map the drainage areas which contribute to the stormwater outfalls	SMO, SWCD,	By January

	(their sewersheds) in ArcGIS, and create hard copy maps of those areas. <i>Measurable Goal: Updated GIS maps of Town sewershed.</i>	HD	2015
4.	Establish an IDDE Program within the Town. <i>Measurable Goal: Identify roles in Program for each applicable employee. Identify warning procedures for disconnection of illicit discharges coming from private property. Identify enforcement procedures for private party non-compliance. Identify disconnection procedures for illicit discharges coming from private property. Establish procedures to disconnect any public illicit discharge connections.</i>	SMO, SWCD, HD, Town Attorney	By January 2013
5.	Enforce all provisions of the Town IDDE law regarding illicit discharges into Town drainage infrastructure. <i>Measurable Goal: Enforced IDDE laws by issuing citations.</i>	SMO, Town Attorney	As needed
6.	Inventory high risk areas for possible illicit connections. Highest priority outfalls for inspection will be industrial areas, heavy commercial areas, areas of new development, and older areas of development. <i>Measurable Goal: Produce map of high risk areas for illicit discharge. Produce outfall inspection schedule based upon inventory.</i>	SMO, SWCD, HD	By May 2013
7.	Conduct routine visual inspections of 25% of Town outfalls once per year, in dry periods. Record outcomes, including surrounding generating sites, and record type of potential illicit discharges. <i>Measurable Goal: Record basic visual water quality information.</i>	SWCD	Begin September 2012
8.	Obtain water quality data from Town stormwater outfalls. <i>Measurable Goal: Obtain dry weather discharge water quality data from at least 10 outfalls per year.</i>	SWCD, volunteers	Begin October 2013
9.	Inspect Town sub-surface storm sewer infrastructure for possible illicit discharges. <i>Measurable Goal: Inspect 10% of infrastructure yearly for possible illicit discharges.</i>	SMO, SWCD, HD	By January 2015
10.	Replace any Combined Sewer Overflows (CSOs) that are found during routine Town maintenance and construction activities. <i>Measurable Goal: Remove as many CSOs as practicable.</i>	SMO, HD, Town Water Dept.	As needed
11.	Confirm illicit discharges either found in routine Town activities or reported by the public. Eliminate discharges as necessary. <i>Measurable Goal: Illicit discharges confirmed and eliminated.</i>	SMO, SWCD, HD	As needed
12.	Train all Town personnel (including labor, equipment operator and field staff) regarding the IDDE provisions, including how to identify an illegal discharge and how to undertake the recommended follow-up actions. Update training as necessary. <i>Measurable Goal: All Town staff trained by September 2013.</i>	SMO, SWCD	By September 2013

Minimum Control Measure 4: Construction Stormwater Management

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.

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 (either GP-02-01, GP-0-08-001 or GP 0-10-001), unless more stringent requirements are contained within this 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:*
 - o *That construction activity is part of a larger common plan of development or sale that would disturb one acre or more; or*
 - o *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:*
 - o *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*
 - o *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;*
 - o *Ensure that the individuals performing the reviews are adequately trained and understand the State and local sediment and erosion control requirements;*
 - o *All SWPPPs must be reviewed for sites where the disturbance is one acre or greater; and*
 - o *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;*
 - o *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*
 - o *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. *By May 1st, 2010, 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:*
 - o *Training may be provided by the Department or other qualified entities (such as Soil and Water Conservation Districts);*
 - o *The permittee is not expected to perform such training, but they may cosponsor training for construction site operators in their area;*
 - o *The permittee may ask for a certificate of completion or other such proof of training; and*
 - o *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.*

The table below depicts the BMPs that the Town currently performs or plans to perform for MCM 4, the responsible parties and any applicable deadlines.

MCM 4 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPS		RESPONSIBLE PARTY	TIMELINE
1.	For any land development projects performed within the Town that anticipates exceeding one acre of land disturbance, the owner shall prepare an appropriate Stormwater Management Pollution Prevention Plan (SWPPP). This SWPPP must conform to all requirements and guidelines of the NYS SPDES General Permit requirements. All SWPPPs will be reviewed by the contracted Town Engineer and Town Planning Board. <i>Measurable Goal: All development projects follow the appropriate SWMPP guidelines.</i>	Town Engineer, Town Planning Board	As needed
2.	Encourage developers/contractors include the feasibility of Low Impact Development/Better Site Design/Green Infrastructure principles in the development of SWPPP. <i>Measurable Goal: Encourage the use of Low Impact Development/ Green Infrastructure practices in construction BMPs.</i>	Town Engineer, Town Planning Board	As needed

3.	Ensure that all contractors working on such development projects are informed and knowledgeable of the SWPPP, and that each contractor sign a "Contractor's Certification Statement" acknowledging such. <i>Measurable Goal: Ensure only knowledgeable contractors are working within the Town boundary.</i>	CEO	As needed
4.	Ensure that all subcontractors on such development have obtained the 4-hour contractor Erosion and Sediment Control Training, and are in possession of ID cards noting such training has been obtained. <i>Measurable Goal: All contractor's working within the Town boundaries have been properly trained.</i>	CEO	As needed
5.	Keep updated records of all construction projects in the Town. <i>Measurable Goal: Updated knowledge of construction activities.</i>	CEO	As needed
6.	Perform weekly inspections of all construction sites by a Professional Engineer or a Certified Professional in Erosion and Sediment Control. Utilize the NYS DEC Region 5 inspection checklist for these inspections. Keep all inspection records on file in the Town offices. <i>Measurable Goal: Assess and approve of all construction stormwater BMPs at construction sites.</i>	CEO	As needed
7.	Any public complaints regarding erosion and sediment control or stormwater runoff concerns from such development shall be directed to the Town CEO for review. The CEO will review the issue and ensure that all provisions of the approved SWPPP are in compliance. <i>Measurable Goal: Solicit public involvement in the SWPPP process.</i>	CEO	As needed
8.	The Town will issue Notices of Violation and Stop Work Orders to any construction site that does not follow the proper stormwater runoff management procedures. <i>Measurable Goal: Stop all work that is not in compliance with DEC and Town mandates.</i>	CEO	As needed
9.	Keep apprised of all new provisions of the SPDES General Stormwater Permit, and outreach this information to the appropriate parties at the Town. <i>Measurable Goal: Stay in compliance with updated DEC regulations.</i>	SMO	As needed

Minimum Measure 5: Post-Construction Stormwater Management

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.

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 (either GP-02-01, GP-0-08-001 or GP0-10-002), unless more stringent requirements are contained within this general SPDES permit (GP-0-10-002);

- 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:*
 - o *That project is part of a larger common plan of development or sale; or*
 - o *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:*
 - o *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*
 - o *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.*
- 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;*
 - o *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;*
 - o *Ensure that the individuals performing SWPP reviews are adequately trained, or under the supervision of a qualified professional who understand the State and Local post construction stormwater requirements;*
 - o *All SWPPPs must be reviewed for sites where the disturbance is one acre or greater; and*
 - o *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-0-08-001) when notifying construction site owner / operators that their plans have been accepted and approved by the permittee.*
- vi. *By May 1, 2009 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;*
 - o *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.*

- o *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.*
- o
- 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.*

The table below depicts the BMPs that the Town currently performs or plans to perform for MCM 5, the responsible parties and any applicable deadlines.

MCM 5 – POST - CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs		RESPONSIBLE PARTY	TIMELINE
1.	Develop a Post-Construction Plan for the Town that includes protocols for the inventory, inspection and maintenance of Post-Construction stormwater activities on private and municipal construction projects. <i>Measurable Goal: Ensure all development projects follow the appropriate SWPPP guidelines.</i>	CEO, Town Engineer, Town Planning Board	By March 2013
2.	Encourage that developers include the feasibility of Low Impact Development/Better Site Design/Green Infrastructure principles in the development of SWPPP Operation and Maintenance manual. <i>Measurable Goal: Encourage the use of Low Impact Development/ Green Infrastructure practices in post-construction BMPs.</i>	Town Planning Board, Town Engineer	Beginning January 2013
3.	Maintain an updated inventory of all post-construction stormwater management practices. <i>Measurable Goal: Stay informed of all post-construction stormwater management practices within the town boundary. Maintain list of types of post-construction stormwater management practices used.</i>	CEO	As needed
4.	Prioritize all post-construction stormwater management practices and develop an inspection schedule for each project based upon the Operation and Maintenance manual developed during the SWPPP process. Update as necessary. High priority projects, as deemed by the Town, shall have their post-construction stormwater practices inspected a minimum of 2 times per year. Medium priority projects, as deemed by the Town, shall have their post-construction stormwater practices inspected a minimum of once per year. Low priority projects, as deemed by the Town, shall have their post-construction stormwater practices inspected a minimum of every other year. <i>Measurable Goal: All post-construction stormwater practices inspected on a rotating basis based upon the necessity for inspection.</i>	CEO	By May 2012

5.	Inform the owner of any un-maintained post-construction stormwater practices and if necessary, issue warnings/citations to ensure that all post-construction management practices are properly maintained. <i>Measurable Goal: Ensure that all post-construction management practices are properly maintained.</i>	CEO	As needed
6.	Maintain or cause to maintain all post-construction management practices that the Town has contracted to manage. <i>Measurable Goal: All post-construction management practices are maintained and remain working to the best ability.</i>	HD	As needed
7.	Attend trainings on Low Impact Development, Better Site Design and other Green Infrastructure principles. <i>Measurable Goal: Train Town staff and Board in low impact development principles.</i>	CEO, Town Planning Board, Town Engineer	As available

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

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.

An MS4 must, at a minimum:

- a. *Develop and implement a pollution prevention / good housekeeping program for municipal operations and facilities that:*
 - i. *Addresses municipal operations and facilities that contribute or potentially contribute POCs to the small 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;*
 - ii. *At a minimum frequency of once every three years, perform a self assessment of all municipal operations addressed by the SWMP to:*
 - o *Determine the sources of pollutants potentially generated by the permittee's operations and facilities; and*
 - o *Identify the municipal operations and facilities that will be addressed by the pollution prevention and good housekeeping program, if it is not done already.*
 - iii. *Determines management practices, policies, procedures, etc. that will be developed and implemented to reduce or prevent the discharge of (potential) pollutants. Refer to management practices identified in the "NYS Pollution Prevention and Good Housekeeping Assistance Document" and other guidance materials available from the EPA, State, or other organizations;*
 - iv. *Prioritizes pollution prevention and good housekeeping efforts based on geographic area, potential to improve water quality, facilities or operations most in need of modification or improvement, and 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. Consider and incorporate cost effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing stormwater conveyance systems and municipal properties to the MEP. Some examples include replacement of closed drainage with grass swales, replacement of existing islands in parking lots with rain gardens, or curb cuts to route the flow through below grade infiltration areas or other low cost improvements that provide runoff treatment or reduction.

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

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

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

The table below depicts the BMPs that the Town currently performs or plans to perform for MCM 6, the responsible parties and any applicable deadlines.

MCM 6 – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS BMPS		RESPONSIBLE PARTY	TIMELINE
1.	Roadway and Bridge Maintenance. Roadways and bridges will continue to be maintained in compliance with the Environmental Manual prepared by the New York State Department of Transportation. Measures will be taken to reduce stormwater runoff from the roads where possible, including hydroseeding, installing roadside buffers, removing all construction debris, ect. <i>Measurable Goal: Decrease stormwater runoff from Town roads.</i>	HD	Continuously
2.	Parking Lot and Street Cleaning. All parking lots within the Town boundaries will be inventoried and prioritized for cleaning. <i>Measurable Goal: Sweep all Town parking lots at least once per year.</i>	HD	Annually
3.	Parking Lot and Street Cleaning. Street cleanings will be scheduled in the spring and fall of every year. <i>Measurable Goal: Sweep all Town roadways at least once per year. Increase frequency of cleaning yearly.</i>	HD	Annually
4.	Parking Lot and Street Cleaning. Roadside leaf collection will be scheduled and performed in the fastest manner possible to decrease leaf buildup in storm sewers. <i>Measurable Goal: Collect al leaf litter within one month. Increase amount of leaf litter collected each year.</i>	HD	Annually

5.	Parking Lot and Street Cleaning. Draft ordinance to require all leaf litter be bagged and placed on the curb within a certain time frame. <i>Measurable Goal: Adopt the ordinance. Eliminate all loose leaf piles dumped on Town roads.</i>	SMO, Town Board, Town Attorney	By January 2014
6.	Road Salt Application and Storage. Continue to follow NYSDOT Guidelines for Snow & Ice Control for use of deicing salt. Salt will continue to be stored in buildings constructed for that purpose. <i>Measurable Goal: Eliminate salt storage seepage.</i>	HD	Continuously
7.	Road Salt Application and Storage. Inspections of the Town road salt storage facilities will be completed at least once per year and any issues will be addressed within one week of discovery. <i>Measurable Goal: Expedite salt storage facility repairs. Eliminate salt storage facility seepage.</i>	HD	Annually
8.	Road Salt Application and Storage. Evaluate the possibility of using alternative deicing materials on Town roads. <i>Measurable Goal: Decrease the amount of traditional salt mixtures used on Town roads.</i>	HD	By October 2012
9.	Road Salt Application and Storage. Keep annual records on the amount of salt applied to Town roads. <i>Measurable Goal: Maintain completed records of salt usage. Decrease amount of salt usage where possible.</i>	HD	Annually
10.	Road Salt Application and Storage. Collect water samples at outfalls near recent salt application sites on five different occasions throughout the winter months. Test for and record the chloride and conductivity measurements. <i>Measurable Goal: Evaluate salt usage based on water quality impacts.</i>	SWCD, HD	Begin November 2012
11.	Septic System Management. Minimize septic system wastewater impacts to municipal stormwater systems and local water bodies by diverting sources of surface and ground water away from septic systems; preventing growth of woody plants on the system; preventing hydraulic overloading; minimizing water usage and repairing leaky fixtures. <i>Measurable Goal: Eliminate sources of impact to municipal septic systems.</i>	B&G	As needed
12.	Hydrologic Habitat Modification. Stream and Wetlands disturbances will be kept to a minimum. All procedures established by NYSDEC, USACOE, APA, USFW, and the NYSODT Environmental Manual will be followed. <i>Measurable Goal: Decrease impacts to wetlands when possible.</i>	SMO, HD	As needed
13.	Building Maintenance. Develop a list of the maintenance activities required inside and outside of each municipal building; Identify which activities have an impact on stormwater; and develop mitigation measures for each activity that impacts stormwater. <i>Measurable Goal: Develop a maintenance plan that decreases stormwater pollution from Town building maintenance activities.</i>	B&G	By January 2013
14.	Building Maintenance. Conduct building maintenance activities such that they do not impact the stormwater systems and local water bodies whenever possible. <i>Measurable Goal: Implement the maintenance plan that decreases stormwater pollution from Town maintenance activities.</i>	B&G	Continuously

15.	Building Maintenance. Review the maintenance activity lists on an annual basis to determine if any improvements are necessary. <i>Measurable Goals: Update and improve maintenance activities when necessary</i>	B&G	Annually
16.	Landscaping and Lawn Care. Lawn care and landscaping areas and practices will be inventoried and evaluated, looking for reductions in: Fertilizers, Leaf litter & tree trimmings, Litter, Floatables, and Equipment Fluids. <i>Measurable Goal: Decrease landscaping and lawn care waste that contributes to stormwater pollution.</i>	B&G	By May 2013
17.	Landscaping and Lawn Care. If possible, use slow release, natural or organic lawn care products, and record and document all use. <i>Measurable Goal: Reduce amount of fertilizer used on Town property.</i>	B&G	As applicable
18.	Pest Control. Inventory and evaluate pest control areas and practices, looking for integrated management practices to reduce toxicity levels, and inhibit pest habitat. <i>Measurable Goal: Reduce amount of pest control chemical used on Town property.</i>	B&G	By May 2013
19.	Catch Basin and Storm Drain Cleaning. Clean out 25% of the Town catch basins and storm drains per year. <i>Measurable Goal: Clean 25% of catch basins annually.</i>	HD	Annually
20.	Catch Basin and Storm Drain Cleaning. Prioritize catch basins based on the need for repair. <i>Measurable Goal: Perform at least 10% of the necessary repairs per year.</i>	HD	Annually
21.	Vehicle& Equipment Maintenance and Maintenance Facilities Procedures. Evaluate maintenance procedures for opportunities to reduce discharge to storm sewer systems at the HD facility. <i>Measurable Goal: Decrease amount of stormwater pollution coming from vehicle maintenance.</i>	HD	By June 2012
22.	Vehicle& Equipment Maintenance and Maintenance Facilities Procedures. All used motor oil from municipal vehicles will be properly recycled. <i>Measurable Goal: Properly recycle all used motor oil.</i>	HD	Continuously
23.	Vehicle& Equipment Maintenance and Maintenance Facilities Procedures. Design specific areas for vehicle washing and collect all washwater in a system that discharges to the wastewater treatment plant. <i>Measurable Goal: Eliminate washwater runoff to the Town storm sewer system.</i>	HD	By June 2012
24.	Hazardous Waste and Materials Management. Develop a spill response plan and train all applicable personnel on proper response methods. <i>Measurable Goal: Properly clean up all hazardous waste spills.</i>	HD, B&G	By January 2013
25.	Perform self-assessments of all operations on a rotating 3 year schedule. <i>Measurable Goal: Self-assess 33% of Town operations per year. Improve operations as needed.</i>	HD, B&G	Annually
26.	Town Employee Training Program. Provide or cause to provide stormwater management BMP training for applicable Town employees. The training will be prioritized first for management and	SMO, SWCD, HD, B&G	Begin May 2012

supervisory staff, then to equipment operators and laborers. <i>Measurable Goal: Train 25% of applicable Town staff per year. Update training as needed.</i>		
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Appendices

Appendix C: List of Documents for Inclusion by Individual MS4s

This list was compiled from page 96 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 Town of Queensbury 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 or procedures (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 or reference to location**