

**DRAFT SWMPAR**

**STORM WATER MANAGEMENT PROGRAM  
ANNUAL REPORT NARRATIVE  
FOR PERMIT YEAR 5  
MS4 SPDES NO. NYR20A470**

**PREPARED FOR**

**TOWN OF PHILIPSTOWN  
238 MAIN STREET  
COLD SPRING, NEW YORK 10516**

**MAY 2008**

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**STORMWATER MANAGEMENT PROGRAM  
MS4 SPDES NO. NYR20A470  
YEAR 5 FINAL STORMWATER MANAGEMENT REPORT**

**1.0 INTRODUCTION**

In year 2003, under Phase II Stormwater EPA Regulations, the Town of Philipstown (Town) was granted a SPDES General Permit from the New York State Department of Environmental Conservation (NYSDEC) for the discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 Permit). The SPDES Permit extended from January 8, 2003 and expired on January 8, 2008 (First Term Five-Year Permit).

The permit required the Town to develop, implement and enforce a stormwater management program (SWMP) designed to reduce the discharge of pollutants from stormwater runoff. Pursuant to the permit conditions, the Town was required demonstrate compliance with the following six minimum control measures:

- MCM 1: Public Education And Outreach
- MCM 2: Public Involvement/Participation
- MCM3: Illicit Discharge Detection & Elimination
- MCM 4 Construction Site Stormwater Runoff Control
- MCM 5 Post-Construction Stormwater Management
- MCM 6: Pollution Prevention/Good Housekeeping

The SPDES Permit required the Town to show steady progress towards achieving the above measurable goals with final completion by five years from the issuance date of the permit, by January 8, 2008. This report documents the various steps taken by the Town during the five-year permit term to develop, implement and enforce a stormwater management program (SWMP) designed to reduce the discharge of pollutants from stormwater runoff

**2.0 SWMP IMPLEMENTATION SCHEDULE**

To demonstrate the Town's progress towards meeting their MS4 measurable goals under SPDES Permit # NYR20A470, the Town selected a SWMP Coordinator, established a SWMP Steering Committee and hired a consultant to assist them in implementing the program. A Technical advisory Panel and a Citizen Advisory Panel

was also established to assist the Town in the implementation of the program. The program was carried out over a five-year period, beginning in 2003.

The program implementation schedule, which references NYSDEC Permit Years and the corresponding Calendar Years, is summarized below:

- Year 1 = March 10, 2003 to June 1, 2004
- Year 2 = March 10, 2004 to June 1, 2005
- Year 3 = March 10, 2005 to June 1, 2006
- Year 4 = March 10, 2006 to June 1, 2007
- Year 5 = March 10, 2007 to June 1, 2008

### **3.0 SENSITIVE WATERBODIES IN PHILIPSTOWN**

Pollution from stormwater runoff impacts “all surface waters of the State of New York, which include lakes, bays, ponds rivers streams, marshes, and all other bodies of surface waters, natural or artificial, in or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters), waters which are wholly or partially within or bordering the Town of Philipstown or within its jurisdictions. Exclusions include manmade bodies of water which neither were originally created in the waters of the State nor resulted from the impoundment of waters of the State.”

The principal water body impacted by the Town of Philipstown from stormwater runoff is the Hudson River, which runs approximately 9.5 miles of the Town’s shoreline drains approximately 16.00 acres of land in the Town of Philipstown. The streams that are located primarily within the Town of Philipstown and that drain to the Hudson River include:

- Foundry Brook
- Indian Brook
- Philipse Brook
- Arden Brook
- Clove Creek
- Canopus Creek

**Foundry Brook** discharges its flow to Foundry Cove located in Cold Spring. The Foundry Brook Watershed is the primary source of municipal water to the Villages of Nelsonville and Cold Spring. The Upper Cold Spring Reservoir is located close to the headwaters of Foundry Brook and the Lower Reservoir is located on the south side of

Fishkill Road. Jaycox Pond, approximately 12 acres in size, is also located in the Foundry Watershed.

The headwaters of the **Indian Brook** start in the Putnam Valley Town, from where the brook flows west intercepts several ponds before continuing to the Hudson River.

**Philipse Brook** originates in the Clarence Fahnestock State Park and travels west intercepting several ponds and traveling under Route 9 through the Garrison Golf Course before draining to the Hudson River.

**Arden Brook** originates at the junction of Route 403 and Route 9 and flows northwesterly before discharging into the Hudson River.

**Clove Creek** originates in the Clarence Fahnestock State Park and travels northwest along Route 9 into Dutchess County, via Fishkill Creek and finally discharges into the Hudson River.

**Canopus Creek** with its headwaters from Canopus Lake located in the Clarence Fahnestock State Park (Town of Putnam Valley) flows southwesterly through a small section of Continental Village in the Town of Philipstown, before emptying into Cortlandt Lake (located partially in the Towns of Philipstown and Cortlandt in the Cortlandt Lake Watershed).

#### **4.0 POTENTIAL IMPACTS FROM POLLUTANTS OF CONCERN**

The abundance of open space, lakes and streams and parklands in Philipstown have had a major impact in reducing the impact of stormwater runoff pollution typically associated with more developed urbanized areas, which are subject to:

- Litter and debris from paved shopping and commercial facilities
- Polycyclic aromatic hydrocarbons, oils and greases from paved roads and driveways

Nevertheless developed areas such the Villages of Nelsonville and Cold Spring and the hamlets of Garrison and Continental Village are more prone to pollutants typically found in urbanized areas as noted above.

Because of the steep slopes with thin glacial till soils, the streams draining to the Hudson River are reported (NYSDEC Hudson River Estuary Program) being stressed by silt/sediments and pathogens from the following sources of pollution:

- Pathogens from on-site individual septic systems located on steep slopes and shallow soils, with insufficient setbacks
- Fertilizers, pesticides and herbicides applied to lawns and gardens
- Salts and chlorides applied on roads and parking lots during the winter season
- Sediment from unpaved roads
- Stream bank erosion from steep slopes

## **5.0 ONGOING PHILIPSTOWN WATERSHED EFFORTS**

In 2003, the Town of Philipstown filed a Notice of Intent (NOI) to comply with the Phase II Stormwater Regulations. Subsequently, Town received a NYSDEC SPDES Permit # NYR20A470 for stormwater discharges from the Town. Under the State mandated program, Philipstown initiated the following actions:

### *SWMP Guidance Manual*

In June 2005, a SWMP Guidance Manual was prepared. This document, which is available to the public for review at the Town Clerk's Office, is intended to be a guide to the Town in complying with the Phase II Regulations.

### *Stormwater Website*

In July 2005, a Stormwater Website was developed for inclusion of key documents such as newsletters and fact sheets. The Stormwater Website is also used to report storm water events such as public meetings, citizen participation meetings, workshops and includes other relevant stormwater information.

### *Newsletters & Fact Sheets*

Beginning in July 2005, Newsletters and Fact Sheets have been prepared by the Town as part of the Public Education and Outreach Program on stormwater impacts. Newsletters and Fact Sheets have been posted on the Town's Stormwater Website, published in the local papers, as well made available to the public for review at the Town Clerk's Office.

### *Stormwater Workshops*

In November and December of 2005, the Town held two (2) Stormwater Workshops presented by the NYSDEC. The first workshop, discussed the Phase II Stormwater Regulations as it impacts Construction-Related Activity and the second workshop covered Illicit Discharges, Detection and Elimination. Notices for these workshops were posted at the Town Clerk's Office and the public was invited to attend these workshops.

### *Local Laws Adopted to Address Stormwater Runoff*

On December 12, 2007, the Town of Philipstown adopted new local laws to comply with the State's Phase II Stormwater Management Program. The adoption of

amendments to Local Laws marks a dramatic beginning by the Town to comply with to comply with the Phase II Stormwater Management Program. The local laws were revised as follows:

- Chapter 147A entitled “Stormwater Management and Erosion and Sediment Control “ was added to the Town Code
- Chapter 112 entitled “Land Development” was modified to include subparagraph 112-11E(7)
- Chapter 175 entitled” Zoning” was modified by adding a new subparagraph 175-36 D and relettering existing subparagraph D to subparagraph E
- Chapter 147B entitled “Stormwater Illicit Discharges, Activities, and Connections to Separate Storm Sewer System Law” was added to the Town Code

*Stormwater Committees*

In December of 2005, the Town established three (3) stormwater committees, consisting of Steering Committee, a Technical Advisory Committee (TAC) and a Citizen Advisory Panel (CAP). The steering committee is responsible for the overall implementation and the direction of the program. The TAC is responsible for amending the local laws so that they adequately address stormwater runoff controls from Construction Activity and Illicit Discharges, Detection and Elimination. The CAP is responsible for developing an Outreach and Education Program.

**6.0 STORMWATER MANAGEMENT MEASURABLE GOALS**

The SWMP adopted by the Town included the six (6) minimum control measures (MCM) required by the NYSDEC Permit. For each of the six minimum measures, the Town identified measurable goals and selected Best Management Practices (BMPs) to achieve these measurable goals. The BMPs for each of the six minimum measures adopted by the Town are tabulated on separate pages as follows:

**MCM 1: Public Education and Outreach**

The Public Education and Outreach Program was established to develop public education programs on the impacts of stormwater discharges on receiving water bodies and to develop steps that the public can take to reduce pollutants to receiving water bodies. Summarized below are actions taken by the Town of Philipstown on Public Education and Outreach, program;

<b>BMP ID</b>	<b>PUBLIC EDUCATION &amp; OUTREACH PROGRAM – BMP ACTION</b>	<b>RESP. ENTITY</b>	<b>MEASURABLE GOAL</b>
1-1	SWMP Guidance Manual on Phase II Stormwater Regulations, was prepared for the Town	Town Board	Completed Yr 2; Available to Public
1-2	Stormwater Website w/ contact names, newsletters and fact sheets, was developed for the Town	Town Clerk's Office	Started in Yr 2, updated annually
1-3	Stormwater Steering Committee w/Contact Person, consisting of citizens from Philipstown, Cold Spring and Nelsonville, was established	Town Board	Established in Yr 3
1-4	Citizen Advisory Panel, consisting of citizens from Philipstown, Cold Spring and Nelsonville, was established	Town Board	Established in Yr 3
1-5	Technical Advisory Committee, consisting of citizens from Philipstown, Cold Spring and Nelsonville, was established	Town Board	Established in Yr 3
1-6	Fact Sheet on "Sensitive Waterbodies in Your Area" was published on the Town's Stormwater Website	Consultant	Prepared in Yr 3
1-7	Newsletters, on stormwater initiatives, amendment to local laws on construction activity and illicit discharges and the impacts of stormwater on the Hudson River, were prepared and made available to the public	Consultant	Prepared in Yr 4 and Yr 5
1-8	Stormwater Management Annual Reports (SWMPAR) on the current and ongoing stormwater program, were prepared annually and presented to the public and NYSDEC	Consultant	Updated annually

## **MCM 2: Public Involvement/Participation**

The public involvement/participation program included efforts to reach out and engage the public in all aspects of the stormwater program. Summarized below are actions taken by the Town of Philipstown on Public Involvement/Participation.

<b>BMP ID</b>	<b>PUBLIC INVOLVEMENT/PARTICIPATION – BMP ACTION</b>	<b>RESP. ENTITY</b>	<b>MEASURABLE GOAL</b>
2-1	Access to Public Notices, Newsletters and Fact Sheets were made available to the public at the Town Clerks Office, through mailings and on the Town's Stormwater Website	Consultant	Updated annually
2-2	Public presentations were made on the annual reports and comments received from the public incorporated into the program and reports as appropriate	Consultant	Updated annually
2-3	The Town actively solicited volunteers for Steering, Citizen and Technical Advisory Committees, to help develop the SWMP.	Consultant and Town Board	Prepared in Yr 3
2-4	Public Workshop on Construction-Related Activity, open to citizens of Philipstown, Cold Spring and Nelsonville, was held	Consultant & NYSDEC	Presented in Yr 3
2-5	Public Workshop on Illicit Discharge Detection & Elimination, open to citizens of Philipstown, Cold Spring and Nelsonville, was held	Consultant & NYSDEC	Presented in Yr 3
2-6	Putnam County Stormwater Coalition Group meetings, to explore networking opportunities between MS4s in Putnam County, were held quarterly at the Putnam County Planning Department	Putnam County Planning Dept.	Meetings conducted quarterly, on an annual basis
2-7	Citizen Advisory Panel meetings, consisting of citizens from Philipstown, Cold Spring and Nelsonville, were held to discuss the stormwater initiatives taken by the Town	Town Board	Established in Yr 3, meetings held periodically



### **MCM 3: Illicit Discharge Detection and Elimination**

In accordance with the NYSDEC Permit requirements, the Town must implement and enforce a program to detect and eliminate illicit discharges (non-stormwater discharges). Summarized below are actions taken by the Town of Philipstown on the elimination of illicit discharges.

<b>BMP ID</b>	<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION– BMP ACTION</b>	<b>RESP. ENTITY</b>	<b>MEASURABLE GOAL</b>
3-1	Public Workshop on Illicit Discharge Detection & Elimination, (IDDE) open to citizens of Philipstown, Cold Spring and Nelsonville, was held	Consultant & NYSDEC	Presented in Yr 3
3-2	The Consultant held several meetings with the Town on amending Local Laws to address illicit discharges and a meeting was held on May 2, 2007 to review draft law.	Consultant	Presented in Yr 3
3-3	On November 5, 2007, the Town held a meeting with Philipstown Planning Board on Illicit Discharges	Town Board	Held in Yr 5
3-4	NYSDEC IDDE Sample Law was reviewed by Chairman of Technical Advisory Committee	Town Board	Held in Yr 5
3-5	NYSDEC IDDE Sample Law was reviewed and approved by Putnam County on November 6, 2007	Town Board	Held in Yr 5
3-6	Public Notice on adoption of IDDE in local laws, was published in Putnam County News and Recorder on December 5, 2007	Town Board	Held in Yr 5
3-7	Public Hearing was held on December 12, 2007 on the adoption of IDDE local law and the amendment was adopted	Town Board	Held in Yr 5
3-8	Storm Outfall and Sewer Mapping Project for Continental Village was initiated by the Town	Town Board	Initiated in Yr 5

**MCM 4 & MCM 5: Construction Site Stormwater Runoff Control and Post-Construction Stormwater Management**

In accordance with the NYSDEC Permit requirements, the Town must implement and enforce a program to reduce pollutants in stormwater runoff from construction activities, and implement strategies which include a combination of structural and non-structural BMPs appropriate to the construction site to address post-construction runoff from the site. Summarized below are actions taken by the Town of Philipstown on Construction Site Stormwater Runoff Control, and Post-Construction Stormwater Management.

<b>BMP ID</b>	<b>CONSTRUCTION &amp; POST-CONSTRUCTION SITE STORMWATER RUNOFF – BMP ACTION</b>	<b>RESP. ENTITY</b>	<b>MEASURABLE GOAL</b>
4,5 -1	Public Workshop on Construction-Related Activity, open to citizens of Philipstown, Cold Spring and Nelsonville, was held	Consultant & NYSDEC	Presented in Yr 3
4,5 -2	Draft Amendment to Local Laws, addressing Construction and Post-Construction Activities, was presented by the Town Board on April 12, 2007	Town Board	Presented in Yr 5
4,5 -3	The Consultant held several meetings with the Town on amending Local Laws to address Construction-Related Activity & a meeting was held on May 2, 2007 to review draft law.	Consultant	Presented in Yr 3
4,5 -4	On November 5, 2007, the Town held a meeting with Philipstown Planning Board on Construction-Related Activity	Town Board	Held in Yr 5
4,5 -5	NYSDEC Construction-Related Activity Sample Law was reviewed and approved by Putnam County on November 6, 2007	Town Board	Held in Yr 5
4,5 -6	Public Notice on adoption of Construction-Related Activity in local laws was published in Putnam County News and Recorder on December 5, 2007	Town Board	Held in Yr 5
4,5 -7	Public Hearing was held on December 12, 2007 on the adoption of local law on Construction-Related Activity and the amendment was adopted	Town Board	Held in Yr 5

**MCM 6: Pollution Prevention/Good Housekeeping**

This measure was set up to establish a framework for pollution prevention and good housekeeping for municipal operations and facilities for the Town. Summarized below are actions taken by the Town of Philipstown on Pollution Prevention/Good Housekeeping.

<b>BMP ID</b>	<b>CONSTRUCTION &amp; POST-CONSTRUCTION SITE STORMWATER RUNOFF – BMP ACTION</b>	<b>RESP. ENTITY</b>	<b>MEASURABLE GOAL</b>
6 -1	In-House O & M Staff Training was provided in Year 2 and annually thereafter. Training consisted of handout materials on stormwater management, potential sources of contamination and best management practices to control spills and reduce chemical contamination from municipal operations	Consultant	Presented in Yr 2 and annually thereafter
6-2	A separate training session was provided to Staff from the Highway Department that oversees streets and highway maintenance, winter road maintenance, storm drainage maintenance and vehicle and fleet maintenance.	Consultant	Presented in Yr 2 and annually thereafter
6-3	A separate training session was provided to Staff from the Recreation Department that oversees Parks and Open Space maintenance.	Consultant	Presented in Yr 2 and annually thereafter
6-4	A Policy and Procedures Document was prepared and distributed to the Town, designed to implement an operation and maintenance program to reduce pollutants to the maximum extent practicable.	Consultant	Presented in Yr 5