

Village of Marcellus Stormwater Management Program Plan

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Introduction

The Village of Marcellus Stormwater Management Program (SWMP) Plan is developed and implemented 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 or its successor (Appendix A). In response to the 1987 Amendments to the Clean Water Act (CWA), the U.S. Environmental Protection Agency (EPA) developed Phases I and II of the National Pollutant Discharge Elimination System (NPDES) Storm Water Program.

The Phase II Final Rule, published in the Federal Register on December 8, 1999, expanded the stormwater permit program to include stormwater discharges from certain regulated small Municipal Separate Storm Sewer Systems (MS4s). The New York State Department of Environmental Conservation (NYS DEC) is responsible for administering the program in New York State as part of the State Pollutant Discharge Elimination System (SPDES) program.

The SPDES General Permit for Stormwater Discharges from Small MS4s was promulgated by NYSDEC in 2002 and required regulated MS4s (those with a minimum population density of 1000 people per square mile and located in urban areas with a population of 50,000 or more as defined by the U.S. Census Bureau) to develop and fully implement a Stormwater Management Program (SWMP) Plan by 2008. Going forward from 2008, the SWMP Plan must be re-assessed on an annual basis and updated as needed to improve its effectiveness, monitor progress, and account for any changes in the regulations and guidance provided by NYSDEC. A blank form for completing the evaluation, as well as the Village of Marcellus's annual evaluation of the previous year's SWMP is attached as Appendix B (*MS4 may substitute their own form if they wish, if it contains a comparable process that meets the regulatory requirement*).

The Syracuse Urbanized Area (SUA), which includes portions of Onondaga, Oswego and Madison Counties, meets the population threshold and density criteria regulated under Phase II of the Stormwater Program. The SUA contains 31 municipalities required to maintain coverage under the SPDES MS4 stormwater permit and comply with requirements of the permit. Please see Appendix D for a map of the SUA. Many of these municipalities are working together as the CNY Stormwater Coalition.

The template upon which this SWMP is based was reviewed, approved, and adopted by the CNY Stormwater Coalition. It includes information regarding programs that are delivered by program partners on behalf of Village of Marcellus, and also includes information regarding Village of Marcellus's own individual compliance program.

Phase II of the Federal Stormwater Final Rule identifies six program elements designed to reduce the discharge of pollutants to the maximum extent practicable (MEP). The program elements, known as Minimum Control Measures (MCMs), include:

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

Stormwater Pollutants of Concern and Their Sources

Stormwater runoff from impervious and developed surfaces carries large amounts of various pollutants to the surface waters of the United States. Among these pollutants are nutrients, silt and sediment, pathogens, oil/grease, metals, and floatables (debris and litter). Phosphorus, sediment, and pathogens are of particularly high concern to the water bodies in the Syracuse Urbanized Area (SUA).

Phosphorus (and other nutrients)

Phosphorus is the primary nutrient of concern locally because it is the limiting nutrient in the majority of local waters. High phosphorus levels lead to excess weed and algae growth in lakes and streams. This growth clogs waterways and blocks sunlight. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Most fish and other aquatic life are unable to survive in water containing low dissolved oxygen levels. Sources of nutrients include fertilizer, human and animal waste, and detergents. Leaves, grass clippings, and other plant materials that fall or are deposited on urban land also carry nutrients that are released during decomposition.

Silt and sediment

Silt and sediment is carried by stormwater into water bodies as a result of soil erosion from construction sites, lawns, agriculture, and gardening or landscaping activities. Heavy deposits of silt in sensitive areas such as wetlands and stream and lake bottoms can damage habitat needed by aquatic insects and plants. Turbidity (cloudiness) created by suspended sediment blocks sunlight needed by aquatic plants to grow. Sediment also can carry toxic chemicals that deplete oxygen in water bodies, and can clog drinking water intake pipes.

Pathogens (bacteria, viruses)

Bacteria, viruses and other microorganisms include infectious agents and disease producing organisms normally associated with human and animal (both pet and wildlife) wastes, leakage from sewers and seepage from septic tanks. These organisms can cause disease in humans and animals when present in drinking water and water bodies. Because pathogens can harm aquatic and human health, their presence can render lakes and streams unsafe for drinking, swimming, fishing, and other forms of water recreation. Biological contaminants originate from organic matter, animal waste and litter. They may enter the stormwater drainage system through illicit discharges and cross-connections or sanitary and combined sewer overflows.

Metals (e.g. arsenic, lead, mercury, copper, cadmium, zinc)

Metals in water can be toxic to aquatic life, humans and animals. Metals generally originate from vehicle exhaust, weathered paint, metal plating, tires, discarded auto parts, and motor oil. Heavy metals have the ability to bioaccumulate, meaning that they become more concentrated and toxic the higher in the food chain they progress.

Thermal stress (sunlight)

Direct exposure of urban streams to sunlight (such as in areas where shade is lacking) may elevate stream temperatures. These temperatures can exceed fish tolerance limits, reducing survival and lowering resistance to disease. Thermal energy also originates from street, parking lot and roof surfaces that have been heated by sunlight. This energy is conveyed through the drainage system to streams by surface flow during storm events, resulting in similar stress to aquatic life.

Floatables (litter)

Floating litter and trash in water may be contaminated with toxic chemicals and bacteria, and can cause death to aquatic animals and birds. Obviously, aesthetics of the water are also negatively impacted. Floatables are generally the result of careless handling or littering.

Oxygen demanding organics

Natural or synthetic organic materials (including human and animal waste, decaying plants and animals, discarded litter, and food waste) can enter surface waters either dissolved or suspended in stormwater runoff. Natural decomposition of the material can deplete dissolved oxygen supplies in the waters. When dissolved oxygen is reduced below a critical threshold level, fish and other aquatic organisms can perish.

Chlorides

Large quantities of deicing or anti-skid compounds are applied by municipalities and transportation departments during the winter months; commonly these substances consist of chloride salts (although sand may also be used). These chemicals are washed into storm drains and streams during snowmelt; they are toxic in large quantities and can contaminate drinking water.

Other toxic substances

Toxic substances may enter surface waters either dissolved in runoff or attached to sediment or organic materials. The principal concerns in surface water are their entry into the food chain, toxic effect on fish, wildlife and microorganisms, habitat degradation, and potential degradation of public water supplies. Oil and grease in storm drains can be toxic even in small amounts; they can generally be traced to automotive leaks and spills or improper disposal of used oil and automotive products into storm drains. Residential sources of toxic substances include vehicle fluids (oil, gasoline and antifreeze), paint, pesticides, solvents, batteries, hazardous wastes, street litter, soap from car washing, and swimming pool discharges. Activities of commercial businesses may generate soap from equipment washing, waste process water and hazardous liquids that are either directly discharged to the storm sewer system or enter via surface runoff. Toxic substances can also originate from construction sites and may include wash water from concrete mixers, used oil and solvents, and vehicle fuels and pesticides.

Impaired Waters

Several bodies of water in the SUA are considered impaired and are included in a list of impaired waters known as the 303(d) list. This indicates that they are unable to meet the uses designated by their Water Quality Classifications, whether these uses include drinking water (Class A), primary contact recreation (Class B), or secondary contact recreation (Class C). Sources of impairment to water quality include specific Pollutants of Concern. MS4s should assign particular priority to these pollutants in their individual stormwater programs, although all of the pollutants mentioned above generally warrant attention.

Also, the watershed of Onondaga Lake is subject to what is known as a Total Maximum Daily Load (TMDL) for phosphorus. A TMDL allocates the maximum quantities of a given pollutant that can be discharged from specific sources to the drainage and stream system of the watershed as well as directly to the lake itself. 19 MS4s in the SUA are entirely or partially located in the Onondaga Lake watershed and therefore subject to the requirements.

The following are Pollutants of Concern that the Village of Marcellus has identified as priorities in our area and the bodies of water to which they pertain (check all that apply) *(refer to Table 1 on page 3 of the SWMP Regulatory Background and Instruction Document for more details)*:

	POC	Affected waters
	Sediment	
X	Pathogens	Nine Mile Creek, Onondaga Lake TMDL
X	Phosphorus	Nine Mile Creek, Onondaga Lake TMDL
	Nitrogen (nitrates)	
	Nitrogen (ammonia)	
	Heavy metals	
	Hydrocarbons/ petroleum products	
	Trash/floatables	
	Thermal pollution	
	Other _____ _____ _____	

Minimum Control Measure 1. Public Education and Outreach.

The Public Education and Outreach Minimum Control Measure involves planning and conducting an ongoing education and outreach program to inform the public of the impacts of stormwater discharges on water bodies, Pollutants of Concern and their sources, and behaviors that can be adopted to reduce the discharge of pollutants to the stormwater drainage system.

The Village of Marcellus, as a member of the CNY Stormwater Coalition will contract with the Central New York Regional Planning and Development Board (CNY RPDB) to conduct an annual CNY Stormwater Coalition Education Compliance Assistance Program that informs the above-mentioned target audiences about stormwater issues. Methods include the following:

- distribution of printed materials through various venues;
- articles and inserts published in the Post-Standard newspaper;
- maintenance of a stormwater website and library;
- distribution of a newsletter to inform contractors and developers of important current issues pertaining to the stormwater permits;
- use of a stormwater display at public events; and
- training of municipal officials and staff.

A copy of the program proposal for the current reporting year and the resolution to participate signed by Village of Marcellus are included as Appendix E.

The Village of Marcellus website <http://www.villageofmarcellus.com> will include links for the general public to stormwater program information on the CNY RPDB's stormwater website <http://www.cnyrpd.org/stormwater/> as well as other informative sites such as those provided by:

NYSDEC www.dec.ny.gov/chemical/8468.html

EPA <http://cfpub.epa.gov/npdes/stormwater/swbasicinfo.cfm>

Onondaga County www.savetherain.us

Target audiences

The Village of Marcellus considers the following audiences to be of prime importance to reach in order for the education and outreach program to result in water resources protection and improvement (*MS4 may refer to the SWMP Instruction Document for more guidance if needed*):

General public (including educational and commercial entities)

Construction industry

Municipal staff (planning)

Municipal staff (highway/parks)

Municipal staff (code enforcement)

Other

Measurable Goals

Village of Marcellus is assessing the success of Minimum Control Measure 1 of its SWMP through the following Measurable Goals (Details provided in the Annual Stormwater Report.):

Number of visitors to stormwater program website

Number of newsletters sent to the general public concerning stormwater pollution issues

Number of days in which newspaper articles or inserts educating the public about stormwater were run

Number of individual printed materials (brochures, flyers, posters) distributed

Number of mailing lists for stormwater program information

Number of individuals on stormwater program mailing lists

Number of public events at which booths were staffed educating target audiences

Number of locations containing kiosks or other displays educating target audiences about stormwater

Number of attendees at school programs pertaining to stormwater

Other: _____

Minimum Control Measure 2. Public Involvement and Participation.

The Public Involvement and Participation Minimum Control Measure involves designing and conducting a public involvement/participation program that identifies key individuals and groups who are interested in or affected by the stormwater permitting program; the type of input the MS4 will seek from them and how it will be used; and activities the MS4 will undertake to provide program access and gather needed input.

The following activities under Minimum Control Measure 2 will be completed by the Village of Marcellus independently or in cooperation with the CNYSC and/or its partner agencies:

- Document all compliance activities conducted directly by staff and provide necessary documentation to CNY RPDB for inclusion in a joint annual report to be submitted to NYS DEC on behalf of the CNYSC;
- Sign a memorandum of agreement with Onondaga County Water Environment Protection (OCWEP) regarding operation of a public stormwater hotline to receive reports of suspected illicit discharges to the stormwater draining system (Copy of MOA attached as Appendix F) *(leave Appendix blank or omit if not applicable)*;
- Promote and participate in the Onondaga County Resource Recovery Agency recycling and household hazardous waste collection programs.
- Establish a formal system for receiving, coordinating and resolving stormwater specific complaints from the public.

The Village of Marcellus has identified and is working with the following key groups and individuals to seek out input and assistance concerning the implementation of its stormwater management program:

Name: Onondaga County Water Environment Protection

Contact Info: 315-435-5402

Input/Assistance Sought: IDDE

The Village of Marcellus has identified the following point of contact for public concerns regarding stormwater management and compliance issues and has published this information on the Village of Marcellus website at <http://www.villageofmarcellus.com> and municipally generated outreach materials:

Name: Bill Reagan / Dave Weber

Title/Position: Code Enforcement

Telephone: 315-673-3112

E-Mail: codes@villageofmarcellus.com

The Village of Marcellus will announce availability of the draft annual report on its website at <http://www.villageofmarcellus.com>, in its municipal newsletter and in the newspaper of record Marcellus Observer.

The Village of Marcellus will post its annual report for public review and comment on its website at <http://www.villageofmarcellus.com>. Copies of the report will also be available for public review at the Village of Marcellus municipal building & office. Members of the public may

request an open public meeting to ask questions or comment on the draft report by submitting a request to the Village of Marcellus Clerk at least 2 weeks prior to a scheduled municipal Board meeting before May 31.

The Village of Marcellus will develop a summary of all public comments received and intended responses, and will submit the response to CNY RPDB for inclusion in the final annual report submitted to NYS DEC. The response document will also be available in the Municipal Clerk's office and posted on the municipal website <http://www.villageofmarcellus.com> along with a link to the full final report to be posted on the CNY RPDB stormwater website at <http://www.cnyrpdb.org>. Forms for documenting public comments, and completed summaries of public comments, are attached as Appendix G and the response document is attached as Appendix H.

The Village of Marcellus will conduct or sponsor the following types of activities to promote public awareness, involvement, and active participation in stormwater pollution prevention:

Earth Day Cleanup: Volunteers will collect trash from streets and ditches

Storm Drain Stenciling: Planned for 2017

Committees or Advisory Councils: The Onondaga Lake Watershed Partnership (OLWP) operates as a neutral clearinghouse for lake and watershed dialogue and decisions. OLWP works to gather and facilitate input by stakeholders. The Nine Mile Creek Conservation Council is a non-profit organization concerned with protecting the Nine Mile Creek watershed, which includes the Village. Project Watershed, sponsored by the Izaak Walton League, conducts training and stream monitoring throughout Central New York.

Measurable Goals

Village of Marcellus is assessing the success of Minimum Control Measure 2 of its SWMP through the following Measurable Goals (Details provided in the Annual Stormwater Report.):

Number of comments received on annual report and SWMP Plan

Number of complaints or inquiries, or hotline calls, received regarding the stormwater management program

Number of positive resolutions or outcomes attained as a result of complaints

Number of plantings, number of volunteers

Number or percentage of storm drains stenciled, number of volunteers

Number of stakeholder organizations involved in, or providing input to, the stormwater program

Number of citizens participating in watershed organizations or otherwise providing input to the stormwater program

Number of household hazardous waste cleanup events offered

Quantity of waste collected or number of participants in household hazardous waste cleanups

Number of other organized public water quality improvement activities

Number of citizens participating in organized water quality improvement activities

Other: _____

Minimum Control Measure 3. Illicit Discharge Detection and Elimination.

The Illicit Discharge Detection and Elimination aspect of the MS4 stormwater program is focused on identifying and removing non-stormwater flows from the stormwater system in situations in which they contribute to stormwater pollution.

Permit requirements addressed by this SWMP include:

- Adoption and implementation of a local law prohibiting illicit discharges to the MS4;
- Mapping and characterization of stormwater outfalls;
- Mapping of storm sewersheds;
- Identification of probable sources of illicit discharges in the community to target;
- Outfall reconnaissance to identify dry-weather flows and other evidence of illicit discharges;
- Tracking of illicit discharges through the drainage system to determine their source;
- Elimination of discharges, including illegal dumping and illicit connections to the drainage system, through voluntary compliance or enforcement action;
- Outreach to municipal employees and the public about the hazards of illicit discharges.

The following activities under Minimum Control Measure 3 will be completed by the Village of Marcellus independently or in cooperation with the CNYSC and/or its partner agencies:

- Village of Marcellus will coordinate with CNY RPDB to maintain a stormwater outfall mapping database for the entire SUA that is periodically updated to reflect new information uncovered during OCWEP's outfall inspection program, Village of Marcellus's inspection program or other sources.
- Village of Marcellus will maintain a cooperative agreement with Onondaga County through which OCWEP implements a stormwater outfall inspection program, fulfilling the requirement to inspect all outfalls at least once every 5 years for dry-weather flows (Appendix F). Village of Marcellus also has the option to contract as needed with OCWEP for track down of suspected illicit discharges in an attempt to determine their source, so that they can be readily eliminated.
- Village of Marcellus as a member of the CNY Stormwater Coalition, will contract with the Central New York Regional Planning and Development Board (CNY RPDB) to provide outreach materials concerning illicit discharges as part of an annual CNY Stormwater Coalition Education Compliance Assistance Program (Appendix E).
- Village of Marcellus will review outfall mapping, sewershed mapping, and outfall inspection data completed or compiled by CNY RPDB/OCWEP for quality control.
- Village of Marcellus will provide information to OCWEP (where applicable) regarding new outfalls for addition to maps and for incorporation into the County's outfall inspection program. A copy of the current outfall map is included as Appendix I.

- The storm sewershed mapping database will be maintained by Onondaga County Department of Water Environment Protection utilizing GIS accompanied where necessary by field investigations, including areas extending outside of the urbanized area (to facilitate track down of illicit discharges). A hard copy map of sewersheds is included in Appendix J (*Alternatively, MS4 may reference location of digital or hard copy files*).
- Procedures must be implemented for targeting types of illicit discharges believed to be most common or likely in the MS4 in question. Based on guidance provided in the document "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments" (EPA 2004), the Village of Marcellus has determined that the following sources are most likely to contribute illicit discharges to the stormwater drainage system within municipal boundaries:
 - Building maintenance
 - Commercial car washes
 - Commercial Laundromats or dry cleaners
 - Construction vehicle washouts
 - Cross-connections (sanitary or septic)
 - Improper RV waste disposal
 - Landscaping (irrigation)
 - Outdoor fluid storage
 - Parking lot maintenance
 - Restaurants
 - Swimming pools
 - Vehicle fueling
 - Vehicle repair and maintenance shops
 - Other
- Village of Marcellus has determined that the following types of discharges are not substantial contributors of pollutants to the stormwater drainage system (*include all that apply*):
 - Water line flushing
 - Landscape irrigation
 - Diverted stream flows
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
 - Uncontaminated ground water
 - Rising ground waters
 - Discharges from potable water sources
 - Foundation drains
 - Air conditioning condensate
 - Irrigation water

- Springs
- Water from crawl space and basement sump pumps
- Footing drains
- Lawn and landscape watering runoff (only if fertilization and/or pesticide application done properly)
- Water from individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Residual street wash water
- Discharges or flows from firefighting activities
- Dechlorinated water reservoir discharges
- Any SPDES permitted discharge
- The following staff are responsible for working with Onondaga County to track down sources of illicit discharges: Village Code Enforcement Officer
- The following staff are responsible for achieving voluntary compliance and/or enforcement actions to eliminate identified discharges: Village Code Enforcement Officer
- A process to identify and track illicit discharges to their source has been developed and will be implemented. The document “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments” (EPA 2004) will be used as guidance for completing this process.
- The local law prohibiting illicit discharges to the separate storm sewer system adopted in 2004 and readopted on December 17, 2012 will continue to be enforced by the Village of Marcellus Code Enforcement Officer. A copy of the local law is included as Appendix K.
- Enforcement actions as specified in the local law will be documented and a summary form denoting the status of outfalls with suspected and confirmed illicit discharges and the progress made toward eliminating them will be maintained (the blank form and completed summary documentation are included as Appendix L). This information is maintained in a database located at the village offices.

Measurable Goals

Village of Marcellus is assessing the success of Minimum Control Measure 3 of its SWMP through the following Measurable Goals (Details provided in the Annual Stormwater Report.):

Number of new stormwater outfalls mapped (annual)

Percent completion of storm sewershed mapping

Percent completion of storm sewer system mapping

Number of outfalls inspected and percentage of total (Note: 20% is minimum annual)
Number of outfalls in municipality:

Number of outfalls with suspected illicit discharges (annual)

Number of outfalls with confirmed illicit discharges (annual)

Number of illicit discharges tracked to source (annual)

Number of high-risk discharges prioritized (annual)

Number of illicit discharges eliminated (annual)

Number of enforcement actions issued for illicit discharges and resulting rate of compliance (annual)

Percent of staff in relevant positions that have received IDDE training

Number of regular maintenance and inspection reminders issued to septic tank owners

Number of illegal dumps reported by citizens (annual)

Number of illegal dump cleanups completed

Number of illegal dumping violators apprehended

Number of suspected illicit discharges reported by citizens (annual)

Number of sanitary sewer overflows identified or reported

Number of sanitary sewer overflow causes identified

Number of inflow infiltration issues and/or gallons of I/I to sanitary system eliminated

Number and percentage of sanitary sewer overflows eliminated

Other: _____

Minimum Control Measure 4. Construction Site Runoff Control.

The focus of the Village of Marcellus’s Construction Site Runoff Control component of the stormwater program is to reduce the discharge of pollutants from active construction sites disturbing one acre or more of land surface, including disturbances of less than one acre that are part of a larger common plan of development or sale.

Permit requirements addressed by this SWMP include:

- A local law requiring that a SWPPP be prepared and implemented for any earth-disturbance activity of one acre or more, in compliance with NYS Standards and Specifications for Erosion and Sediment Control and the general construction permit SPDES GP-0-15-002;
- Procedures for SWPPP review to ensure compliance with permit requirements and design standards, and considering potential water quality impacts;
- Opportunity for public comment on SWPPPs;
- Performance of site inspections to ensure proper implementation of SWPPPs, and maintenance and repair of best management practices as needed;
- Ensuring adequate training for those performing SWPPP reviews and site inspections;
- Ensuring that land contractors performing work in the Village of Marcellus have received the required erosion and sediment control training.

The following activities under Minimum Control Measure 4 will be completed by the Village of Marcellus independently or in cooperation with the CNYSC and/or its partner agencies:

- As a partner of the CNYSC, the Onondaga County Soil and Water Conservation District (OCSWCD) regularly conducts 4-hour Contractor Certification Trainings that are endorsed by NYSDEC to fulfill the contractor erosion and sediment control training requirement. Village of Marcellus will cooperate with OCSWCD in this effort. OCSWCD is authorized by NYSDEC to distribute the 3-year term certification cards indicating that an individual has satisfied this requirement. OCSWCD’s program reaches contractors that work throughout the SUA. Courses are held annually at the Syracuse Builders Exchange.

List the date and location of the most recent training(s) by OCSWCD:

Location	Date
(Details provided in the Annual Stormwater Report.)	

- SWPPP technical reviews are will be completed by the following (*indicate whether the listed individual(s) is/are a CPESC/P.E./RLA or works under the supervision of a qualified professional familiar with NYS erosion and sediment control requirements*) (*Note affiliation of reviewers and whether they are consultants or municipal staff. If necessary, indicate their specific role in review.*)

Name of Reviewer	Qualifications	Role and/or Affiliation
(Details provided in the Annual Stormwater Report.)		

- The Village of Marcellus provides notice and opportunity for public comment on all SWPPPs through the public hearing phase in the subdivision, site plan review, [and/or] special permit process, where the SWPPP is developed and reviewed simultaneously with other aspects of the project design.
- All SWPPPs must be in compliance with the 2005 NY Standards and Specifications for Erosion and Sediment Control and 2015 Stormwater Design Manual or current version. The progress of each individual SWPPP through review and approval by the Planning Board, Engineer, and Chief Elected Official will be documented; this documentation is included as Appendix M along with a blank form to be used for this purpose. As required, the Village of Marcellus will complete the NYSDEC SWPPP Acceptance Form for each accepted SWPPP. The form will be endorsed by the Chief Elected Official, Mayor John Curtin. The original will be given to the applicant to file with his or her Notice of Intent to NYSDEC, while a copy will be maintained on file in the village offices.
- Village of Marcellus will use a system for tracking and inspection of active construction sites. Village of Marcellus will maintain a database of this information that is regularly updated as conditions change. This database is located in the village offices, and annual summaries of construction inspections are provided in Appendix N along with forms to be used for inspections of individual sites and for compiling all inspection data. Sites will be inspected at key points during the course of construction, including the following:
 - immediately before work begins;
 - after installation of perimeter sediment control practices;
 - at completion of clearing;
 - after rough grading;
 - after final grading;
 - at the close of the construction season;
 - at final stabilization;
 - on a site-specific basis as a follow-up to violations to ensure corrected.

- Village of Marcellus Code Enforcement Officials will check onsite to ensure that construction site operators have 4-hour erosion and sediment control training certification while they are performing work requiring erosion and sediment control. If at least one individual representing a given contractor/company is unable to produce a certification card indicating that he/she has received the required training, the company will be asked to stop work and leave the site until the requirement is fulfilled.
- Village of Marcellus Code Enforcement Officers will conduct final site inspections when developers or site owners are seeking to close out their general permit coverage, which is done through filing of a Notice of Termination (NOT). In order to file the NOT, all portions of the site not consisting of buildings or hardscapes must be stabilized with 80 percent density turf or other appropriate vegetation or landscaping. All permanent stormwater management practices and green infrastructure features must be in place and functioning as intended. At the recommendation of the inspecting Code Enforcement Official, the chief elected official of Village of Marcellus, then will sign off on the NOT so that it can be submitted by the project owner to NYSDEC. A copy of each completed NOT will be maintained on file in the village offices.
- Village of Marcellus will follow a series of escalating actions for sites that are in violation. The process is described in Appendix O. (*General guidance concerning this item is available in the SWMP Instruction Document.*)
- The following individuals have received, or will receive training on technical elements and proper procedures to conduct site inspections and review of owner/operator inspections in order to determine compliance with the stormwater permit requirements: **William Reagan and Dave Weber, code enforcement officers**
- Training is obtained through the following programs : CNY RPDB, SWCD, NYSDEC,

For officials that have already been trained, copies of training sign-in logs and certificates related to this requirement are included as Appendix P.
- Village of Marcellus will ensure that all municipal projects are designed and constructed in accordance with SPDES GP-0-15-002. A copy of GP-0-15-002 is included as Appendix Q for reference.
- A local law requiring compliance with GP-0-15-002 and the NY Standards and Specifications for Erosion and Sediment Control for all construction sites 1 acre or greater in land disturbance was adopted in 2007 and readopted on December 17, 2012 will continue to be enforced by the Village of Marcellus. A copy of the local law, with relevant sections of Subdivision, Zoning, and Site Plan Review codes, is included as Appendix R.

Measurable Goals

Village of Marcellus is assessing the success of Minimum Control Measure 4 of its SWMP through the following Measurable Goals (*Mandatory goals are listed in bold. Check all of the following suggested goals that apply and/or add additional goals, and specify benchmark or milestone target and current progress information*):

Number of SWPPPs reviewed for erosion and sediment control compliance (annual)

Number of construction projects of greater than one acre disturbance authorized

Number of construction projects of greater than one acre disturbance active (annual)

Number of construction sites inspected for erosion and sediment control compliance

Number of construction sites inspected for erosion and sediment control compliance more than once

Number/percentage of inadequate or noncompliant SWPPPs submitted (annual)

Number of non-compliant ESC practices identified (annual) *Goal:*

Number of non-compliant ESC practices repaired or maintained (annual) *Goal:*

Number/percentage of inadequate construction sites identified (annual) *Goal:*

Number of Notices of Violation issued

Number of Stop Work Orders issued

Number of criminal actions taken

Number of contracts terminated

Number of administrative fines issued

Number of civil penalties issued

Number of administrative orders issued

Total number of enforcement actions or sanctions taken for non-compliance (annual)

Number of non-compliance issues resolved

Percent compliance for total of all construction site inspections (annual)

Number of trained SWPPP reviewers

Number of trained construction site inspectors

Number or percentage of construction firms or contractors with current 4-hour training certification

Other: _____

Minimum Control Measure 5. Post-Construction Stormwater Management.

The Village of Marcellus's Post-Construction Stormwater Management program addresses control of stormwater quality, volume, and peak flow after construction is completed in both new and existing developments.

Permit requirements addressed by this SWMP include:

- A local law requiring that a SWPPP be prepared and implemented for any earth-disturbance activity of one acre or more, in compliance with NYS Stormwater Management Design Manual and the general construction permit SPDES GP-0-10-001;
- Procedures for SWPPP review to ensure compliance with permit requirements and design standards, and considering potential water quality impacts;
- Opportunity for public comment on SWPPPs;
- Performance of site inspections to ensure proper implementation of SWPPPs, and maintenance and repair of best management practices as needed;
- Ensuring adequate training for those performing SWPPP reviews and site inspections;
- Completion of an inventory of all post-construction stormwater management practices (public and private) under the municipality's jurisdiction,
- Ensuring that post-construction stormwater management practices are inspected by qualified individuals and maintained to ensure proper function.

The following activities under Minimum Control Measure 5 will be completed by the Village of Marcellus independently or in cooperation with the CNYSC and/or its partner agencies:

Village of Marcellus must demonstrate No Net Increase in Pollutants of Concern to the following designated 303(d)-listed water bodies as applicable for the pollutants noted (*refer to Table 2 on page 13 of the SWMP Regulatory Background and Instruction Document*):

Nine Mile Creek	
Onondaga Lake	

Initial modeling was completed using a NYSDEC- supported model of pollutant loading known as the Watershed Treatment Model in cooperation with CNY RPDB. This assessment was completed for the entire area of The Town of Geddes that discharges to the water bodies listed above. For ongoing development it was determined in conjunction with the DEC that there would be No Net Increase in phosphorus as long as new developments met the requirements in the Stormwater Design Manual for Runoff Reduction Volume and Enhanced Phosphorus Removal (Chapter 10). Documentation of WTM results and No Net Increase interpretation are included in Appendix S

A Total Maximum Daily Load (TMDL) for phosphorus is in place for Onondaga Lake watershed. The TMDL specifies that a reduction of 18 percent in phosphorus load is required from urban stormwater discharges from MS4s. The Village of Marcellus will work in cooperation with the

CNYSC to more closely define a method for complying with this requirement. **A Watershed Improvement Strategy (WIS) will be developed by June 2015 in accordance with GP-0-10-002.** Options that are likely to be evaluated in development of the WIS include reductions in phosphorus load that will occur as a result of the new NYS Phosphorus Fertilizer Law, and possibly stormwater retrofit activities with a focus on the use of green infrastructure. A watershed planning process including identified stakeholders will be utilized to help guide the development of the WIS.

- Village of Marcellus follows the SWPPP review process detailed under MCM 4 on page 16. All SWPPPs are required to be in compliance with the 2015 version of the NYS Stormwater Management Design Manual. For projects located within the watershed of Onondaga Lake, Village of Marcellus will require that designs abide by the Enhanced Phosphorus Removal Standards contained within the 2015 Stormwater Management Design Manual.
- A local law requiring compliance with GP-0-15-002 and the NYS Stormwater Management Design Manual for all construction sites 1 acre or greater in land disturbance was adopted in 2007 and will continue to be enforced by the Village of Marcellus. A copy of the local law is included as Appendix Q.
- The Village of Marcellus will inspect post-construction stormwater management practices and permanent green infrastructure features while they are under construction as part of the inspections described for MCM 4, to ensure that they are installed in accordance with the SWPPP and will function as intended after construction is complete. These inspections are documented in Appendix N. The inspection of permanent stormwater management practices during construction is part of the process for construction inspection described under MCM 4 (refer to page 16).
- Village of Marcellus conducts a post-construction stormwater management inspection and maintenance program and tracks inspections, identify maintenance or repair needs, and document completion of needed work. Village of Marcellus maintains a database of this information that is regularly updated as conditions change. Annual summaries of the condition and inspection and maintenance records for all post-construction stormwater management practices are included in Appendix T along with a blank form that may be used for this purpose. The database containing detailed data is maintained by the Village Code Enforcement Officer using a software tracking program.

Measurable Goals

Village of Marcellus is assessing the success of Minimum Control Measure 5 of its SWMP through the following Measurable Goals (*Mandatory goals are listed in bold. Check all of the following that apply and/or add additional goals, and specify benchmark or milestone target and current progress information*) (Details provided in the Annual Stormwater Report.):

Number of SWPPPs reviewed for post-construction stormwater management (PCSWM) compliance (Permit requirement is 100%)

- Number of construction sites inspected for PCSWM compliance
- Number of construction sites inspected for PCSWM compliance more than once
- Number/percentage of inadequate or noncompliant SWPPPs submitted
- Number of non-compliant PCSWM practices under construction identified
- Number of non-compliant PCSWM practices under construction repaired or maintained
- Number of enforcement actions taken for PCSWM non-compliance and number of issues resolved
- Number of trained SWPPP reviewers
- Number of trained construction site inspectors
- Number of existing post-construction stormwater management practices inspected and percentage of total
- Number of existing post-construction stormwater management practices with maintenance or repair needs identified, percentage of total (annual)
- Number of existing post-construction stormwater management practices maintained or repaired
- Number of new stormwater management or green infrastructure practices installed as a result of watershed planning or banking and credit programs
- Percentage of municipal staff responsible for program implementation that attended training on Green Infrastructure principles, Low Impact Development, and/or Better Site Design
- Other: _____

Minimum Control Measure 6. Pollution Prevention and Good Housekeeping of Municipal Operations.

Municipal facilities and operations contain and produce many potential sources of pollutants to the stormwater drainage system. MCM 6 focuses on development and implementation of Best Management Practices to eliminate or minimize this pollution.

Permit requirements addressed by this SWMP include:

- An inventory and self-assessment of all municipal operations, facilities, and equipment to ensure implementation of best management practices that prevent stormwater pollution, completed at least once every three years;
- Establishment and implementation of policies and procedures for operations that have the potential to contribute to stormwater pollution;
- Implementation of best management practices to reduce and eliminate the discharge of pollutants from municipal operations and facilities to the MS4;
- Proper training of municipal employees in all aspects of the Pollution Prevention and Good Housekeeping program;
- Policies to ensure that all third-party contractors comply with established Pollution Prevention and Good Housekeeping procedures and practices;
- Preparation and utilization of Stormwater Pollution Prevention Plans for facilities and operations covered under the MS4 General Permit that would otherwise be subject to the Multi-Sector General Permit (SPDES GP-0-12-001).

The following activities under Minimum Control Measure 6 will be completed by the Village of Marcellus independently or in cooperation with the CNYSC and/or its partner agencies:

- Village of Marcellus completes a self-assessment of stormwater pollution prevention municipal operations at least once every three years. The most recent self-assessment was done in February 2014 and is attached in Appendix U.
- Appendix V contains a listing of policies, procedures, and management practices pertaining to the following areas of Village of Marcellus operations (*include all that are applicable*):
 - Street and Bridge Maintenance
 - Winter Road Maintenance
 - Stormwater System Maintenance
 - Vehicle and Fleet Maintenance
 - Parks and Open Space Maintenance
 - Municipal Building Maintenance
 - Solid Waste Management

- New Construction and Land Disturbances
- Right-Of-Way Maintenance
- Village of Marcellus implements a municipal staff training program. Documentation of program activities is provided in Appendix W, including materials, presentations, and sign-in sheets from training sessions. Training strategies that Village of Marcellus employs to inform its staff regarding the stormwater pollution prevention program **include the following:**

Training sessions by Central New York Regional Planning and Development Board

Posters on the bulletin board at the Village Highway Garage

A short annual training session presented to Highway Department employees using training materials from the EPA, DEC, and CNYRPDB

- Village of Marcellus ensures third-party compliance with this SWMP and all related Best Management Practices through language in its contract documents. A copy of the required language that will be included in these documents is found in Appendix X. (*General guidance concerning this requirement is provided in the SWMP Instruction Document*).
- The following items will be tracked throughout the reporting year and reported annually to NYSDEC.
 - number of catch basins inspected, cleaned, repaired or replaced;
 - miles of roads swept;
 - number of post-construction stormwater management facilities inspected and cleaned;
 - pounds of phosphorus applied in chemical fertilizer.
- Onondaga County Soil and Water Conservation District (OCSWCD) implements a Critical Area Seeding and Stabilization that provides seeding, mulching, and application of erosion control in highway ditches and embankments throughout Onondaga County upon request of municipal highway departments and DPWs. Records of stabilization activities performed by OCSWCD are included as Appendix Y.

Appendix Z is an annual summary listing and quantifying all of the data required for the MS4 Annual Report; a blank form for tabulating this data is included.

(Include if applicable) The following facilities that would otherwise be subject to the NYS Multi-sector General Permit (MSGP, GP-0-12-001) for industrial stormwater discharges are covered under the MS4 General Permit, GP-0-10-002 (*additional information concerning this requirement can be found in the SWMP Instruction Document*). Stormwater Pollution Prevention Plans have been developed for these facilities and can be found at the village hall: **Marcellus Sewage Treatment Plant**

Measurable Goals

Village of Marcellus is assessing the success of Minimum Control Measure 6 of its SWMP through the following Measurable Goals (Details provided in the Annual Stormwater Report.):

Number of employee training events

Number of employees trained in general municipal pollution prevention and good housekeeping, percentage of total

Number of educational materials distributed to municipal employees

Miles of roadway swept (annual) (miles x number of street sweepings)

Acres of parking lot swept (annual) (acres x number of times swept)

Tons of debris removed through street and parking lot sweeping

Number of catchbasins inspected (annual), percentage of total

Number of catchbasins cleaned (annual), percentage of total

Tons of debris removed through catchbasin cleaning

Amount of phosphorus fertilizer applied in pounds

Amount of nitrogen fertilizer applied in pounds (annual)

Amount of pesticide applied in acres and number of applications (annual)

Number of employees trained in hazardous material storage and maintenance, percentage of total

Number of employees trained in spill response and prevention, percentage of total

Number of spills of petroleum or hazardous chemicals occurring due to municipal operations (annual)

Number of employees trained in road salt/deicer application techniques

Frequency of inspection and maintenance visits to petroleum or hazardous materials storage facilities

Number of repairs to petroleum or chemical storage tanks and distribution systems

Length of storm drainage conveyance system cleaned (annual), percentage of total

Tons of material removed through cleaning of storm drainage system (annual)

Miles or linear feet of road ditches and embankments stabilized through critical area seeding (annual)

Quantity of salt applied to roadways (annual)

Quantity of alternative products used and approximate percentage of total deicing material (annual)

Number and % of plow vehicles equipped with digital deicer application calibrators

Existence of pet waste ordinance, number of signs explaining regulations

Number of pet waste bag stations or percentage of parks with stations

Number of gallons of used oil collected from municipal operations

Number of municipal drainage retrofit projects incorporating green infrastructure practices

Other: _____