



September 30, 2021

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*Commissioner*

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Re: New York City Department of Environmental Protection, Stormwater Pollution Prevention Tri-Annual Self-Assessment for East of Hudson Bureau of Water Supply Operations within the MS4 Area for permit #NYR20A529

Dear Mr. Sullivan

Pursuant to the requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4), we are transmitting to you the attached document as summarized below:

- Stormwater Pollution Prevention Self-Assessment for East of Hudson Bureau of Water Supply Operations within the MS4 Area for permit # NYR20A529

If you require any additional information or clarification, please do not hesitate to contact me at (914) 749-5344 or [brennerw@dep.nyc.gov](mailto:brennerw@dep.nyc.gov).

Sincerely,

*William Brenner*

William Brenner  
Compliance Manager, WTO QA  
Bureau of Water Supply

***NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER SUPPLY***

**Stormwater Pollution Prevention Self-Assessment  
Of East of Hudson Bureau of Water Supply Operations  
within the MS4 Area**

**Part VIII.A.6.a.ii and Part VIII.a.6.g of NYSDEC General Permit GP-0-10-002**

**Required for New York State Department of Environmental Conservation  
SPDES General Permit for Stormwater Discharges from Municipal Separate  
Storm Sewer Systems (MS4s) GP-0-15-003  
Permit No. NYR20A529**



**Commissioner  
Vincent Sapienza, P.E.**

**Deputy Commissioner  
Paul V. Rush, P.E.  
Bureau of Water Supply**

September 2021

# **New York City Department of Environmental Protection Stormwater Pollution Prevention Self-Assessment of Agency Operations**

## **I. Introduction**

A self-assessment is required once every three years under Section VIII.A.6.a.ii of the General Permit for Stormwater Discharges from Municipal Separate Storm Sewers (MS4s), permit #GP-0-10-002. In addition, section VIII.a.6.g of the GP-0-10-002 states that during the 3-year program development period the covered entity must develop a stormwater pollution prevention program that describes pollution prevention priorities and management practices to be developed. The self-assessment is the most effective way to accomplish these goals.

The purpose of the self-assessment is to:

- 1) Determine the sources of pollutants potentially generated by the Agency's operations and facilities;
- 2) Evaluate the effectiveness of existing programs;
- 3) Identify the municipal operations and facilities that will be addressed by the municipal pollution prevention and good housekeeping program, if it has not done already;
- 4) Provide a prioritized list of facilities and action items.

## **II. Self Assessment**

### ***A. Inventory of Existing Operations***

To begin the MS4 Self-assessment, NYCDEP assessment staff provided a list of existing municipal operations (Table 1). This list includes the following information:

- Facility name
- Type of facility
- Location: Street address, town and county
- Reservoir that the facility is associated with
- Facility manager name and contact information

NYCDEP also provided a map of all facilities that was used for the self-assessment and is available at the office of Bill Brenner, NYCDEP BWS Sutton Office.

For the 2021 MS4 Stormwater Assessment, Bill Brenner and Ed Walters collaborated to evaluate our program development and compliance and to identify the facilities that had the most stormwater pollution potential, primarily Bureau of Water Supply (BWS) operational buildings and maintenance facilities. These facilities were selected for site visits and best management practice analysis from June through August 2021.

The BWS team inspected 35 facilities using a checklist developed by Kendall Storm Water Services, a contractor used in 2012. The checklists assist in data gathering

information at inspected locations. The analysis of municipal operations included activities that have the potential of generating stormwater pollution and assessment of current best management practices (BMPs) for each facility. Information about staff, equipment, and coordination/collaboration within NYCDEP departments was compiled and proved beneficial in our analysis. Comprehensive recommendations could then be made for best management practices to reduce the potential for stormwater pollution.

This MS4 Stormwater Assessment report includes checklists covering 35 facilities (Appendix 1). Each checklist asks for information about various pollution generating activities, as well as current best management practices. A summary of general notes and recommendations is provided on the page directly after each checklist. The checklists are organized in three groups geographically and by stormwater pollution potential topic as follows, (bulleted list shows the title of each checklist):

Group 1. Katonah Headquarters facilities, Cross River Reservoir facilities, Amawalk Reservoir facilities, Croton Reservoir facilities

- Building Maintenance - Sheet 1 - Katonah, Cross River, Amawalk, Croton
- Street, Bridge and Parking Lot Maintenance - Sheet 1 - Katonah, Cross River, Amawalk, Croton
- Vehicle/Equipment Maintenance - Cross River Maintenance Facility
- Open Space, Streambank and Hydrologic Habitat Maintenance - Sheet 1 - Katonah, Cross River, Amawalk, Croton

Group 2. Boyds Corners Reservoir facilities, Croton Falls Reservoir facilities, Mahopac Wastewater Treatment Plant, West Branch Reservoir facilities

- Building Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch
- Street, Bridge and Parking Lot Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch
- Vehicle/Equipment Maintenance - Carmel Field Maintenance Facility
- Open Space, Streambank and Hydrologic Habitat Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch

Group 3. Kensico Reservoir facilities, Eastview DEP Police Precinct, Pleasantville Alum Plant

- Building Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville
- Street, Bridge and Parking Lot Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville
- Open Space, Streambank and Hydrologic Habitat Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville

Facilities that were not included in this assessment include the Hudson River Pump Station and facilities associated with the Diverting, Middle Branch, and Titicus Reservoirs. These facilities will be assessed later in 2021 or 2022.

### ***B. Prioritized list of operations and recommendations***

Those facilities in nearest proximity to the reservoirs, such as Shafts 10, 17 and 18, continue to use double and triple controls to ensure that pollution will not enter the reservoirs. For example, petroleum-fueling tanks for vehicles are double walled, have emergency shut off controls, and electronic leak detection. In the event of a spill, spill cleanup materials are near all vehicle fuel tanks.

Based on the self-assessment forms completed for this report the following is a draft list of operations that will be recommended for stormwater pollution prevention/good housekeeping efforts in the next 3-year cycle of projects and assessment activities

### **GENERAL RECOMMENDATIONS FOR ALL COMPLEXES**

Stormwater management practice inventory - An inventory of all stormwater management practices such as ponds, sand filters, bioretention, etc. is kept by Matt Giannetta, Chief of the Regulatory Engineering Programs for BWS. Mr. Giannetta's team of stormwater technical experts, scientists and engineers verify that the inventory includes all practices in the EOH MS4 area and detail parameters for all practices including but not limited to practice type, date constructed, location (lat/long), maintenance schedule, maintenance verification, and maintenance responsibility.

Proper disposal of street sweepings - Verify that when street sweepings are brought to the Catskill connector property they are stored away from any stream, lake or wetland and that spoil piles are covered if there is a potential for petroleum or other contamination in the material.

### **SPECIFIC RECOMMENDATIONS FOR INSPECTED FACILITIES**

#### **Building Maintenance - Sheet 1 - Katonah, Cross River, Amawalk, Croton**

##### **Katonah District Office**

Roof drains - Roof leaders empty directly on to paved parking lot; stormwater then flows to eroding swale to west of driveway that empties into a tributary to the Muscoot Reservoir. Suggested temporary erosion control with riprap under laid with permeable filter cloth after the last assessment. Suggested repairs/upgrades were made to site. The improvement continues to contain building site runoff. A permanent solution might include directing roof leaders to bioretention, rain gardens, and/or permeable pavement near the building to absorb runoff on-site.

##### **Cross River Barn**

Septic system - There is a recurring problem with Stormwater infiltration into the septic

system at this location. The system is pumped out monthly. Staff are working too develop a plan/design to mitigate the problem. Since this facility is up on a hill near the reservoir, this is a potential pollution source.

Housekeeping – There have been past problems with storage on this site. Great improvements were made, and just basic cleanup and re-arranging have been the biggest contributing factor. The team staff have also been vigilant when it comes to maintaining this site.

### **Amawalk Barn**

Housekeeping - Used vehicle batteries and fluorescent bulbs on second floor behind partition should be removed on a more frequent basis. This remains a difficult issue to keep ahead of.

### **Vehicle/Equipment Maintenance - Sheet 1 - Cross River Maintenance Facility**

#### **Cross River Field Maintenance Facility**

Solvents – Management is considering executing a service contract to change out spent solvent for the parts washer on a more frequent basis. Put in place a contract with a parts washer service to change out spent solvent. Staff stated that this had been available in the past, but it was discontinued. The site Supervisor has been tasked to see if a contract can be re-instated or budgeted for the future.

Training - Employee training on spill prevention is up to date.

### **Open Space, Streambank and Hydrologic Habitat Maintenance - Sheet 1 - Katonah, Cross River, Amawalk, Croton**

Pet waste education - Most roads available to the public are not near our reservoirs. There is, however, one road near the Cross-River Reservoir where people can walk their dogs. A pet waste control station with a pet waste bag dispenser was installed on this road to encourage people to pick up their pet waste. This practice has worked positively at other EOH DEP facilities that have public access. To date there seems to be a big improvement.

### **Building Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch**

#### **Carmel Field Operations Building**

Housekeeping/Outdoor materials storage - Used and new 55-gallon drums, old tires, and some gasoline-powered equipment continue to be stored outside, uncovered in the wooded area up on the small hill behind the building. Suggest that the drums start to be removed and/or at least covered. A tire removal schedule should be developed ASAP. This seem to be an ongoing problem. As mentioned before, installing a shed or covered roof for small equipment would be a big improvement as a temporary storage place.

#### **Mahopac Wastewater Treatment Plant**

Housekeeping -The outside dumpsters should be closed to keep rainwater out and prevent

stormwater pollution generation.

Dewatered sludge roll-off container - The sludge transfer and disposal system appear to have the potential of creating stormwater pollution, since there is some staining of the entrance driveway to the sludge roll-off container garage and leaking underneath the roll-off container was observed. The following steps should be taken: 1. Verify the direction and outlet of stormwater flows on the entrance driveway to the sludge roll-off garage. If the stormwater flows to a storm drain that is connected internally back to the head of the sewage treatment plant, then no further action is needed. 2. If the stormwater flows into a storm drain that empties to waters of the state, or if the stormwater flows off site above ground, then consider measures to contain the sludge transfer process, such as: A. Provide a more enclosed chute system for sludge transfer rather than the open blue tarp currently used; B. Contract with a roll-off company that can provide a leak-proof roll-off container. C. Relocate the container to a better location on the site and mitigate the risk.

## **Vehicle Equipment Maintenance - Sheet 2 - Carmel Field Operations**

### **Carmel Field Operations Maintenance Facility**

Vehicle washing - Vehicles are currently washed down in the parking lot, as a last resort, to remove salt. The parking lot drains downhill to a paved swale and directly into a storm drain. It is recommended that vehicles be washed elsewhere, such as at the Mahopac Protection Office where boat washing currently takes place or Staff now use vouchers to wash vehicles at a private facility that is connected to the sanitary sewer system.

Self-audit - It is recommended that the facility supervisor complete a Stormwater Pollution Prevention Facility Self-Audit (Appendix C) at least once a year, as was done for the Cross-River Maintenance Facility.

## **Building Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville**

### **Kensico Manor Field Maintenance Garage**

Petroleum products storage - Used oil from back-up generators is delivered to this facility for storage and eventual pick up by a waste oil company. In addition, there is a high concentration of gas, oil, and other materials stored both inside this facility. While the floor drains have been sealed off and there are no nearby storm drains, supervisors should continue to be vigilant in the handling of waste and maintain the spill response plan and conduct staff training.

### **Kensico Manor House**

Roof leaders and septic system - Staff noted that in the past it was discovered that the roof leaders from the building are tied into the septic system. The roof leaders should be disconnected as soon as possible to prevent failure of the septic system, which could lead to surface stormwater contamination. At this point in time, the Manor house is not manned and is in the process of either being removed or given to the town.

### **Eastview Precinct**

Fuel station – There are two storm drains in the fueling station area are tied directly to the underground sand filter. This situation can lead to failure of the sand filter much sooner than normal due to stormwater containing petroleum continually entering the sand filter. Upon inspection and looking at records, it seems that there has never been a release of petroleum-based products into the sand filters. Continue to inspect the sand filter monthly as is currently being done. Continue to close the storm drains off with spill mats during fuel tanker deliveries as is currently being done. In the future, consider tying these two storm drains to the sanitary system.

Garage floor drain - It is not clear where the floor drains in the garage drain. It seems that there is an additional sand filter under the floor where water can perc into. In the future, consider tying this garage drain to the sanitary system.

### **Street, Bridge and Parking Lot Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville**

#### **Kensico Shaft 18**

Ditch behind Kensico Shaft 18 office trailer – A silt fence was used for erosion control on a temporary open ditch. This seemed to be a less effective measure due to pavement obstructions and it is difficult to maintain the integrity of the installation. In addition to the silt fence, a Silt Sox was installed on the pavement edge to contain any silt generated by stormwater runoff.

#### **Next Steps**

For those agency operations prioritized in this self-assessment, NYCDEP should continue do the following over the next three years:

##### **Implementation Plan**

Further, investigate the agency operations on the prioritized list, select pollution prevention/good housekeeping practices to reduce pollution potential to local waterbodies, and develop an implementation plan for each operation, including budget information and clearly identify the Responsible Individual for implementation.

#### **BMP Implementation**

Install the pollution prevention/good housekeeping best management practices identified in the Implementation Plan.

#### **Evaluation**

Evaluate implementation progress at least once every three years. Continue good practices based on Section VIII.A.6.a.ii of the General Permit for Stormwater Discharges from Municipal Separate Storm Sewers (MS4s), permit #GP-0-10-002. In addition, section VIII.a.6.g of the GP-0-10-002 states that during the 3-year program development period the covered entity must develop a Stormwater pollution prevention program that describes pollution prevention priorities and management practices to be developed. The self-assessment *is the most effective way to accomplish these goals.*

**Table 1: NYCDEP Complexes and Facilities in MS4 Area East of the Hudson River**

**Table 1: DEP Complexes and Facilities in MS4 Area East of the Hudson River**

As of 3/30/2021 Data Source: NYCDEP BWS GIS (TES)		Land-cover Breakdown by Parcel: *								Roads not on actual Parcels **		Each Complex Includes the Following Facilities:							
Complex Name	SWIS_SBL Parcel	Section-Block Lot	Total Acres of Parcel	Forested Acres	Turf/ Meadow Acres	Wetland Acres	Other Developed Acres	Impervious Acres-excluding NYC-owned rds	NYC Road Length (Miles)	NYC Road Surface (Acres)	Facility Name	Category	Type	Address	County	Town	Contact	Contact phone	Demo Date
Amawalk	55520003700500250050000000	37.05-25-5	53.1	22.5	11.1	7.9	7.9	3.6			Amawalk Auxiliary Dam	DAM		Tomahawk Street	W	Somers			
											Amawalk Dam Meter Chamber	CHAMBER	METER	2547 Amawalk Road	W	Somers			
											Amawalk Dam Valve Chamber	CHAMBER	VALVE	2547 Amawalk Road	W	Somers			
											Amawalk Intake Tower	CHAMBER	INTAKE	NYS Route 35	W	Somers			
											Amawalk Main Dam	DAM		NYS Route 35	W	Somers			
											Amawalk Main Dam Spillway	CHANNEL	SPILLWAY	NYS Route 35	W	Somers			
	Amawalk Outlet Culvert	BRIDGE		Route 35	W	Somers													
	55520003701300250080000000	37.13-25-8	222.4	200.0	11.6	0.6	8.9	1.3			Amawalk Auxiliary Release Bridge	BRIDGE		Route 35	W	Somers			
											Amawalk Barn	STORAGE	BARN		W	Somers	Jim Keesler	(914)455-3373	FY 23
										Amawalk Maintenance House	RESIDENCE	HOUSE	2552 Amawalk Road	W	Somers	Jim Keesler	(914)455-3373	FY 23	
Bog Brook	37308905700000010020000000	57-1-2	372.2	319.0	22.7	23.4	6.1	1.0			Bog Brook Dam 1	DAM		21 Brewster Hill Road	P	Southeast			
											Bog Brook Dam 1 Valve Chamber	CHAMBER	VALVE	21 Brewster Hill Road	P	Southeast			
											Bog Brook Dam 2	DAM		21 Brewster Hill Road	P	Southeast			
											Bog Brook Gate House	CHAMBER	GATE	21 Brewster Hill Road	P	Southeast			
											Bog Brook/Sodom Tunnel Connection Chamber	CHAMBER	VALVE	21 Brewster Hill Road	P	Southeast			
Boys Reservoir	37220003100000020280000000	31-2-28	24.2	11.1	3.3	3.9	3.1	2.8			Boys Corner Dam	DAM		2946 Route 301	P	Kent			
											Boys Corner Dam Gatehouses	CHAMBER	GATE	2946 Route 301	P	Kent			
											Boys Corner Dam Intake Tower	CHAMBER	INTAKE	2946 Route 301	P	Kent			
											Boys Corner Dam Spillway	CHANNEL	SPILLWAY	2946 Route 301	P	Kent			
											Boys Corner Dam Valve Chamber	CHAMBER	VALVE	2946 Route 301	P	Kent			
	37220003200000010030000000	32-1-3	9.8	8.0	1.1	0.0	0.7	0.1			Boys Corners Barn	STORAGE	BARN	2986 Route 301	P	Kent	Jim Keesler	(914)455-3373	FY 23
										Boys Corners Maintenance House	RESIDENCE	HOUSE	2986 Route 301	P	Kent	Jim Keesler	(914)455-3373	FY 23	
Cross River	55200004901200010010000000	49.12-1-1	16.9	11.6	1.5	0.1	2.3	1.3			Cross River Barn	STORAGE	BARN	241 Cross River Road	W	Bedford	Joseph Brunetto	914-232-3483	
											Cross River Fleet Maintenance	SHOP	GARAGE	241A Cross River Road	W	Bedford	Joseph Brunetto	914-232-3483	
											Cross River Maintenance House	OFFICE	HOUSE	241 Cross River Road	W	Bedford	Joseph Brunetto	914-232-3483	2017
											Cross River Septic System (under Barn)	SEPTIC		241 Cross River Road	W	Bedford	Joseph Brunetto	914-232-3483	
											Cross River Dam	DAM		1 Maple Avenue	W	Bedford			
											Cross River Dam Spillway	CHANNEL	SPILLWAY	Maple Avenue	W	Bedford			
											Cross River Dam Valve Chamber	CHAMBER	VALVE	241B Cross River Road	W	Bedford			
	Cross River Outlet Bridge	BRIDGE		Maple Avenue	W	Bedford													
	55200005001500010010000000	50.15-1-1	361.6	297.7	38.9	13.5	10.4	1.1			Cross River Dam Gate House	CHAMBER	GATE	241B Cross River Road	W	Bedford			
											Cross River Inlet Bridge	BRIDGE		Old Post Road (State Highway 121)	W	Bedford			
								0.33	1.0	Maple Avenue	ROAD			W	Bedford				

Table 1 Page 1 - facility chart (Excel Spreadsheet)

Complex Name	SWIS_SBL Parcel	Section-Block Lot	Total Acres of Parcel	Forested Acres	Turf / Meadow Acres	Wetland Acres	Other Developed Acres	Impervious Acres-excluding NYC-owned rds	NYC Road Length (Miles)	NYC Road Surface (Acres)	Facility Name	Category	Type	Address	County	Town	Contact	Contact phone	Demo Date
Croton Falls	see 67.-140 in Diverting										Croton Falls Diverting Channel Weir	WEIR		Lower Mine Road	P	Southeast			
	37200007700000020070000000	77.-2-7	220.0	174.4	27.0	7.4	8.9	2.3			Croton Falls Dam	DAM		Croton Dam Road	P	Carmel			
											Croton Falls Dam Gate House	CHAMBER	GATE	Hemlock Road	P	Carmel			
											Croton Falls Dam Lower Spillway Bridge	BRIDGE		Croton Dam Road	P	Carmel			
											Croton Falls Dam Spillway	WEIR		Croton Dam Road	P	Carmel			
											Croton Falls Dam Upper Spillway Bridge	BRIDGE		Croton Dam Road	P	Carmel			
											Croton Falls Dam Valve Chamber	CHAMBER	VALVE	Croton Dam Road	P	Carmel			
											Croton Falls Hydraulic Pumping Station	PUMP	STATION	Hemlock Road	P	Carmel			
											Croton Falls Maintenance House	OFFICE	HOUSE	16 Samantha Lane	P	Carmel			Spring 2018
											Croton Falls Road Bridge	BRIDGE		Croton Falls Road	P	Carmel			
									0.98	3.0	Croton Dam Road	ROAD			P	Carmel			
									0.40	1.2	Hemlock Road	ROAD			P	Carmel			
	37200007700000020170000000	77.-2-17	220.0	174.4	27.0	7.4	8.9	2.3			Magnetic Mine/Lower Mine Rd Stormwater Remediation	REMEDIATION		Lower Mine Road	P	Carmel	Jim Keesler	(914)455-3373	
Croton Reservoir	55540004701300010030000000	47.13-13	15.8	13.8	0.0	0.2	0.6	1.1			Baptist Church Road Bridge	BRIDGE		Baptist Church Road	W	Yorktown			
	see 58.08-1-2 in Turkey Mt.										Croton Lake Downtake Chamber	CHAMBER	DOWNTAKE	Chapman Road	W	Yorktown			
	55540005800900010020000000	58.09-1-2	39.3	28.6	2.5	3.0	2.9	2.2			Hunters Brook Bridge	BRIDGE		Croton Lake Road	W	Yorktown			
	55540005801200010040000000	58.12-1-4	50.6	32.5	5.7	1.7	4.2	6.5			Highlands Office	OFFICE	HOUSE	900 Croton Lake Road	W	Yorktown			FY 22
	55540005801600010110000000	58.16-1-11	5.8	5.0	0.1	0.0	0.4	0.2			Croton Lake Gate House (Old)	CHAMBER	GATE	Croton Dam Road	W	Yorktown			
											Croton Lake Gate House Septic System	SEPTIC		1120 Croton Dam Road	W	Yorktown	Russ Hanaburgh	346-386-3457	
	55540005901300010010000000	59.13-1-1	56.4	44.1	1.4	4.9	3.4	2.6			Croton Lake Electrical Shop	SHOP	ELECTRIC	1111 Route 129	W	Yorktown	David Syso	347-672-0527	Spring 2018
											Croton Lake Gate House (New)	CHAMBER	GATE	1120 Croton Dam Road	W	Yorktown	Russ Hanaburgh	347-386-3457	
											Gatehouse Bridge "B"	BRIDGE		Croton Dam Road	W	Yorktown			
											Pines Bridge (old)	BRIDGE			W	Yorktown			
									0.24	0.7	Arcady Road	ROAD			W	Yorktown			
	55540005901300010070000000	59.13-1-7	6.7	6.4	0.2		0.1	0.1	0.02	0.1	Arcady Road	ROAD			W	Yorktown			
	55360005901300010010000000	59.13-1-1	61.2	52.3	0.4	8.3	0.1	0.1			Kisco River Bridge "D"	BRIDGE		Lake Road (CR 1323)	W	New Castle			
Delaware Aqueduct	37280001900000020160000000	19.-2-16	0.9	0.2	0.2	0.0	0.5	0.0			Delaware Aqueduct Shaft 08	SHAFT		1919 Route 301	P	Putnam Valley			
	55400004100011250010000000	41.-1125-1	11.6	8.6	0.6	0.0	2.3	0.1			Delaware Aqueduct Shaft 12	SHAFT		Route 22	W	North Salem			
	37220004300000020640000000	43.-2-64	38.7	21.5	6.7	9.7	0.3	0.5			Delaware Aqueduct Shaft 09	CHAMBER	INFLUENT	352 Dixon Road	P	Kent			
	55200004901200020010000000	49.12-2-1	69.6	55.3	5.0	1.6	4.0	3.7			Delaware Aqueduct Shaft 13	CHAMBER	DRAINAGE	241C Cross River Road	W	Bedford			
	55520000601200250130000000	6.12-25-13	83.4	72.0	5.8	1.1	4.4	0.2			Delaware Aqueduct Shaft 11	CHAMBER	VALVE	Bullerville Road	W	Somers			
	55200007300900010110000000	73.09-1-11	0.3	0.3	0.0	0.0	0.0	0.0			Delaware Aqueduct Shaft 14	SHAFT		Harris Road	W	Bedford			
	55200008301500010090000000	83.15-1-9	0.3	0.2	0.1	0.0	0.0	0.0			Delaware Aqueduct Shaft 15	SHAFT			W	Bedford			

Table 1 Page 2 - facility chart (Excel Spreadsheet)

Complex Name	SWIS_SBL Parcel	Section-Block Lot	Total Acres of Parcel	Forested Acres	Turf / Meadow Acres	Wetland Acres	Other Developed Acres	Impervious Acres-excluding NYC-owned rds	NYC Road Length (Miles)	NYC Road Surface (Acres)	Facility Name	Category	Type	Address	County	Town	Contact	Contact phone	Demo Date	
Diverting	3730890670000001040000000	67-1-40	193.7	126.6	11.6	35.5	19.2	0.8			Diverting Dam	DAM		Lower Mine Road	P	Southeast				
											Diverting Dam Intake Tower	CHAMBER	INTAKE	Lower Mine Road	P	Southeast				
											Diverting Dam Outlet Fountain	AERATOR	FOUNTAIN	Lower Mine Road	P	Southeast				
											Diverting Dam Spillway	CHANNEL	SPILLWAY	Lower Mine Road	P	Southeast				
											Diverting Dam Valve Chamber	CHAMBER	VALVE	Lower Mine Road	P	Southeast				
											Diverting Spillway Bridge	BRIDGE		Lower Mine Road	P	Southeast				
Diverting								0.29	0.9	Lower Mine Road	ROAD			P	Southeast					
	37308907800000010510000000	78-1-51	24.8	23.1	0.6	0.0	1.1	0.0			Reservoir Road Bridge	BRIDGE		Reservoir Road	P	Southeast				
Hunter Brook	55540003600900010610000000	36.09-1-61	6.9	5.8	0.9	0.0	0.1	0.0			Hunter Brook North Siphon Chamber	CHAMBER	SIPHON	Jacob & Hunterbrook Road	W	Yorktown				
	55540003601400010210000000	36.14-1-21	11.5	10.6	0.7	0.0	0.2	0.0			Hunter Brook South Siphon Chamber	CHAMBER	SIPHON	Hunterbrook Road	W	Yorktown				
Katonah Office	55200004902000010010000000	49.20-1-1	81.1	59.4	4.5	9.9	6.2	1.1			Katonah District Office	OFFICE	BUILDING	5 Jay Street	W	Bedford	Ralph Marchatelli	(914)232-8556		
											Katonah Office Septic System	SEPTIC		5 Jay Street	W	Bedford	Ralph Marchatelli	(914)232-8556		
Kirk Lake	37200006401900010170000000	64.19-1-17	53.2	50.1	0.3	0.4	2.0	0.4			Kirk Lake Dam	DAM		Lakeside Road	P	Carmel				
											Kirk Lake Dam Valve Chamber	CHAMBER	VALVE	Longpond & Lake Side Road (Hill Street)	P	Carmel				
Lake Gilead	37200006600000020320000000	66-2-32	131.7	120.7	6.0	3.7	1.3	0.0			Lake Gilead Dam	DAM		Seminary Hill Road	P	Carmel				
Lake Gleneida	37200005500000020050000000	55-2-5	56.9	32.1	10.5	9.7	3.8	0.8			Lake Gleneida Dam	DAM		Route 301	P	Carmel				
Mahopac WWTP	37200006501700010410000000	65.17-1-41	14.7	0.0	0.0	2.4	10.5	1.8			Mahopac Protection Office	OFFICE	BUILDING	54 Croton Falls Road	P	Carmel	Tony Peronti	347-386-3449		
											Mahopac WWTP	WWTP		34 Mud Pond Road	P	Carmel	Patrick Frawley	(845) 628-5637		
											Mahopac Land Management				P		Tony Peronti	347-386-3449		
Middle Branch	37308905600000010170000000	56-1-17	203.6	144.5	17.2	30.9	8.9	2.1			Drewville Road Bridge	BRIDGE		Drewville Road	P	Southeast				
											Middle Branch Blow-Off Chamber	CHAMBER	RELEASE	Maple Road	P	Southeast				
											Middle Branch Dam	DAM		826 Drewville Road	P	Southeast				
											Middle Branch Dam Intake Tower	CHAMBER	INTAKE	826 Drewville Road	P	Southeast				
											Middle Branch Dam Meter Chamber	CHAMBER	METER	826 Drewville Road	P	Southeast				
											Middle Branch Dam Spillway	CHANNEL	SPILLWAY	826 Drewville Road	P	Southeast				
											Middle Branch Dam Valve Chamber	CHAMBER	VALVE	826 Drewville Road	P	Southeast				
Muscoot	55400000100016710010000000	1-1671-1	49.7	29.2	2.9	13.4	3.0	1.3			Deans Bridge "P"	BRIDGE		Deans Bridge Road	W	North Salem				
	55520002801400250010000000	28.14-25-1	772.3	601.5	59.3	79.9	25.8	5.8			Muscoot Dam	DAM		Cherry Street	W	Somers				
											Plum Brook Bridge "M"	BRIDGE		Plum Brook Road	W	Somers				
	55200004901100010030000000	49.11-1-3	0.6	0.3	0.0	0.1	0.1	0.0			Lakeside Road Bridge "H"	BRIDGE		Lakeside Road	W	Bedford				
55200004901300010010000000	49.13-1-1	87.0	80.6	0.9	3.3	0.9	1.1			Muscoot Dam Gate House	CHAMBER	GATE	33 Cherry Street	W	Bedford					
New Croton Aqueduct	55220006800800010080000000	68.08-1-8	128.7	114.5	2.1	11.6	0.4	0.1		0.10	0.3	New Croton Aqueduct Shaft 01	SHAFT		1/8 mile West of CLGH Barway	W	Cortlandt			
												Croton Dam Road	ROAD			W	Cortlandt			
	55360008000700010080000000	80.7-1-8	0.9	0.9	0.0	0.0	0.0	0.0			New Croton Aqueduct Shaft 02	SHAFT		Woods Lane	W	New Castle				

Table 1 Page 3 - facility chart (Excel Spreadsheet)

Complex Name	SWIS_SBL Parcel	Section-Block Lot	Total Acres of Parcel	Forested Acres	Turf / Meadow Acres	Wetland Acres	Other Developed Acres	Impervious Acres-excluding NYC-owned rds	NYC Road Length (Miles)	NYC Road Surface (Acres)	Facility Name	Category	Type	Address	County	Town	Contact	Contact phone	Demo Date
New Croton Dam	5522000680000010010000000	68.08-1-1	20.4	4.8	0.6	14.8	0.2	0.1			New Croton Dam Blow-Off Chamber	CHAMBER	RELEASE	Croton Lake Road	W	Cortlandt			
											New Croton Dam Masonry Dam	DAM		Croton Dam Road	W	Cortlandt			
											New Croton Dam Gate House 1	CHAMBER	GATE	56 Croton Lake Road	W	Cortlandt			
											New Croton Dam Gate House 2	CHAMBER	GATE	43 Croton Lake Road	W	Cortlandt			
									0.26	0.8	Croton Dam Road	ROAD			W	Cortlandt			
Park Street Culvert	3730010670110002003000000	67.11-2-3	2.8	0.0	0.0	0.0	2.8	0.0			Park Street Culvert	BRIDGE		Park St. & Marvin Ave.	P	Southeast			
Sodom Dam	3730890680000002004000000	68.-2-4	647.9	427.0	13.5	194.7	12.0	0.7			Sodom Dam Gate House	CHAMBER	GATE	1100 Route 22	P	Southeast			
											Sodom Dam Spillway	CHANNEL	SPILLWAY	1100 Route 22	P	Southeast			
											Sodom Dam Valve Chamber (East Branch)	CHAMBER	VALVE	1100 Route 22	P	Southeast			
											Sodom Earth Dam	DAM		1100 Route 22	P	Southeast			
											Sodom Masonry Dam	DAM		1100 Route 22	P	Southeast			
Titicus	554000TITCUS RESERVOIR	15.-1688-12	130.4	97.8	5.7	12.5	5.3	9.0			Titicus Dam	DAM		119 Titicus Road (Route 116)	W	North Salem			
											Titicus Dam Gate House	CHAMBER	GATE	119 Titicus Road (Route 116)	W	North Salem			
	5540000280001685001000000	28.-1685-1	6.6	5.7	0.2	0.0	0.4	0.3			Mills Road Bridge	BRIDGE		Mills Road	W	North Salem			
	5540000280001686001000000	28.-1686-1	39.5	31.3	4.6	0.1	2.1	1.5			Titicus Dam Spillway Channel	CHANNEL	SPILLWAY	119 Titicus Road (Route 116)	W	North Salem			
											Titicus Dam Valve Chamber	CHAMBER	VALVE	119 Titicus Road (Route 116)	W	North Salem			
Turkey Mountain	5554000470190001024000000	47.19-1-13	21.5	18.3	2.2	0.0	0.7	0.3			Turkey Mountain North Siphon Chamber	CHAMBER	SIPHON	1227 Underhill Road	W	Yorktown			
	555400058000800010020000000	58.08-1-2	19.0	13.9	3.9	0.0	0.5	0.7			Turkey Mountain South Siphon Chamber	CHAMBER	SIPHON	Chapman Road	W	Yorktown			
West Branch	37200005400000010290000000	54.-1-29	104.6	64.7	13.4	13.7	10.9	1.9			Belden House	OFFICE	HOUSE	1 Belden Road	P	Carmel	Jim Keesler	(914)455-3373	FY 22-23
											Carmel NRM Office	OFFICE	HOUSE	1 Belden Road	P	Carmel	Jim Keesler	(914)455-3373	Spring 2017
											Carmel Well House	WELL	HOUSE	1 Belden Road	P	Carmel	Jim Keesler	(914)455-3373	
											DEL Shaft 10 (West Branch Effluent Chamber)	CHAMBER	EFFLUENT	Route 6 (N/O Drewville Road)	P	Carmel	Jim Keesler	(914)455-3373	
											DEL Shaft 10 Septic System	SEPTIC		Route 6 (N/O Drewville Road)	P	Carmel	Jim Keesler	(914)455-3373	
											West Branch Auxiliary Dam Gate House	CHAMBER	GATE	Route 6	P	Carmel			
											West Branch Main Dam	DAM		Route 6 & Belden Road	P	Carmel			
											West Branch Main Dam Gate House	CHAMBER	GATE	Route 6 & Belden Road	P	Carmel			
											West Branch Main Dam Valve Chamber	CHAMBER	VALVE	Route 6 & Belden Road	P	Carmel			
	see 43.-2-64 in Del. Aq.										Dixon Road Bridge	BRIDGE		Dixon Road	P	Kent			
	3720000540000001030000000	54.-1-30	5.0	3.3	0.1	0.0	1.6	0.1			Carmel Field Operations Office	OFFICE		1 Belden Road	P	Carmel	John Daddona	347.203.9303 845-225-3550	
	3720000650000001005000000	65.-1-5	43.5	30.0	1.8	8.1	3.1	0.5			West Branch Auxiliary Dam	DAM		Route 6	P	Carmel			
	37200007700000020130000000	77.-2-13	111.3	95.5	7.0	5.8	2.6	0.5			West Shore Drive Bridge	BRIDGE		West Shore Drive	P	Carmel			
	37200005400000010310000000	54.-1-31	16.9	15.3	1.3			0.2	0.1		Washington Rd Stormwater Remediation	REMEDIATION		Washington Rd	P	Carmel	Jim Keesler	(914)455-3373	
37200005400000010770000000	54.-1-77	9.1	6.2	0.1	2.7	0.1	0.0			Pennebrook Rd Stormwater Remediation	REMEDIATION		Pennebrook Rd	P	Carmel	Jim Keesler	(914)455-3373		
37200005500000020030000000	55.-2-3	23.1	22.1	0.5	0.0	0.5	0.0			Meadowlark Dr Stormwater Remediation	REMEDIATION		Meadowlark Dr	P	Carmel	Jim Keesler	(914)455-3373		

Table 1 Page 4 - facility chart (Excel Spreadsheet)

Complex Name	SWIS_SBL Parcel	Section-Block Lot	Total Acres of Parcel	Forested Acres	Turf/ Meadow Acres	Wetland Acres	Other Developed Acres	Impervious Acres-excluding NYC-owned rds	NYC Road Length (Miles)	NYC Road Surface (Acres)	Facility Name	Category	Type	Address	County	Town	Contact	Contact phone	Demo Date
			Total Acres of Parcels	Forested Acres	Turf/ Meadow Acres	Wetland Acres	Other Developed Acres	Impervious Acres (excluding NYC-owned rds)	NYC Road Length (Miles)	NYC Road Surface (Acres)									
<b>Total Acreage Complexes in EOH Watershed</b>			4,959.9	3,795.4	344.9	547.9	207.2	64.4	2.63	8.0									
<b>In MS4 Area (Outside EOH watershed):</b>																			
Kensico Flouride															W		Russ Hanaburgh	346-386-3457	
Kensico Manor Field															W		Sal Siciliano	917.578.1658	
Kensico Shaft 18															W		R. Hannaburgh	914-948-1679	
Eastview Precinct															W		Douglas Walton	(914) 742-2035	
Hudson River Pump Station (HRPS)															D		Charlie Newman	(845) 628-5968	
SH 17															W		Louis Occhiuto	(347) 672-0650, (914)397-7970	
Pleasantville Alum Plant															W		Louis Occhiuto	(347) 672-0650,	

W=Westchester P=Putnam D=Dutchess

NOTES: Final Total of 134 facilities on this list. GIS data are approximate according to their scale and resolution, they may be subject to error and are not a substitute for on-site inspection or survey.

- 1) GIS Parcel data source is 2009 digital tax parcel data from Westchester and Putnam Counties. Land-cover and Parcel acreages can be summed by column because any duplicate parcels that span more than one complex are only listed once and noted in comments field for any additional facility/complex combinations that fall on a previously-listed parcel.
- 2) GIS Facilities data source are GPS-ed locations of side of, center of, or entrances to facilities by DEP Operations or Police. They are represented in GIS as point features. Actual building or structure footprints are not available in GIS format.
- 3) GIS Level-4 Land-cover classification is derived from 2001 30m satellite imagery enhanced by 2001 1ft CIR orthoimagery for impervious surfaces. Several land-cover categories are aggregated into the 5 classes displayed in this table.
- 4) \* "Other Developed" category is a land-cover class of mixed development areas (commercial/industrial, low/med/high density residential, etc.) that is not completely impervious (lawns, trees, gravel clearings, etc). Only the portions of those areas that are actually impervious (as best detected by automated classification of 2001 orthoimagery) are calculated in the "impervious" column.
- 5) \*\* Gaps exist between all GIS tax parcels (as maintained by each County) where public road rights-of-way exist, so these areas are not included as part of each parcel polygon. Since these public roadway corridors are not included as land in NYC-owned parcel delineations for land-cover analysis, the NYC-owned road surface areas that fall within these gaps were calculated by multiplying length (from the NYSDOT ALIS vector road GIS layer for these sections) by the average measured road width of 25 ft.(from 2009 1 ft orthoimagery) and converted to acres. See "Table 2: Roads Worksheet" for how this was calculated.

Table 1 Page 5 - facility chart (Excel Spreadsheet)

**Table 2: Worksheet List of DEP BWS-owned and Maintained Roads by Parcel, Inside EOH Basins**

As of 3/30/2021 Data Source: NYCDEP BWS GIS (TES)											
Road Section Name	Type	Miles	SWIS_SBL Parcel	Section-Block-Lot	Length (Miles)	Length (Feet)	Avg Width (Feet)	Road Area (Sq Ft)	Road Area (Acres)	County	Town
Arcady	NYC-owned rd	0.24	55540005901300010010000000	59.13-1-1	0.24	1,267.13	25	31,678.16	0.7	Westchester	Yorktown
		0.02	55540005901300010070000000	59.13-1-7	0.02	110.75	25	2,768.66	0.1	Westchester	Yorktown
Croton Dam (Croton Falls Res.)	NYC-owned rd	0.98	37200007700000020070000000	77.-2-7	0.98	5,174.66	25	129,366.48	3.0	Putnam	Carmel
Croton Dam (New Croton Res.)		0.26	55220006800800010010000000	68.08-1-1	0.26	1,369.36	25	34,233.92	0.8	Westchester	Cortlandt
		0.29	55220006800800010080000000	68.08-1-8	0.10	523.21	25	13,080.35	0.3	Westchester	Cortlandt
Hemlock	NYC-owned rd	0.40	37200007700000020070000000	77.-2-7	0.40	2,117.05	25	52,926.15	1.2	Putnam	Carmel
Lower Mine	NYC-owned rd	0.29	37308906700000010400000000	67.-1-40	0.29	1,549.56	25	38,738.89	0.9	Putnam	Southeast
Maple	NYC-owned rd	0.33	55200005001500010010000000	50.15-1-1	0.33	1,748.37	25	43,709.33	1.0	Westchester	Bedford
<b>Total</b>					<b>2.63</b>	<b>13,860.08</b>	<b>200</b>	<b>346,501.95</b>	<b>8.0</b>		

**NOTES: Total Mileage = 2.63**

- 1) Only NYC-owned road sections that drain inside the EOH watershed basins (excluding Kensico) are included. Any road sections over New Croton dam is included.
- 2) Since road corridors are not included in NYC-owned parcel delineations for land-cover analysis, the road surface area was calculated by multiplying length (from the NYSDOT ALIS vector road GIS layer for these sections) by the average measured road width of 25 ft.(from 2009 1 ft orthoimagery) and converted to acres. These acres are included in "Table 1: Complex Report" as additional imperious road acres by parcel.
- 3) Data Sources: NYSDOT ALIS (Accident Location Information System) Roads, 2007 and NYS CSCIC March 2009 leaf-off 1 ft digital orthoimagery.

# **Appendix 1: NYCDEP EOH Facility Stormwater Pollution Prevention Self-Assessment Checklists**

# **MS4 Stormwater Assessment: Building Maintenance – Katonah, Cross River, Amawalk and Croton**

## **General Notes**

**Universal Waste Program** – All Facilities send Bill Brenner an email as needed regarding the hazardous, non-hazardous, universal, electronic and bulk waste that they have collected at their sites. This waste is then transported to the Croton Lake New Gate House for central collection and storage until removal.

**Household Hazardous Waste** – Triumverate Environmental or an on-call emergency waste management company collects periodically.

**Septic System Recording** – Jim Keesler maintains pink Slips required by the Westchester County Health Department.

**Fueling Station** – All vehicles fueling stations have double walled petroleum tanks with electronic leak detection.

## **Staff Contacts**

Bill Brenner is the WTO Compliance Manager.

Jim Keesler is the Facilities Manager for the Highlands Region.

Mohammed Rahim is the Manager of the Cross River fleet maintenance facility.

**MS4 Stormwater Assessment: Building Maintenance - Sheet 1 - Katonah, Cross River, Amawalk, Croton**

Date of visit: July 13, 2021

Instructions: Place an "X" in the box if the activity occurs at a location. Items in **BOLD** are **BMPs**. Check all that apply.

Activity	Category	OFFICE	STORAGE	SHOP	OFFICE	STORAGE	RESIDENCE	SHOP	CHAMBER			
	Type	BUILDING	BARN	GARAGE	HOUSE	BARN	HOUSE	ELECTRIC	GATE			
<b>Pollution Generating Activities</b>		Bedford	Bedford	Bedford	Bedford	Somers	Somers	York-town	York-town			
Contractor used for maintenance					<b>Demolished Spring 2017</b>	<b>Scheduled for demolition FY 23</b>	<b>Scheduled for demolition FY 23</b>	<b>Demolished Spring 2018</b>				
Bulk petroleum storage		x	x									x
Hazardous materials storage			x	x								x
Outdoor loading / unloading of materials			x	x								x
Outdoor container storage of liquids				x								
Outdoor storage of raw materials				x								
Roof drainage systems		x	x									
Building washing performed		x										
Sidewalk cleaning (powerwashing)												
Sidewalk salting		x										x
On-site septic systems		x	x	x								x
Outside dumpster			x	x								
<b>Current BMPs in Place</b>												
Erosion control for new construction		x	x	x								
Alternative product usage		x	x	x								
Fluorescent light recycling		x	x	x								x
Paper/plastic recycling		x	x	x								x
Animal waste program			x									
Household hazardous waste collection		x	x	x								x
Dumpster emptied weekly				x								
Spill prevention and response plan		x	x	x				x				
Double walled petroleum tank			x					x				
Tank alarms, fill overflow shutoff, spill kits, break away hose			x									
Secondary containment-petroleum/hazard		x						x				
Enclosed outdoor storage containers				x								
Vehicles/equipment/boats on concrete			x	x								
Outdoor materials storage covered				x								
Washwater infiltrates into ground												
Septic inspections and recordkeeping												
Septic monthly pumpout												
Staff trained in stormwater management		x	x	x				x				

Facility Name

Katonah District Office

Cross River Barn

Cross River Fleet/Field Maintenance

Cross River Maintenance House

Amawalk Barn

Amawalk Maintenance House

Croton Lake Electrical Shop

Croton Lake Gate House

# **MS4 Stormwater Assessment: Street, Bridge and Parking Lot Maintenance – Katonah, Cross River, Amawalk and Croton**

## **General Notes**

**Bridges** – State, County and Towns maintain bridge decks and general bridge maintenance on all bridges except for Gatehouse Bridge “B”.

**Street Sweeping** – Roads over dams are swept. No road sweeping is done on any other roads. Street sweepings are occasionally reused for maintenance as far as filling in pot holes.. See policy for further guidance.

**Vehicle Washing** – Staff now use vouchers to wash vehicles at a private facility that is connected to the sanitary sewer system.

## **Staff Contacts**

Jim Keesler is the Regional Manager for roads and bridges in the Highland Area.



## **MS4 Stormwater Assessment: Vehicle/Equipment Maintenance - Cross River**

### **General Notes**

**Solvents** – This is still a problem from the 3-year assessment. The only improvement is that there seems to be less parts washed in turn meaning the equipment is being used far less. A consideration to contract a parts washing chemical service company to change out spent solvent on a regular basis. Staff stated that this was available in the past, but was discontinued.

**Septic system** – Monthly pump out of the system seems to be alleviating any problems with possible overflowing and contamination.

**Housekeeping** – There have been past problems with storage on this site. Great improvements were made, and just basic cleanup and re-arranging have been the biggest contributing factor. The team staff have also been vigilant when it comes to maintaining this site.

**MS4 Stormwater Assessment:**

**Vehicle / Equipment Maintenance - Cross River**

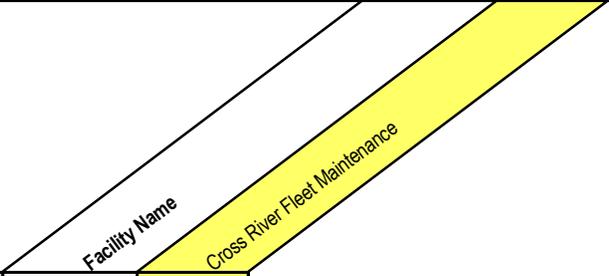
**NOTE: The Stormwater Pollution Prevention Facility Self-Audit inspection checklist (Appendix C) will also be used for the Vehicle Maintenance facilities.**

Date of visit: August 3 2021

Instructions: Place an "X" in the box if the activity occurs at a location.

Items in **BOLD** are **BMPs**. Check all that apply.

Activity	Category	SHOP
	Type	GARAGE
<u>Pollution Generating Activities</u>		Bedford
Vehicle washing done outside		
Repairs done outside		
Vehicles stored outside for extended periods		X
Hazardous material storage		X
Oil water separator on site		
Tires stored outside		
<b><u>Current BMPs in Place</u></b>		
Stormwater Pollution Prevention Facility Self-Audit completed at least once a year (Appendix C)		X
Repairs done inside		X
Recycling oil and antifreeze		X
Fluids removed before vehicles stored outside		
Spill prevention and response plan		X
Wastewater disposal and treatment from wash water		X
Oil water separator disconnected from storm drain system		
Staff have been trained in stormwater management principles		X
Contract with parts washer service to change out spent solvent		



# **MS4 Stormwater Assessment: Open Space, Streambank and Hydraulic Habitat Maintenance – Katonah, Cross River, Amawalk and Croton**

## **General Notes**

**Fertilizers** – Fertilizers are not used on watershed lands.

**Herbicides/Pesticides** – Limited herbicides are used on dam faces to control weeds. Personnel that are qualified to perform this task receive extensive training and are certified as required by law. Rodent control is performed to eliminate rodent burrows by smoking out animals and plugging the burrow with concrete. These individuals also receive extensive training that allows the individuals to perform their jobs proficiently and ethically.

**Woody Debris** – Woody material from roads and lawns is chipped and spread neatly in a nearby wooded areas and gardens.

**Litter Control** - Litter is collected, as needed. More time is spent near public fishing areas, due to population, and disposed of by solid waste carriers. This was less of an issue over the last 2 years because of the COVID-19 Pandemic.

## **Staff Contacts**

Michael Parks is a licensed pesticide applicator.

Matt Gianetta keeps Stormwater practices inventory.

Joe Ziminsky is responsible for Stormwater ponds.

**MS4 Stormwater Assessment:**

**Open Space, Streambank and Hydrologic Habitat Maint. - Sheet 1 -  
Katonah, Cross River, Amawalk, Croton**

Activity	Katonah Headquarters Lands and Streams Cross River Reservoir Lands and Streams Amawalk Reservoir Lands and Streams Croton Reservoir Lands and Streams			
Date of visit: August 3 2021				
Instructions: Place an "X" in the box if the activity occurs at a location. Items in <b>BOLD</b> are <b>BMPs</b> . Check all that apply.				
<b>Pollution Generating Activities</b>				
Fertilizer application				
Pet waste present				
Pesticide application	x	x	x	x
Stream bed dredging				
Creek bottom sediment removal				
Removal of woody debris	x	x	x	x
Bank reshaping				
<b>Current BMPs in Place</b>				
Fertilizer and pesticide usage records	x	x	x	x
Integrated pest management use	x	x	x	x
Erosion control practices used	x	x	x	x
Pet waste education	x	x		
Litter control	x	x	x	
Spill prevention and response	x	x	x	x
Priority setting for streambank stabilization projects				
Use of alternative soft engineering approaches				
Stormwater pond on site		x		
Stormwater pond in DEP inventory				
Stormwater pond maintenance program				
Staff trained in stormwater management	x	x	x	x

# **MS4 Stormwater Assessment: Building Maintenance – Boyds Corners, Croton Falls, Mahopac WWTP and West Branch**

## **General Notes**

**Universal Waste Program** – All Facilities send Russ Hanaburgh an email as needed regarding the hazardous, non-hazardous, universal, electronic and bulk waste that they have collected at their sites. This waste is then transported to the Croton Lake New Gate House for central collection and storage until removal.

**Household Hazardous Waste** – Triumverate Environmental or an on-call emergency waste management company collects periodically.

**Septic System Recording** – Jim Keesler maintains pink-Slips as required by the Westchester County Health Department. They are available upon request.

**Fueling Station** – All vehicles fueling stations have double walled petroleum tanks with electronic leak detection. All current operational tanks/stations are inspected and maintained by qualified contractors within time parameters with the paperwork being maintained by the local SEE and Industrial Hygienist/Safety person.

## **Housekeeping**

Continue to maintain and improve in all areas of housekeeping safe management practices. There seems to be an overall improvement from last assessment. Keep up the good work.

## **Staff Contacts**

Jim Keesler is the Regional Manager for the Highland Region.

MS4 Stormwater Assessment:

Building Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch

Date of visit: 13 July & 8, 11 August 2021  
 Instructions: Place an "X" in the box if the activity occurs at a location. Items in **BOLD** are BMPs.  
 Check all that apply. SW = Stormwater

Activity	Category	STORAGE	RESIDENCE	OFFICE	OFFICE	WWTP	OFFICE	OFFICE	WELL	OFFICE		
	Type	BARN	HOUSE	HOUSE	BLDG	WWTP	HOUSE	HOUSE	HOUSE			
	Facility Name	Boyds Corners Barn	Boyds Corners Maintenance House	Croton Falls Maintenance House	Mahopac Protection Office	Mahopac WWTP	Balden House	Carmel NRM Office	Carmel Well House	Carmel Field Operations Office	DEL Shaft 10	
<u>Pollution Generating Activities</u>		Kent	Kent	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel
Contractor used for maintenance						X						
Bulk petroleum storage					X	X				X	X	
Hazardous materials storage						X				X	X	
Outdoor loading/unloading of materials					X	X				X	X	
Outdoor container storage of liquids					X	X				X	X	
Outdoor storage of raw materials					X	X						
Roof drainage systems						X				X		
Building washing performed												
Boat powerwashing					X							
Sidewalk salting						X				X	X	
On-site septic systems										X	X	
Outside dumpster						X						
<u>Current BMPs in Place</u>												
Erosion control for new construction												
Alternative product usage										X		
Fluorescent light recycling					X	X				X		
Paper/plastic recycling					X	X				X		
Animal waste program										X		
Household hazardous waste collection										X	X	
Spill prevention and response					X	X				X	X	
Septic inspections and recordkeeping						X				X	X	
Staff trained in stormwater management					X	X				X	X	
Roof drains into infiltration area												
Secondary containment-petroleum/hazard						X				X	X	
Enclosed outdoor storage containers					X	X				X		
Indoor garage bay containment						X					X	
Dumpster emptied once/week						X						
All floor drains connected internally to WWTP						X						

# **MS4 Stormwater Assessment: Street, Bridge and Parking Lot Maintenance – Boyds Corner, Croton Falls, Mahopac WWTP and West Branch**

## **General Notes**

**Bridges** – State, County and Towns maintain bridge decks and general bridge maintenance on all bridges except for Gatehouse Bridge “B”.

**Street Sweeping** – Roads over dams are swept. No road sweeping is done on any other roads. Street sweepings are occasionally reused for maintenance.

**Vehicle Washing** – Staff now use vouchers to wash vehicles at a private facility that is connected to the sanitary sewer system.

## **Staff Contacts**

Jim Keesler is the Regional Manager for roads and bridges in the Highland Area.

**MS4 Stormwater Assessment:**

**Street, Bridge and Parking Lot Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch**

Date of visit: 13 July & 18 August 2021  
 Instructions: Place an "X" in the box if the activity occurs at a location. Items in **BOLD** are **BMPs**.  
 Check all that apply. SW = Stormwater

Activity	STORAGE	RESIDENCE	OFFICE	REMEDATION	ROAD	REMEDATION	OFFICE	WWTP	OFFICE	OFFICE	WELL	OFFICE	REMEDATION						
<u>Pollution</u>	BARN	HOUSE	HOUSE				BLDG		HOUSE	HOUSE	HOUSE								
<u>Generating Activities</u>	Kent	Kent	Carmel	Carmel	Carmel	Brewster	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel						
Sidewalks and parking lots cleaned	<b>Building not currently in use. Scheduled for demolish FY 23</b>	<b>Building not currently in use. Scheduled for demolish FY 23</b>	<b>Demolished Spring 2018</b>					X	<b>Building not currently in use. Scheduled for Demolish FY 22/23</b>	<b>Demolished Spring 2017</b>	<b>Not in use. No storage.</b>								
Street maintenance					X							X			X				
Striping/painting													X						
Bridge and structure maintenance																			
Ditch maintenance																		X	
Maintenance of unpaved roads performed													X					X	
Winter road salting													X	X			X	X	
Salt storage on site																	X		
Salt vehicle washing													X				X		
<u>Current BMPs in Place</u>																			
Street sweeping																			
Proper disposal of street sweepings																			
Salt spreaders calibrated/maintained																			
Alternative deicing materials used																			
Staff trained - stormwater														X			X	X	

## **MS4 Stormwater Assessment: Vehicle/Equipment Maintenance – Carmel Field Operations**

### **General Notes**

**Vehicle Washing** – Staff now use vouchers to wash vehicles at a private facility that is connected to the sanitary sewer system.

### **Staff Contacts**

Jim Keesler is the Regional Manager for roads and bridges in the Highland Area.

**MS4 Stormwater Assessment:**

**Vehicle / Equipment Maintenance - Carmel Field Operations**

**NOTE: The Stormwater Pollution Prevention Facility Self-Audit inspection checklist (Appendix C) will also be used for the Vehicle Maintenance facilities.**

Date of visit: 21 July & 13 August 2021

Instructions: Place an "X" in the box if the activity occurs at a location.

Items in **BOLD** are **BMPs**. Check all that apply.

Activity	Category	SHOP
	Type	GARAGE
Pollution Generating Activities		Carmel
Vehicle washing done outside		X
Repairs done outside		
Vehicles stored outside for extended periods		X
Hazardous material storage		X
Oil water separator on site		
Tires stored outside		X
Current BMPs in Place		
<b>Stormwater Pollution Prevention Facility Self-Audit completed at least once a year (Appendix C)</b>		
<b>Repairs done inside</b>		X
<b>Recycling oil and antifreeze</b>		X
<b>Fluids removed before vehicles stored outside</b>		
<b>Spill prevention and response plan</b>		X
<b>Wastewater disposal and treatment from wash water</b>		
<b>Oil water separator disconnected from storm drain system</b>		
<b>Tires removed 3 times per year</b>		X
<b>Vehicles washed at another facility</b>		
<b>Staff have been trained in stormwater management principles</b>		X

Facility Name

Carmel Field Operations Maintenance

# **MS4 Stormwater Assessment: Open Space, Streambank and Hydraulic Habitat Maintenance – Boyds Corners, Croton Falls, Mahopac WWTP and West Branch**

## **General Notes**

**Fertilizers** – Fertilizers are not used on watershed land.

**Herbicides/Pesticides** – Herbicides are used on dam faces to control weeds. Rodent control is performed to eliminate rodent burrows by smoking out animals and plugging the burrow with concrete.

**Woody Debris** – The tree task force removes woody material from roads and lawns is chipped and spread neatly in a nearby wooded area.

**Litter Control** - Litter is collected, as needed, especially near public fishing areas and disposed of by solid waste carriers.

## **Staff Contacts**

Michael Parks is a licensed pesticide applicator.

Matt Gianetta keeps Stormwater practices inventory.

Joe Ziminsky is responsible for Stormwater ponds.

**MS4 Stormwater Assessment:**

**Open Space, Streambank and Hydrologic Habitat Maintenance - Sheet 2 - Boyds Corners, Croton Falls, Mahopac WWTP, West Branch**

Activity	Mahopac Land Management	Magnetic Mine/Lower Mine Rd SW Remed.	Washington Rd SW Remediation	Pennebrook Rd SW Remediation	Meadowark Dr SW Remed.	DEL Shaft 10 Stormwater Pond	Mahopac WWTP Stormwater Pond	Hemlock Dam Rd. & Samantha Lane
	REMEDATION	REMEDATION	REMEDATION	REMEDATION			REMEDATION	
Date of Site Visit: 26 July & 26 August 2021								
Instructions: Place an "X" in the box if the activity occurs at a location. Items in <b>BOLD</b> are <b>BMPs</b> . Check all that apply. SW = Stormwater								
<b>Pollution Generating Activities</b>	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel	Carmel
Fertilizer application								
Pet waste present								
Pesticide application								
Stream bed dredging								
Creek bottom sediment removal								
Removal of woody debris			X					
Bank reshaping								X
<b>Current BMPs in Place</b>								
<b>Fertilizer and pesticide usage records</b>								
<b>Integrated pest management use</b>								
<b>Erosion control practices used</b>			X	X				X
<b>Pet waste education</b>								
<b>Litter control</b>	X							
<b>Spill prevention and response</b>	X							
<b>Priority setting for streambank stabilization projects</b>			X	X				X
<b>Use of alternative soft engineering approaches</b>			X					X
<b>Inventory of stormwater ponds</b>				X	X	X	X	
<b>Stormwater pond maintenance program</b>				X	X	X	X	
<b>Staff trained in stormwater management</b>	X							

# **MS4 Stormwater Assessment: Street, Bridge and Parking Lot Maintenance – Kensico, Eastview and Pleasantville**

## **General Notes**

**Bridges** – State, County and Towns maintain bridge decks and general bridge maintenance on all bridges except for Gatehouse Bridge “B”.

**Street Sweeping** – Roads over dams are swept. No road sweeping is done on any other roads. Street sweepings are occasionally reused for maintenance.

**Vehicle Washing** – Staff now use vouchers to wash vehicles at a private facility that is connected to the sanitary sewer system.

## **Staff Contacts**

Louis Occhiuto is the Kensico Operations Manager  
Doug Walton is the Eastview Operations Manager

**MS4 Stormwater Assessment:**

**Street, Bridge and Parking Lot Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville**

Date of visit: August 8 2018

Instructions: Place an "X" in the box if the activity occurs at a location. Items in **BOLD** are **BMPs**. Check all that apply.

Activity	Category	Facility Name							
	Type	North Castle	Mount Pleasant		Mount Pleasant		Mount Pleasant	Mount Pleasant	North Castle
<b>Pollution Generating Activities</b>									
Sidewalks and parking lots cleaned		x	x	N/A	x	x	x	x	
Street maintenance		x	x	N/A	x	x	x	x	
Striping/painting performed		x	x	N/A	x		x	x	
Bridge and structure maintenance		x	x	N/A	x	x	x	x	
Ditch maintenance			x	N/A	x	N/A			
Maintenance of unpaved roads performed		x	x	N/A	x	x			
Winter road salting		x	x	N/A	x	x	x	x	
Salt storage on site		x	N/A	N/A	N/A	N/A			
Salt vehicle washing			N/A	N/A	N/A	N/A			
<b>Current BMPs in Place</b>									
<b>Street sweeping</b>		x	x	N/A	x	x	x	x	
<b>Proper disposal of street sweepings</b>		x	x	N/A	x	x	x	x	
<b>Salt spreaders calibrated/ maintained</b>		x	x	N/A	x	x	x		
<b>Alternative deicing materials used</b>			N/A	N/A	N/A	N/A			
<b>Staff trained in stormwater management</b>		x	x	N/A	x	x	x	x	
<b>Erosion control for ditch maintenance</b>			x	N/A	x	x			

\*

# **MS4 Stormwater Assessment: Building Maintenance – Kensico, Eastview and Pleasantville**

## **General Notes**

**Universal Waste Program** – All Facilities send Russ Hanaburgh an email as needed regarding the hazardous, non-hazardous, universal, electronic and bulk waste that they have collected at their sites. This waste is then transported to the Croton Lake New Gate House for central collection and storage until removal.

**Household Hazardous Waste** – Triumverate Environmental or an on-call emergency waste management company collects periodically.

**Septic System Recording** – Jim Keesler maintains pink Slips required by the Westchester County Health Department.

**Fueling Station** – All vehicles fueling stations have double walled petroleum tanks with electronic leak detection.

## **Staff Contacts**

Bill Brenner is the WTO Compliance Manager.  
Sal Siciliano is the Field Supervisor for the Region.

**MS4 Stormwater Assessment:**

**Building Maintenance - Sheet 3 - Kensico, Eastview, Pleasantville**

Date of visit: July 22 & Aug 16 2021

Instructions: Place an "X" in the box if the activity occurs at a location. Items in **BOLD** are **BMPs**. Check all that apply.

	Facility Name	Kensico Manor Maintenance Garage & House	Kensico Shaft 18	Office Trailer at Shaft 18	Kensico Fluoride	Kensico Lab	Eastview Precinct	Pleasantville Alum Plant & Electric Shop	Shaft 17	CAT DEL UV Plant
<b>Staff trained in stormwater management</b>		X	X	X	X		X	X	X	X
<b>Tertiary containment for hazardous waste, 90 days removal</b>			X							
<b>Secondary containment-petroleum/hazard</b>			X					X	X	
<b>Concrete pad with secondary containment drain for delivery of chemicals</b>			X		X		X	X	X	X
<b>Standard operating procedure for chemical / fuel deliveries - storm drain closed off during delivery</b>			X		X	X	X	X	X	X
<b>Portable containment unit for decontamination - use inventory kept</b>			X							
<b>Enclosed outdoor storage containers</b>			X							
<b>Sump connected to sanitary sewer</b>			X							
<b>Contractor responsible for waste disposal per contract</b>			X				X			
<b>Weekly waste staging inspections</b>			X							
<b>Motorboats stored on concrete pad</b>			X							
<b>Screen cleaning water containerized and sent to municipal sewer plant</b>			X							
<b>Dumpster on concrete pad</b>			X	X		X	X			



# **MS4 Stormwater Assessment: Open Space, Streambank and Hydraulic Habitat Maintenance – Kensico, Eastview and Pleasantville**

## **General Notes**

**Fertilizers** – Fertilizers are not used on watershed lands

**Herbicides/Pesticides** – Herbicides are used on dam faces to control weeds. Rodent control is performed to eliminate rodent burrows by smoking out animals and plugging the burrow with concrete.

**Woody Debris** – Woody material from roads and lawns is chipped and spread neatly in a nearby wooded area.

**Litter Control** - Litter is collected, as needed, especially near public fishing areas and disposed of by solid waste carriers.

## **Staff Contacts**

Michael Parks is a licensed pesticide applicator.  
Matt Gianetta keeps Stormwater practices inventory.  
Joe Zaminski maintenance of Stormwater ponds.

**Open Space, Streambank and Hydrologic Habitat  
Maintenance - Sheet 3 - Kensico, Eastview,  
Pleasantville**

**MS4 Stormwater Assessment:**

Activity	<div style="display: flex; justify-content: space-between; padding: 5px;"> <span style="transform: rotate(-45deg); font-size: small;">Kensico Manor Maintenance Garage &amp; House</span> <span style="transform: rotate(-45deg); font-size: small;">Kensico Shaft 18 Grounds</span> <span style="transform: rotate(-45deg); font-size: small;">Eastview Precinct Lands and Streams</span> <span style="transform: rotate(-45deg); font-size: small;">Shaft 17</span> <span style="transform: rotate(-45deg); font-size: small;">UV Plant</span> </div>				
	North Castle	Mount Pleasant	Mount Pleasant	North Castle	Valhalla
<u>Date of visit:</u> 8/18/2021					
<u>Instructions:</u> Place an "X" in the box if the activity occurs at a location. Items in <b>BOLD</b> are <b>BMPs</b> . Check all that apply.					
<b>Pollution Generating Activities</b>					
Fertilizer application		N/A			
Pet waste present		X			
Pesticide application		X			
Stream bed dredging		N/A			
Creek bottom sediment removal		N/A			
Removal of woody debris	X	N/A			
Bank reshaping		N/A			
<b>Current BMPs in Place</b>					
<b>Fertilizer and pesticide usage records</b>		X			
<b>Integrated pest management use</b>		X			
<b>Erosion control practices used</b>	X		X		
<b>Pet waste education</b>					
<b>Litter control</b>			X		X
<b>Spill prevention and response</b>	X	X	X		X
<b>Priority setting for streambank stabilization projects</b>		X			
<b>Use of alternative soft engineering approaches</b>					
<b>Inventory of stormwater ponds</b>		X	X	X	X
<b>Stormwater pond / sand filter maintenance program</b>		X	X	X	X
<b>Staff trained in stormwater management</b>	X	X	X		X
<b>Grass clippings blown off of pavement on to grassed area to prevent washing into storm drains</b>		X			X