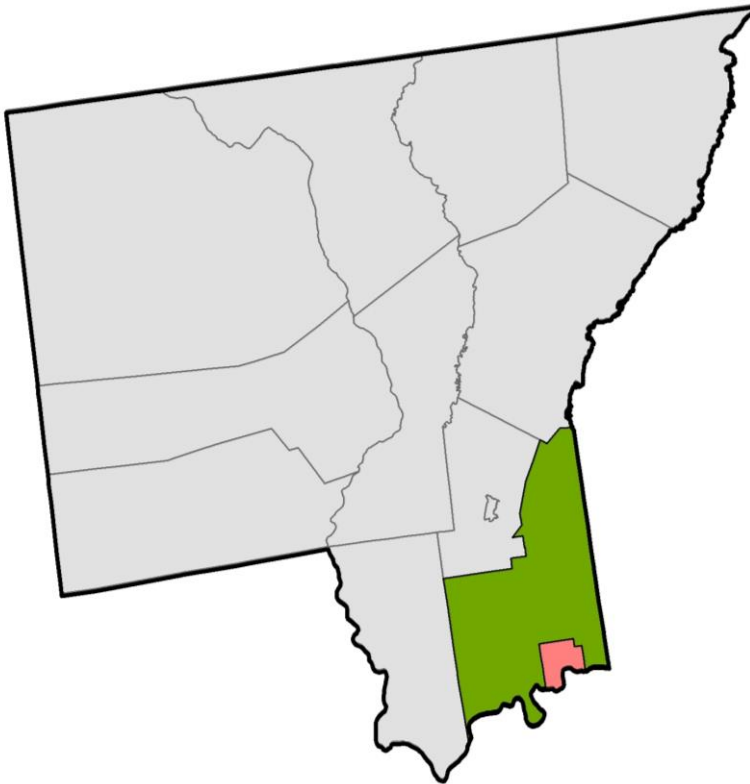


Warren County MS4 Stormwater Management Program Plan

This Plan is a requirement under NYSDEC General Permit For Municipal Stormwater Discharges, Permit # GP-GP-0-15-003



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Introduction

Warren County is categorized as a non-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 (GP-0-10-002). Under this mandate, Warren County must have a working Program Plan which outlines the county's activities to address stormwater education, outreach, and implementation under the state requirements. The MS4 area designated by the NYS DEC in Warren County which falls under the purview of this program is limited to the Town of Queensbury and the City of Glens Falls.

This Warren County Stormwater Management Program Plan (SWMP) documents the proactive efforts planned by Warren County under this program. These requirements primarily correspond to the county infrastructure and properties (roads, bridges, drainage infrastructure and facilities), but also include public information and outreach on stormwater issues. The ultimate purpose of this plan is to maintain or improve water quality in the area designated as within the MS4 boundary in Warren County.

The SWMP 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. 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. As of March 10, 2003, these new regulations and requirements came into effect. From this time up until late 2010, the primary entity responsible for the Warren County MS4 program was the Warren County Department of Public Works.

Warren County is considered a “non-traditional MS4” in that it does not have permitting authority over development projects that municipalities have. As such, Minimum Measures 4 and 5 are largely non-applicable to Warren County. The relatively minimal role that the county has in these two measures are identified within this plan.

In November of 2010, the Warren County Board of Supervisors officially appointed Dave Wick, CPESC as the Warren County Stormwater Management Officer (SMO). It is mandated that each MS4 have a Stormwater Management Officer, under the requirements of the NYS program. Dave Wick is the District Manager of the Warren County Soil and Water Conservation District, and much of the District's workload is in the stormwater management field.

It was agreed by all parties involved at the county level (Board of Supervisors, County Administrator, DPW Superintendent, SWCD Board) that Dave Wick and the Soil and Water Conservation District would undertake the primary role in the county's MS4 program, but it would be in cooperation with the Warren County Department of Public Works who had administered the program from 2003 until 2011. The SWCD and DPW will work together to implement the provisions of this plan, supported by the Lake Champlain Lake George Regional Planning Board and other interested parties.

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.

The following activities comprise the public education and outreach portion of the Warren County MS4 Stormwater Plan:

Key:

SWCD = Warren County Soil and Water Conservation District

DPW = Warren County Department of Public Works

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

Warren County is dedicated to providing public education and outreach on stormwater runoff issues and impacts on local waterbodies. Numerous organizations such as lake associations, environmental advocacy groups, town environmental commissions and committees exist in the Queensbury and Glens Falls region which collaborate and interact with the Warren County Soil and Water Conservation District on stormwater issues and education. With Warren County being very lake-tourist driven, and stormwater runoff being the largest single water quality impact on Warren County waterbodies, this issue is more in the public perspective than in most regions of NY State.

	Minimum Control Measure #1 - Action	Involved	Annual Cost
MCM1	1. Set up or participate in educational events for the general public and waterbody specific audiences related to water quality and stormwater runoff issues. (Measurable Goal: 5 events per year)	SWCD	\$1,500
MCM1	2. Work with the media to get articles in the Glens Falls Post Star and the Chronicle newspapers about stormwater projects, stream cleanups and other important water quality issues. (Measurable Goal: 5 stormwater related articles per year)	SWCD, DPW	\$500
MCM1	3. Engage with the Glen Lake Association and the Lake Sunnyside Association on their stormwater runoff issues, and offer presentations to their groups on how individuals can positively affect stormwater runoff on their properties. (Measurable Goal: contact both lake associations once per year regarding stormwater issues)	SWCD	\$2,000
MCM1	4. Utilize and disperse existing brochures and other literature developed by the Regional Planning Board, the SWCD, and the DEC regarding stormwater runoff. Get information out to public forums and to youth events as appropriate. (Measurable Goal: disperse information at five events per year minimum)	SWCD	\$500
MCM1	5. Maintain information repository on Warren County SWCD website with updated stormwater information. (Measurable Goal: Update repository annually)	SWCD	\$100

Minimum Control Measure 2: Public Involvement and Participation

The Public Involvement and Participation MCM consists of a set of actions 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 actions are designed to seek public input and participation in stormwater management activities within the Warren County MS4 area. The target audiences for the public involvement program are key individuals and groups that may have an interest in the particular itemized actions as well as the general public located within the permitted boundary. Specific groups meeting this criteria may include the Feeder Canal Alliance, the Queensbury Environmental Committee, and the lake associations for Glen Lake and Sunnyside Lake. Any additional groups with conservation and public infrastructure interests will be identified throughout the outreach process. Input from these groups regarding the Stormwater Management Plan will be incorporated into the pertinent activities of the Warren County MS4 planning and implementation activities.

	Minimum Control Measure (MCM) #2 - Action	Involved	Annual Cost
MCM2	1. Organize and undertake the Warren County Envirothon; an educational competition for high school students. Glens Falls High is a regular attendee, and work to get Queensbury High to the event. (Measurable Goal: Have participation from all eight high schools in Warren County, with multiple teams per school).	SWCD	\$1,000
MCM2	2. Set up and outreach a water quality hotline for the public to report spills, dumping, illegal pipes, etc. The Warren County DPW will be the agency responsible for taking all calls, and will set up an answering machine for post-operating hours calls. Refer all substantive calls with the Stormwater Management Officer, who will follow up with site investigations as appropriate. (Measurable Goal: Set up hotline and outreach its availability).	DPW, SWCD	\$1,500
MCM2	3. Work with various municipal and stakeholder groups to undertake a stormdrain marking program for key areas within the Warren County MS4. (Measurable Goal: Install 10 markers per year on county roads in MS4 area).	SWCD	\$2,500

MCM2	4. Prepare and present an Annual Report for public review, by May 1 of every year. Present this report at the Warren County Department of Public Works Committee meeting in April, and publicly notice this meeting as required by Open Meetings Law. Attach any public comments to the report and incorporate appropriate ideas into the overall Plan to be implemented throughout subsequent years. (Measurable Goal: Annual Reports delivered on-time every year).	SWCD, DPW	\$1,000
MCM2	5. Host this plan at the websites of the Warren County DPW and the Warren County SWCD, in an easily findable location for public review and use. Provide opportunity for public comment. (Measurable Goal: Maintain MS4 information on websites in an easy to access location).	DPW, SWCD	\$200
MCM2	6. Provide hard copies of this Plan available to the public at the Warren County Municipal Center, the Warren County DPW office, and the Warren County SWCD office. (Measurable Goal: Copies will be available by May 15 th of every year).	SWCD, DPW	\$300
MCM2	7. Periodically assess this Stormwater Management Plan, and update the plan as appropriate with new ideas and tasks. (Measurable Goal: Assess the Plan every three years, or as permit requires).	SWCD	\$300
MCM2	8. Continue to engage the public in the Adopt-A-Highway program, and work to expand the areas of county road covered by this initiative. This program is a beneficial means of addressing roadside litter while helping to educate the public about environmental issues. (Measurable Goal: Continue the Warren County DPW program, and expand overall mileage by 20% by 2015).	DPW	\$1,000
MCM2	9. If the opportunity becomes available, Warren County will participate in a Household Hazardous Waste Collection program facilitated by NYS DEC. (Measurable Goal: If available, participate).	DPW	\$2,000
MCM2	10. Host a Stream Cleanup Day once per year for a section of stream,	SWCD	\$2,500

	<p>river, canal or lake as deemed appropriate. Outreach this effort through email networks and the media, and encourage volunteer participation. (Measurable Goal: Host one cleanup per year).</p>		
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Minimum Control Measure 3: Illicit Discharge Detection & Elimination

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

	Minimum Control Measure (MCM) #3 - Action	Involved	Annual Cost
MCM3	<p>1. As the MS4 program boundary has expanded, undertake a new mapping of the stormwater outfalls from Warren County Roads in the Town of Queensbury and the City of Glens Falls boundaries. Include the names and DEC classification of any streams which receive stormwater discharge from a county outfall. Map the drainage areas which contribute to the stormwater outfalls (their sewersheds) in ArcGIS, and create hard copy maps of those areas. (Measurable Goal: In 2010, plan for 2011 additional outfall mapping. In 2011, map all additional outfalls. In 2012, map sewersheds.</p>	SWCD	\$8,000
MCM3	<p>2. Conduct an outfall reconnaissance inventory, as described in the EPA publication entitled Illicit Discharge Detection and Elimination: A</p>	SWCD, DPW	\$500

	Guidance Manual for Program Development and Technical Assessment, addressing every outfall within Warren County's jurisdiction at least once every five years, with reasonable progress each year. (Measurable Goal: Conduct an outfall recon inventory, and perform visual outfall inspections of 100% of county outfalls by 2013).		
MCM3	3. Review and enforce all provisions of the Warren County IDDE law regarding illicit discharges into Warren County drainage infrastructure. (Measurable Goal: In 2010, fund IDDE program. In 2011, create IDDE procedures and protocols.)	DPW, SWCD	\$1,000
MCM3	4. Train all appropriate Warren County DPW 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. (Measurable Goal: All training completed by 2013).	DPW	\$1,000

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. This Measure primarily applies to traditional MS4's (towns, villages, cities) which have control over land use development permits. Warren County has no primary approval role in development activities, and as such, this MCM only applies to construction practices that the county itself undertakes.

The BMPs describe the mechanisms that will be used to require erosion and sediment controls, enforcement procedures and actions to ensure implementation of appropriate erosion and sediment control BMPs, requirements for county construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site, procedures for internal site plan review which incorporate the consideration of potential water quality impacts, procedures for receipt and consideration of information submitted by the public, and procedures for site inspection and enforcement of control measures.

Measurable Goal for all subsequent MCM4 Tasks shall be to achieve the stated intent of the task as needed for applicable county land disturbance projects.

	Minimum Control Measure (MCM) #4 - Action	Involved	Annual Cost
MCM4	For any County land development projects which anticipate exceeding one acre of land disturbance, the county shall prepare or cause to be prepared an appropriate Stormwater Management Pollution Prevention Plan (SWPPP). This SWPPP will conform to all requirements and guidelines of the NYS SPDES General Permit requirements.	DPW, Buildings and Grounds	As needed
MCM4	1. Ensure that all contractors working for the County on such development projects are informed and knowledgeable of the SWPPP, and that each contractor sign a "Contractor's Certification Statement" acknowledging such.	DPW, Buildings and Grounds	As needed
MCM4	2. 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.	DPW, Buildings and Grounds	As needed
MCM 4	3. Provide for weekly inspections of the construction site, 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 with the county's project manager.	DPW, Buildings and Grounds	As needed
MCM4	4. Any public complaints regarding erosion and sediment control or stormwater runoff concerns from such development shall be directed to the County Stormwater Management Officer for review. The SMO will review the issue and ensure that all provisions of the approved SWPPP are in compliance.	SWCD	As needed
MCM4	5. Keep apprised of all new provisions of the SPDES General Stormwater Permit, and outreach this information to the appropriate parties at the County.	SWCD	\$500

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. While MCM4 addresses stormwater runoff during construction, MCM5 addresses how runoff is controlled and treated after the project is complete, for the long term. This Measure primarily applies to traditional MS4's (towns, villages, cities) which have control over land use development permits. Warren County has no primary approval role in development activities, and as such, this MCM only applies to construction practices that the county itself undertakes.

Measurable Goal for all subsequent MCM5 Tasks shall be to achieve the stated intent of the task as needed for applicable county land disturbance projects.

	Minimum Control Measure (MCM) #5 - Action	Involved	Annual Cost
MCM5	1. For any County land development projects which anticipate exceeding one acre of land disturbance, the county shall prepare or cause to be prepared an appropriate Stormwater Management Pollution Prevention Plan (SWPPP). This SWPPP will conform to all requirements and guidelines of the NYS SPDES General Permit requirements.	DPW, Buildings and Grounds	As needed
MCM5	2. Ensure that all contractors working for the County on such development projects are informed and knowledgeable of the SWPPP, and that each contractor sign a "Contractor's Certification Statement" acknowledging such.	DPW, Buildings and Grounds	As needed
MCM5	3. 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.	DPW, Buildings and Grounds	As needed
MCM 5	4. Provide for weekly inspections of the construction site, 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 with the county's project manager.	DPW, Buildings and Grounds	As needed
MCM5	5. Any public complaints regarding erosion and sediment control or	SWCD	As needed

	stormwater runoff concerns from such development shall be directed to the County Stormwater Management Officer for review. The SMO will review the issue and ensure that all provisions of the approved SWPPP are in compliance.		
MCM5	6. Keep apprised of all new provisions of the SPDES General Stormwater Permit, and outreach this information to the appropriate parties at the County.	SWCD	As needed

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 Warren County operations and properties within the Queensbury and Glens Falls areas. This includes all county maintenance shops, highways, buildings and grounds. It also includes the addressing of highway runoff issues and practices, working to reduce pollutants from county highways into waterbodies.

	Minimum Control Measure (MCM) #6 - Action	Involved	Budget
MCM6	1. County Employee Training program: Warren County Soil & Water Conservation District will provide stormwater management and municipal BMP training for DPW employees. The training will be prioritized first for management and supervisory staff, then to equipment operators and laborers. (Measurable Goal: One training provided per year for appropriate DPW staff)	SWCD, DPW	\$800
MCM6	2. Vehicle & Equipment Maintenance and Maintenance Facilities Procedures: Warren County vehicle maintenance facilities will follow EPA and DEC regulations and guidelines in all vehicle washing and maintenance activities. (Measurable Goal: All washwater discharge will be contained on-site, and all maintenance activities will conform to all accepted standards)	DPW	\$0

MCM6	3. Building Maintenance: Warren County Buildings & Grounds will: conduct building maintenance activities such that they do not impact the stormwater systems and local water bodies whenever possible; Develop a list of the maintenance activities required inside and outside of each municipal building; Identify which activities have an impact on stormwater; Develop mitigation measures for each activity that impacts stormwater; (Measurable Goal: Develop a list of any maintenance activities which may impact stormwater runoff by the end of 2011. Review the maintenance activity lists on an annual basis to determine if any improvements are necessary)	DPW Buildings & Grounds	\$1,500
MCM6	4. Septic System Management: Warren County Buildings & Grounds will minimize septic system wastewaters impact 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 repair leaky fixtures. (Measurable Goal: Inspect and pump out Westmount Adult Care Center on an annual basis, and address any identified shortcomings)	DPW Buildings & Grounds	\$1,500
MCM6	5. Landscaping and Lawn Care: Warren County Buildings & Grounds will continue under existing contract(s) with registered applicator(s) required to follow all New York State regulations for use of lawn care products. 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. Future contracts will require the use of slow release, natural, or organic lawn care products, the use of which the contractor will record and document. (Measurable Goal: Eliminate phosphorus in all fertilizer mixes on all county facilities for the 2011 season)	DPW Buildings & Grounds	\$300
MCM6	6. Pest Control: Warren County Buildings & Grounds will continue to contract with registered applicators required to follow all New York State regulations for use of pest control products. (Measurable Goal: Pest control areas and practices will be inventoried and evaluated, looking for integrated management practices to reduce	DPW Buildings & Grounds	\$1,000

	toxicity levels, and inhibit pest habitat).		
MCM6	7. Pet Waste Collection: Warren County will prohibit pets on County property, or require pet owners to collect their pet's waste. (Measurable Goal: Create and install signage for the Municipal Center noting 'no pets allowed').	DPW Buildings & Grounds	\$1,000
MCM6	8. Hazardous Waste and Materials Management: If the opportunity becomes available, Warren County will participate in a Household Hazardous Waste Collection program facilitated by NYS DEC. (Measurable Goal: Participate in the next available opportunity for a collection program sponsored by DEC or other entity)	DPW Buildings & Grounds	\$5,000
MCM6	9. Roadway and Bridge Maintenance: Warren County DPW will 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. Highways and bridges will continue to be maintained in compliance with the Environmental Manual prepared by the New York State Department of Transportation. (Measurable Goal: Sponsor and host a one-day forum on de-icing practices for all local and county highway departments in the county, with participation from experts in the field of standard and alternative practices)	DPW	\$1,000
MCM6	10. Catch Basin and Storm Drain Cleaning: DPW will continue to perform periodic cleanouts of catch basins. (Measurable Goal: Continue existing program, and evaluate the funding available to increase cleanout frequency)	DPW	\$20,000
	11. Inventory and update mapping on all existing stormwater infrastructure. (Measurable Goal: Mapping and inventory of all drop inlets and catch basins on county roads in the MS4 area by the end of 2011)	DPW, SWCD	\$4,000
MCM6	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. (Measurable Goal: All projects which disturb any regulatory wetland or waterbody will be individually reviewed and permitted)	DPW	\$0

Appendices

Appendix C: List of Documents for Inclusion by Individual MS4s

This list was compiled from page 74 of the New York State Department of Environmental Conservation General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (GP-0-08-002). It is not necessarily limited to all actions and documents for inclusion. It is the responsibility of the Warren County 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**