

TOWN OF KIRKWOOD

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STORMWATER MANAGEMENT PROGRAM PLAN

For compliance with NYS GP 0-24-001

Last Revised: June 26, 2024

Description of coverage

Town of Kirkwood is covered for Municipal Separate Storm Sewer discharges under the NY State SPDES permit program. MS4s are regulated by GP-0-24-001 and are required to prepare a stormwater management plan and program to meet the requirements and benchmarks of this permit.

NOI confirmation: See attachment in Appendix.

Receiving Waters:

Town of Kirkwood MS4 system discharges to:

Receiving Waterbody Name	Receiving waterbody segment ID	Pollutant(s) of concern
Susquehanna River	0601-0182	Nutrients, Silt & Sediment, Pathogens, Metals, Thermal Stress, Trash, Oxygen Depletion, Chlorides & Other Toxic Substances

Pollutants of Concern

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 debris/litter. Phosphorus, nitrogen, and pathogens are of particularly high concern to the water bodies in the Binghamton Urbanized Area.

Nutrients: Phosphorus and Nitrogen

Phosphorus is the primary nutrient of concern locally. 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 are a result of soil erosion from construction sites, lawns, agriculture, and landscaping activities. Heavy deposits of silt in sensitive areas such as wetlands and streams can damage aquatic habitat and cause turbidity. Sediment also can carry toxic chemicals that deplete oxygen in water bodies, and can clog water infrastructure.

Pathogens: Bacteria and 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 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 trash in water may be contaminated with toxic chemicals and bacteria, and can cause death to aquatic animals and birds. Aesthetics are also negatively impacted. Floatables are the result of overproducing single use items and an increase in packaging as well as winds and careless handling of materials.

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.

Description of local laws

The Town of Kirkwood has the following local laws in effect related to Stormwater Discharges:

Stormwater Management & Erosion & Sediment Control [L.L. No. 7-2007]

Illicit Discharges, Prohibiting, and Activities & Connection to Separate Storm Sewer Systems (MS4) [L.L. No. 8-2007]

Personnel

The Stormwater Program Coordinator is:

Name	John Mastronardi
Title	Town Engineer
Contact information	Address: 33 S. Washington Street, Suite 2, Binghamton, NY 13903 Phone (607) 724-2400 Email: jmastronardi@griffithsengineering.com

Duties and responsibilities to implement components of the stormwater program are not limited to the Stormwater Program Coordinator, they require the contribution and expertise of many municipal staff across departments.

Department	Title	Contact information	Role in Stormwater program
Chad Moran	Code Enforcement Officer	Address: 41 Francis Street, Kirkwood, NY 13795 Phone (607) 775-4313 Email: chad@townofkirkwood.org	Compliance & Enforcement
John Finch, Jr.	Commissioner of Public Works	Address: 72 Crescent Drive, Kirkwood, NY 13795 Phone (607) 775-1616 Email: john@townofkirkwood.org	Municipal Best Management Practices & Good Housekeeping

Al Glover	Water/Wastewater Maintenance Crew Chief	Address: 944 NYS Route 11, Kirkwood, NY 13795 Phone (607) 775-1919 Email: kirkwoodwtpo@verizon.net	Municipal Best Management Practices & Good Housekeeping
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Additionally, communication and coordination will take place at a quarterly meeting at which time information will be shared with the Stormwater Program Coordinator who will prepare components of the report and update the plan on the annual schedule.

Additional organizations that assist with implementing the Stormwater Program include:

The Broome-Tioga Stormwater Coalition (The Coalition) exists through the enactment of a Memorandum of Agreement (MOU) between 15 MS4s in the Binghamton Urbanized Area as listed above. The Coalition manages MCM 1 Education and outreach activities for coalition members, assists with MCM 2, and maintains the GIS inventory of stormwater assets.

Minimum Control Measure 1: Public Education and Outreach

Refer to BTSC MCM 1 SWMP Document.

Minimum Control Measure 2: Public Involvement and Participation¹

Pertaining to opportunities to involve the public in the development, review, and implementation of the SWMP.

The public will have an opportunity to get involved in developing, reviewing, and/or implementing the SWMP through the public input period during monthly Town Board meetings. Notice of these meetings will be posted on the Town website, electronic sign board located at the intersection of Francis Street and Crescent Drive, and on the sign board posted at the Town of Kirkwood Town Hall.

The following staff person will serve as point of contact for public concerns regarding stormwater management and compliance issues. This contact information has been published on the Town's Code Enforcement webpage.

Table 1 Stormwater Issues Public Contact

Name	<u>Chad Moran</u>
Title	<u>Code Enforcement Officer</u>
Phone	<u>(607) 775-4313</u>
e-mail	<u>chad@townofkirkwood.org</u>

Public comments received on the SWMP plan and intended responses will be documented, annually, in an appendix to this plan. When public input is received, the Town of Kirkwood will update the SWMP plan, when appropriate, within thirty (30) days.

Pertaining to opportunities to involve the public in the development and review of the Annual Report.

The annual report will be posted for public review and comment online at broometiogastormwater.com and www.townofkirkwood.org. Copies of the report will also be available for public review at the Southern Tier 8 Regional Board: 49 Court Street, Suite 222, Binghamton NY 13901 and Town of Kirkwood Code Office.

Presentation of the draft annual report will be given during the quarterly Broome Tioga Stormwater Coalition meeting where the public will have the ability to ask questions and make comments on the draft annual report.

¹ Part VI

Minimum Contral Measure 3: Illicit Discharge Detection and Elimination²

Pertaining to the development, implementation and enforcement of a program that systematically detects, tracks down and eliminates illicit discharges to the MS4 and ensure pollutants are not being conveyed to waterways.

Illicit Discharge Detection:

Public reporting

The public can report instances of suspected illicit discharge to the Code Enforcement Office (see contact information above). Reports will be documented in the SWMP. Each report must be completed within 30 days of the instance.

Table 2. Documentation of Illicit Discharge Reports from the Public.

Date of report	Location of illicit discharge	Nature of illicit discharge	Follow up action taken, including time taken to respond	Outcomes and enforcement actions taken.

Monitoring Location Inventory and Prioritization:

By January 3rd 2027, the Town of Kirkwood must develop and maintain an inventory of monitoring locations. This should be documented in the SWMP, as an appendix. This should be completed following requirements on page 24-25 of GP-0-24-001. Similarly, by January 2nd 2027 these monitoring locations must be prioritized following criteria on page 25 of GP-0-24-001.

Monitoring Locations Inspection and Sampling Program:

Procedures for inspecting and sampling monitoring locations must be completed and documented in this SWMP by January 3rd 2026. This plan should be developed based on the requirements listed on page 25-27 of GP-0-24-001.

Training:

All staff performing inspection and sampling procedures as prescribed by the Inspection and Sampling Program Plan must be trained on procedures prior to undertaking those duties and every 5 years after. If the operation and procedures are changed at any point, staff must be trained before

² (Part V.I.C)

implementing new procedures. The following staff have been trained, and this list is updated annually and/or as needed:

Table 3. Documentation of staff completing inspection and sampling procedure training.

Name	Title	Contact	Date completed
John Mastronardi, P.E.	Town Engineer	jmastronardi@griffithsengineering.com	TBD
Chad Moran	Code Enforcement Officer	chad@townofkirkwood.org	TBD
John Finch, Jr.	Commissioner of Public Works	john@townofkirkwood.org	TBD

Illicit discharge track-down:

Procedures for inspecting and sampling monitoring locations must be completed and documented in this SWMP by January 3rd 2026. This plan should be developed based on the requirements listed on page 27-28 of GP-0-24-001.

Training:

All staff performing illicit discharge track-down procedures as prescribed by the Illicit Discharge track down Plan must be trained in procedures prior to undertaking those duties and every 5 years after. If the operation and procedures are changed at any point, staff must be trained before implementing new procedures. The following staff have been trained, and this list is updated annually and/or as needed:

Table 4. Documentation of staff completing illicit discharge track down procedure training

Name	title	contact	Date completed
John Mastronardi, P.E.	Town Engineer	jmastronardi@griffithsengineering.com	TBD
Chad Moran	Code Enforcement Officer	chad@townofkirkwood.org	TBD
John Finch, Jr.	Commissioner of Public Works	john@townofkirkwood.org	TBD

Illicit Discharge elimination:

Procedures for inspecting and sampling monitoring locations must be completed and documented in this SWMP by January 3rd, 2026. This plan should be developed based on the requirements listed on page 28-29 of GP-0-24-001.

Training:

All staff performing illicit discharge elimination procedures as prescribed by the Illicit Discharge trackdown program must be trained in procedures prior to undertaking those duties and every 5 years after. If the operation and procedures are changed at any point, staff must be trained before implementing new procedures. The following staff have been trained, and this list is updated annually and/or as needed.

Table 5. Documentation of staff completing illicit discharge elimination training.

Name	Title	Contact	Date completed
John Mastronardi, P.E.	Town Engineer	jmastronardi@griffithsengineering.com	TBD
Chad Moran	Code Enforcement Officer	chad@townofkirkwood.org	TBD
John Finch, Jr.	Commissioner of Public Works	john@townofkirkwood.org	TBD

Minimum Control Measure 4: Construction Site Stormwater Runoff Control³:

Pertaining to development, implementation, and enforcement of a program to ensure construction sites are controlled. This is designed to prevent construction related pollutants from entering waterways and promote proper planning and implementation of stormwater management practices.

The stormwater runoff control program must address stormwater runoff to the MS4 from sites with construction activities that either result in a total land disturbance of greater than or equal to one acre, or disturb less than one acre if part of a larger development.

Public Complaints

The Town of Kirkwood has established the following phone or email contact for members of the public to report stormwater-related complaints from construction sites. Each complaint will be

³ Part VI.D

documented and appropriately investigated. For each complaint received, a report must be made and retained. This form is included as Attachment 1.

Table 6. Public Stormwater construction complaint contact information

Name	Chad Moran	
Title	Code Enforcement Officer	
Phone	(607) 775-4313	
E-mail	chad@townofkirkwood.org	

Construction Oversight Program⁴

Within 1 year, a program must be developed, and procedures documented in this plan.

The MS4 Operator must develop a Construction Oversight Program that documents:

1. When the construction site *stormwater* control program applies:
2. What types of *construction activity* require a SWPPP:
3. The procedures for submission of SWPPPs:
4. SWPPP review requirements:
5. Pre-construction oversight requirements:
6. Construction site inspection requirements and documentation procedures:
7. Construction site close-out requirements:
8. Enforcement process/expectations for compliance:
9. Other procedures associated with the control of *stormwater* runoff from applicable *construction activities*:
10. Implementation:

Table 7. Documentation of Construction Site inspections

Date	Site	Inspector	Violations	Enforcement Action	Follow up

Staff responsible for implementing this plan must be trained before beginning work and every 5 years thereafter. Table 7 records staff who have received this training.

Table 8. Documentation of Staff who completed Construction Oversight Training

Name	Title	Contact	Date completed

⁴ Part VI.D.3 Pg 30

John Mastronardi, P.E.	Town Engineer	jmastronardi@griffithsengineering.com	TBD
Chad Moran	Code Enforcement Officer	chad@townofkirkwood.org	TBD
John Finch, Jr.	Commissioner of Public Works	john@townofkirkwood.org	TBD

The MS4 Operator must document procedures to ensure that those involved in construction activities (contractors, subcontractors, qualified to inspect, SWPPP reviewers) have received 4 hours of training in proper erosion and sediment control principles.

Construction Site Inventory and Inspection Tracking

As part of maintaining proper oversight of projects, the Town of Kirkwood maintains an inventory of applicable construction projects. This inventory will be maintained throughout the year and be updated in the SWMP document annually. The inventory includes the following information (see attachment 3 for inventory table):

1. Location of the Construction site
2. Owner/ operator contact information
3. Receiving watery body name and class
4. Receiving waterbody WI/PWL segment ID
5. Prioritization
6. Construction Project SPDES ID number
7. SWPPP approval date
8. Inspection history, dates, and ratings

Construction Site Prioritization

Within one year of the EDC, the MS4 Operator must prioritize all construction sites which are included in the construction site inventory. Within 30 days of becoming active, MS4 operators must prioritize the construction site and update the construction site prioritization in the inventory annually and document it in the SWMP. Prioritizations are listed in the inventory, attachment 3.

SWPPP Review

Table 9. Staff who have completed DEC approved 4 hr. Course

Name	Title	Contact Information	Date completed
John Mastronardi, P.E.	Town Engineer	jmastronardi@griffithsengineering.com	TBD

Construction Inspection

Pre-Construction Meeting

The Town of Kirkwood will ensure a pre-construction meeting is conducted prior to the commencement of construction activities. The Town of Kirkwood will review the MS4's construction oversight program and expectations for compliance with the constructor.

Refer to Attachment 2 for the pre-construction meeting worksheet.

Construction Site Inspections

The Town of Kirkwood will ensure individuals responsible for construction site inspections receive 4 hours of Department-endorsed training in proper erosion and sediment control principles within 3 years of the EDC and every 3 years thereafter.

Table 9. Staff who have completed DEC approved 4 hr. Course and perform Construction Site Inspections:

Name	Title	Contact Information	Date completed
John Mastronardi, P.E.	Town Engineer	jmastronardi@griffithsengineering.com	TBD

The Town of Kirkwood will annually inspect all sites with construction activity identified in the inventory, during active construction after the pre-construction meeting, or sooner if deficiencies are noted that require attention. If corrective actions are taken, the Town of Kirkwood will perform follow-up construction site inspections to confirm within the timeframes established by the CGP and the Town of Kirkwood's ERP.

The Town of Kirkwood will document all inspections using the Construction Site Inspection Form found in Appendix D of the General Permit.

Construction Site Close-out

The Town of Kirkwood will ensure a final construction site inspection is conducted and documented in the SWMP Plan, using the Construction Site Inspection Report Form (Appendix D). The Notice of Termination will be signed by the Town of Kirkwood to indicate project completion.

Minimum Control Measure 5: Post Construction Stormwater Management⁵

Pertaining to development, implementation, and enforcement of a program to ensure proper operation and maintenance of post construction stormwater practices for new or redeveloped sites.

The Town of Kirkwood SMP program addresses stormwater runoff to the MS4 from a publicly owned/operated and privately owned/operated post-construction SMP that either is a post-construction SMP that has been installed as part of any CGP covered construction site or individual SPDES permit (since March 10, 2003) and/or all new post-construction SMPs constructed as part of the construction site stormwater runoff control program.

Table 10. Documentation of SMP Training

Name	Title	Contact Information	Date completed

Post- Construction SMP Inventory and Inspection Tracking:

The Town of Kirkwood will maintain the inventory from previous iterations of the SPDES general permit for post-construction SMPs installed after March 10, 2003 and develop the inventory for post-construction SMPs installed after March 10, 2003 as they are approved or discovered, and/or after the owner/operator for the construction activity has filled out the Notice of Termination and update the inventory annually.

Within 5 years of the EDC, the MS4 Operator will provide the inventory spreadsheet on post-construction SMPs (Attachment 4).

Post construction Inspection and Maintenance Program:

By January 2nd 2025, a post construction SMP inspection and maintenance program must be developed and documented following the criteria on page 37-38 of GP-0-24-001.

⁵ Part VI. E

Minimum Control Measure 6: Pollution Prevention and Good Housekeeping⁶

Municipality facilities

By January 2nd 2027, BMPs must be incorporated into the municipal facility program and municipal operations this should be completed according to the BMPs described on pages 39-43 of GP-0-24-001. The Facility program must specify the facility procedures and training procedures.

By January 2nd 2026, an inventory of all municipal facilities must be completed including information listed on pg. 44 of GP-0-24-001. **See attachment 5 for the related table to fulfill this requirement.**

By January 2nd 2029 a facility specific SWPP must be complete for each high priority facility. This is described on page 45-48 of GP-0-24-001.

Municipal Operations

Training of municipal staff will include Municipal Good Housekeeping and Stormwater Best Management Practices. The names and contact details of staff who have received training in municipal operations procedures is documented in the following table. This will be updated annually.

Table 11. Documentation of Staff completing municipal operations procedures training.

Name	Title	Contact	Topic	Date completed

⁶ Part VI.F

Attachment 1: Construction Site Complaint Documentation Items (MCM 4)

Construction Site Complaint	
Date of Report	
Location of site	
Nature of Complaint	
Follow up taken or needed	
Inspection outcomes	
Enforcement outcomes	

Attachment 2:

Pre-Construction Meeting Worksheet (MCM 4)

Pre-Construction Meeting Worksheet	
Date of Meeting	
Construction Project Name/Location	
Name of Owner/Operator listed on the CGP NOI (if different from MS4 Operator)	
Name of MS4 Operator	
Name Contractor(s) responsible for implementing the SWPPP for the Construction activity	
Name of Qualified Inspector (if required for construction activity)	
Questions for Review	
Has the project received, or will it receive coverage under the CGP or an individual SPDES permit?	
Do contractors and subcontractors have at least one individual who has received 4 hours of department-endorsed training in proper erosion and sediment control principles?	
Has the MS4 Operator reviewed the construction oversight program and expectations for compliance with the contractors and subcontractors?	

Attachment 3: Construction Site Inventory (MCM 4)

Address	Owner/Operator Contact	Receiving Waterbody Name & Class	Receiving waterbody WII/PWL Segment ID	Prioritization	Construction Project SPDES ID #	Ownership	SWPPP approval date	Inspection History – Date & Rating

