THE TOWN OF SOMERS STORMWATER MANAGEMENT PROGRAM

As Revised Spring 2007

Department of Planning & Engineering
Town of Somers
335 Route 202
Somers, NY 10589

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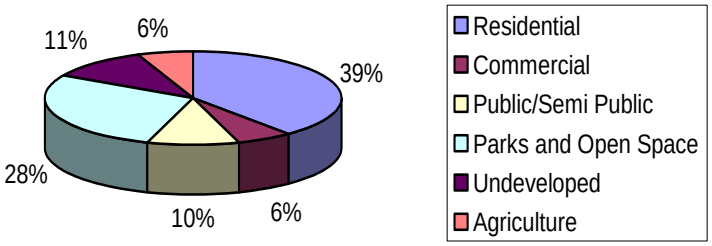
The following is a revised stormwater management program for the Town of Somers, New York which meets the criteria of the Phase II Stormwater Regulations as required by the New York State Department of Environmental Conservation (NYSDEC).

1. BACKGROUND INFORMATION

A. Overall Land Use

The Town of Somers is located in northern Westchester County, New York, approximately six miles west of Connecticut and 30 miles north of New York City. The northern boundary of the Town forms a portion of the county boundary between Putnam County and Westchester County. (See Map 3.1A) The town consists of approximately 20,562 acres. The community is home to 18,346 people (Census 2000). Land use within the Town is predominately residential and commercial land uses occupy less than 1% of the Town's land area. Figure 1.1 represents a breakdown of Somers land use.

Figure 1.1 Somers Land Use



Source: Croton Plan for Westchester Draft June 2005

B. Identification of the MS4's Stormwater Coordinator

The Town of Somers has several departments which are responsible for implementing the Town's stormwater plan. These departments largely consist of the Planning and Engineering Department, the Highway Department, and the Parks and Recreation Department. The Town of Somers has identified the Town Planner as the stormwater coordinator. The Town Planner has over twelve years of specific experience regarding land use and water quality. The Town Planner also has a complete understanding of the Town of Somers, given daily work program responsibilities related to review of development applications and master planning initiatives. In addition, the Town Planner works well with other Town Department Heads which was a primary characteristic in selecting a Stormwater Coordinator.

C. Regional Cooperation

The Town of Somers has agreed to cooperate regionally with Westchester County and 31 other MS4s regarding Public Outreach and Education (minimum measure 1) and Public Participation and Involvement (minimum measure 2). Westchester County received grant funding on behalf of the cooperating MS4s to develop a program to implement the above noted minimum measures. The Town of Somers will continue to implement stormwater management practices (SMPs) in relation to minimum measure 1 and minimum measure 2 until the regional program is underway. The Town of Somers may also be interested in coordinating with other MS4s regarding the implementation of other minimum measures such as contractor training, good housekeeping practices, illicit discharge identification, etc., but discussions with other MS4s have been preliminary at best.

D. Town of Somers Hydrology and Water Quality

The Town of Somers is located within 4 watershed basins of the New York City Watershed (the Amawalk Basin, the New Croton Basin, the Croton Falls Basin and the Muscoot Basin). Within the Town, these basins are divided into 12 subwatershed areas according to Table 1.2.

The Town of Somers has approximately 66 miles of streams within its borders. There are three planned lake communities, Lake Lincolndale, Lake Purdy's and Lake Shenorock, formed in the early 1900's by damming streams and the NYC drinking water supply occupies a large portion of land within the town. The Amawalk Reservoir exists within its entirety in the Town and the New Croton and Muscoot Reservoir's form the south and south eastern boundary of the Town. In addition to the lakes, reservoirs and streams, there are several NYSDEC wetlands found throughout the Town.

Ideally, this information would best be displayed using a map, however the Town currently does not have a geographic information system (GIS). The Town currently utilizes alternative technology (FactsViewer and Computer Assisted Design software) to view data-layers that would otherwise be manipulated and mapped using GIS technology. The Town is expecting to obtain GIS technology by 2008.

Table 1.2 Somers Watersheds and Subwatersheds

Watershed Basin	Subwatershed Area
Amawalk	Lake Shenorock
	Muscoot River
	Amawalk Reservoir
New Croton	Upper Arm Crom Pond
	Hallocks Mill Brook
	Plum Brook
	Angle Fly Brook
	Muscoot Reservoir
Muscoot	E. New Croton Reservoir
	E. Branch Croton River
	Croton River
Croton Falls Basin	Croton Falls Reservoir

The Town's stormwater coordinator compiled information from various sources to determine the existing water quality condition of the Town. The following information presents the water quality condition of Somers as identified by each of the discussed sources:

- The Croton Watershed South Stakeholder Report (Bureau of Water Supply, New York City Department of Environmental Protection, May 2004) identified subwatershed areas that were suspected to be of concern regarding pathogens, total suspended solids, and total phosphorus. The analysis also identified potential management areas based on wastewater treatment (septic systems), stormwater management areas (centralized and distributed treatment), road drainage improvement areas (erosion and pollutant runoff), and open space management areas. Management alternatives were also discussed regarding agricultural uses; however no management areas were identified in Somers. The analysis conducted for this report was based on computerized data and is not reflective of water quality monitoring results. Table 1.3 identifies the priority subwatershed areas in the Town of Somers in relation to the identified management areas.

Table 1.3 Croton Watershed South Management Areas

Watershed Basin	Subwatershed Area	Pathogen Concern	TSS Concern	Phosphorus Restriction	Wetland Concern	Wastewater Management Areas	Stormwater Management Areas	Road Drainage Improvements
Amawalk	Lake Shenorock		✓	✓+		Residential septic areas surrounding lake Shenorock and extending south to shore or Amawalk Reservoir	Residential development east, west and south of lake Shenorock could benefit from infiltration, retention or other centralized stormwater controls	
	Muscoot River		✓	✓	✓			
	Amawalk Reservoir			✓				Extend drainage path along primary roads bordering reservoir to increase travel time regarding accidental spills. Secondary route on the opposite side of Route 202- extend drainage path to increase travel time to reservoir.
New Croton	Upper Arm Crom Pond			✓	✓			
	Hallocks Mill Brook	✓		✓+				Modify drainage outlets to reduce flow velocity and increase basin sump size along roads paralleling trout streams
	Plum Brook	✓	✓	✓+		Residential septic systems surrounding Lake Lincolndale		Modify drainage outlets to reduce flow velocity and increase basin sump size along roads paralleling trout streams
	Angle Fly Brook				✓			

Table 1.3 Croton Strategy South Management Areas (Continued)

New Croton (continued)	Muscoot Reservoir			✓+			Large commercial area (PEPSI) contributing pollutants.	Modify drainage outlets to reduce flow velocity and increase basin sump size along roads paralleling trout streams. Extend drainage path along Route 35 to increase travel time regarding accidental spills.
Muscoot	E. New Croton Reservoir							Extend drainage path along Route 35 to increase travel time regarding accidental spills.
	E. Branch Croton River						Parkland contributing pathogens from uncurbed domestic pets as well as wild geese.	Roads paralleling East Branch of the Croton River-modify drainage outlets to reduce flow and increase basin sump (extend drainage path)
	Croton River			✓+		Residential areas served by septic systems near Lake Purdy's.	Large commercial office park (IBM) contributing pollutants.	
Croton Falls Basin	Croton Falls Reservoir							

- The Draft Croton Plan for Westchester (Westchester County Department of Planning, Draft June 2005) has identified wastewater treatment plants, known SPDES permits and septic focus areas (areas currently using septic systems for wastewater disposal where density may dictate sewering or other wastewater treatment solutions.) Table 1.4 identifies these areas by watershed and subwatershed.

Table 1.4 Wastewater Treatment Plants, SPDES Permits and Focus Areas

Watershed Basin	Subwatershed Area	SPDES/WWTP	Focus Areas
Amawalk	Lake Shenorock	Shenorock Water Treatment Plant	-Lake Shenorock
	Muscoot River	Granite Springs Gas Station Permit to Discharge Treated Water to catchbasin	-Horton Estates -Granite Springs
	Amawalk Reservoir		-Amawalk Heights
New Croton	Upper Arm Crom Pond		
	Hallocks Mill Brook		
	Plum Brook	Somers High School WWTP, Lincoln Hall WWTP, The Willows permit to discharge	-Lake Lincolndale -Dykeer
	Angle Fly Brook	Angle Brook Golf Club Pesticide Application	
	Muscoot Reservoir	IBM WWTP, Heritage Hills WWTP, Kennedy High School Permit to discharge, Somers Manor Nursing Home WWTP	
Muscoot	E. New Croton Reservoir	DOT Office Discharge	
	E. Branch Croton River		
	Croton River		-Lake Purdy's
Croton Falls Basin	Croton Falls Reservoir		

- A Study of Stormwater Conveyances as Point Sources of Pollution in the East of Hudson Watershed, New York City Drinking Water Supply (Croton Watershed Chapter-Trout Unlimited. January 2000) identified several sites along waterways in the Croton Watershed which are contributing to the destruction of and disruption of fish habitat. The report identified seven erosion sites within the Town of Somers as indicated in Table 1.5

Table 1.5 Wastewater Treatment Plants and SPDES Permits

Watershed Basin	Subwatershed Area	Erosion Area
Amawalk	Lake Shenorock	
	Muscoot River	
	Amawalk Reservoir	
New Croton	Upper Arm Crom Pond	
	Hallocks Mill Brook	Erosion associated with culvert within first .5 miles of Lake Rd.
	Plum Brook	Erosion and severe undercutting of stream located along southwest side of Jan Ridge Rd.
	Angle Fly Brook	
	Muscoot Reservoir	
Muscoot	E. New Croton Reservoir	4-5 drainage crossings along Moseman Ave. Culvert north of Mekeel St. Discharge from pond south of Mekeel St. Culverts along South Lane. Runoff from Boces Parking Lot
	E. Branch Croton River	
	Croton River	
Croton Falls Basin	Croton Falls Reservoir	

- The Phase II Phosphorus Total Maximum Daily Loads For Reservoirs in the New York City Water Supply Watershed (Delaware, Dutchess, Greene, Putnam, Schoharie, Sullivan, Ulster, and Westchester Counties) (Division of Water, NYSDEC. June 2000) indicates that all four watershed basins within the Town of Somers exceed the total maximum daily load for Phosphorus. Table 1.6 identifies the amount of phosphorus in each of Somer's watershed basins, the required reduction and the likely source of the reduction.

Table 1.6 Phosphorus TMDL

Watershed Basin	Available Phosphorus Load (Kg/yr)	Current Phosphorus Load (Kg/yr)	Amount of Reduction from Nonpoint Sources (Kg/yr)	Source of Reduction
Amawalk	1,329	1,318	122	Stormwater Control Measures
New Croton	8,758	11,189	1,356	Nonpoint Source Pollution Controls
Muscoot	8,457	11,560	2,058	Nonpoint Source Pollution Controls
Croton Falls	3,030	5,010	885	Nonpoint Source Pollution Controls

- The Town of Somers has several waterbodies listed on the state priority waterbody list (*Priority Waterbodies List New York State Department of Environmental Conservation* http://www.dec.state.ny.us/website/dow/bwam/wipwl.html) as identified in Table 1.7

Table 1.7 Priority Waterbodies List

Watershed Basin	Subwatershed Area	Listed Priority Waterbody	Cause
Amawalk	Lake Shenorock		
	Muscoot River	Muscoot River Upper, Lower, and minor tribs	Pathogens
	Amawalk Reservoir	Amawalk Reservoir	Metals, Nutrients
New Croton	Upper Arm Crom Pond		
	Hallocks Mill Brook		
	Plum Brook		
	Angle Fly Brook		
	Muscoot Reservoir	Upper New Croton/Muscoot Reservoir	Nutrients
Muscoot	E. New Croton Reservoir	New Croton Reservoir	Nutrients
	E. Branch Croton River		
	Croton River		
Croton Falls Basin	Croton Falls Reservoir	Croton Falls Reservoir	Nutrients

- The *Final New York State 2004 Section 303(d) List of Impaired Waters* (NYSDEC, 2004 http://www.dec.state.ny.us/website/dow/303dcalm.html.) identifies those waters that do not support appropriate uses and that require TMDL development. A Response Summary to public comments on the Draft list is also available. The waterbody listings in the Section 303(d) List are segmented into a number of categories. The various categories, or Parts, of the list are available on the website. A list of "de-listed" waters (listed on the 2002 Section 303(d) List, but not on the 2004 List) and their reason(s) for de-listing are also presented on the website. Table 1.8 identifies the Section 303(d) listed waters in the Town of Somers.

Table 1.8 Section 303(d) list of Impaired Waters

Watershed Basin	Subwatershed Area	Listed Waterbody	Cause
Amawalk	Lake Shenorock		
	Muscoot River		
	Amawalk Reservoir	Amawalk Reservoir	Atmospheric Deposition
New Croton	Upper Arm Crom Pond		
	Hallocks Mill Brook	Hallocks Mill Brook (Lower)	Ammonia, D.O./ Oxygen Demand
	Plum Brook	Lake Lincolndale (needing verification)-Phosphorus	Onsite WWTS, Urban runoff
	Angle Fly Brook		
	Muscoot Reservoir		
Muscoot	E. New Croton Reservoir		
	E. Branch Croton River		
	Croton River		
Croton Falls Basin	Croton Falls Reservoir		

As noted previously, mapping this information using a GIS would afford the Town with the ability to overlay information related to land use, existing stormwater management practices, wetlands, waterbodies etc. This would further assist the Town with meeting its MS4 responsibilities. The Town intends to acquire this technology shortly.

2. TOWN OF SOMERS PUBLIC EDUCATION AND OUTREACH PROGRAM (MINIMUM MEASURE 1)

A. Regional Outreach and Education Program

The NYSDEC awarded Westchester County and 32 municipalities funding to develop a regional stormwater outreach and education program focusing on residential audiences. The outreach and education program will enhance municipal efforts and create a central resource for educational tools and materials through a multi-media, downloadable, website. The Westchester County Department of Planning is coordinating this program and the Town of Somers is a participant.

B. Town Program Goals and Objectives

In the Croton Watershed in Westchester County, the draft Croton Plan for Westchester County (Draft June 2005) identified the top five education and outreach priorities related to water quality for the Town of Somers. Four of the five priorities related to stormwater:

- Septic System Function and Maintenance
- Lawn Care/Garden Care/Landscaping Practices
- Impacts of Development on Water Quality
- General Watershed Concepts

As such, the Town of Somers has developed the following goals and objectives based on three of these education and outreach priorities:

Septic System Function and Maintenance- The majority of Somers relies on septic systems for wastewater disposal. This same majority also relies on groundwater wells to furnish drinking water supplies. It is important that septic systems do not impact groundwater wells. The background information collected as part of the Town's stormwater management program identifies the residential areas surrounding Lake Lincolndale, Lake Purdys and Lake Shenorock as areas with potential septic system problems. There are approximately 1700 parcels of land within the combined area of these three lake communities. To help address the potential septic system problems, the Town of Somers would like to educate lake community homeowners, in particular, and all homeowners, in general, about maintaining their septic systems.

Objective: (1) The Town of Somers would like to see routine pump-out and maintenance occur for homes within the three lake communities. (2) The Town would like to ensure all septic systems (Town-wide) function properly.

Lawn Care/Garden Care/Landscaping Practices- The background information collected as part of the Town's stormwater management program notes that the Town of Somers falls within the Croton Watershed's phosphorus restricted area. Phosphorus is a pollutant of concern when undertaking lawn and garden care and other landscaping practices. The Town of Somers would like to educate homeowners and businesses regarding their lawn, garden and landscape practices and the things they can do to reduce phosphorus pollution.

Homeowner Objectives:

1. Have homeowners test their soil before applying fertilizers and use phosphorus-free fertilizers if deemed appropriate.
2. Keep grass-clippings and leaves out of the stormwater conveyance system.
3. Have homeowners raise the minimum mowing height to no lower than 2.5" for preferred pollutant update.

Business Objectives:

1. Have local businesses (nurseries, garden centers, etc.) sell phosphorus-free fertilizers.
2. Have commercial property owners raise the minimum mowing height to no lower than 2.5" for preferred pollutant uptake.

Impacts of Development on Water Quality (Creation of new impervious surfaces)- The creation of new impervious surfaces increases the conveyance system for polluted stormwater to travel to waterbodies. Educating developers, local board and committee members and the general public regarding the impacts of impervious surface creation and mitigation techniques, such as porous pavement and rain gardens, will help provide information and alternatives for new development and redevelopment throughout the Town.

Local Board/Committee Member Objectives:

1. Create a fact sheet to discuss at board/committee meetings regarding the impacts of development on water quality.

Developer/Contractor Objectives:

1. Create low impact development materials to distribute as part of the application process for site plan approval, subdivision approval and all environmental permits.

C. Target Audience(s)

Septic System Function and Maintenance

Target Audience: Lake Community Homeowners surrounding Lake Lincolndale, Lake Purdy's and Lake Shenorock.

Lawn Care/Garden Care/Landscaping Practices

Target Audience: Homeowners, Lawn Care/Landscape Businesses, Nurseries and Garden Centers

Impacts of Development on Water Quality

Target Audience: Town Board members Planning Board members, Zoning Board members, Conservation Board members, and Developers

D. Message Delivery Method

Septic System Function and Maintenance

- Create a direct mail program to lake community homeowners to inform them of proper septic system maintenance every three years.
- Program will include informational brochure regarding proper use and maintenance of septic systems.
- Establish an incentive program (such as a rebate or tax credit funded through grant resources) to ensure proper maintenance of septic systems.
- Post septic information on Town website and display printed materials in public buildings.
- Create and play septic pump-out video on cable access channel and Town Website.
- Explore opportunities to ensure all septic systems (Town-wide) operate properly (Property transfer certificate of operation, tax incentives, etc.)

Lawn Care/Garden Care/Landscaping Practices

- Create and distribute phosphorus free landscaping brochure
- Establish Plant-incentive program to offer free plant for customers that show proof of soil test with purchase.
- Work with Somers Chamber of Commerce, Westchester County Landscape Association, etc. to distribute brochure to landscaping businesses, garden centers and nurseries and garner support for plant-incentive program.
- Post landscape brochure on Town website and display printed materials in public buildings.
- Play video's regarding proper landscape practices on cable access channel

Impacts of Development on Water Quality

- Develop an informational brochure regarding impacts of development on water quality.
- Disseminate brochure to Town Board members, Planning Board members, Conservation Board members, and Zoning Board members for discussion at a meeting.
- Post brochure on Town Website and display printed materials in public buildings.
- Create low impact development informational packet for developers / contractors who file applications for site plan approval, subdivision approval and environmental permit approvals.

E. Stormwater Management Practices and Measurable Goals

Table 2.1 identifies the stormwater management practices and measurable goals for the three outreach and education topics. The table also includes identification of implementation timeframes.

Table 2.1 Stormwater Management Practices, Measurable Goals and Timeframes

Education Topic	Best Management Practice	Delivery Method	Measurable Goal	Time Frame
Septic Systems	Discuss Septic Maintenance campaign	At Somers Town Board Meeting	Town Board approves/disapproves	Winter/Spring 2007
	Offer one time $50 rebate/credit (cash rebate or tax credit)	Note in direct mailing and on Town website		Depends on identifying a funding source for rebate program
	Develop Brochure / Fact Sheet re: function and maintenance, including incentive	Direct Mail to 1700 lake community homeowners Display on Website Locate in Town Hall and Somers Library	First year, 10% of homeowners take advantage of incentive, Second Year, 40% of homeowners take advantage. Third year, 40% of homeowners take advantage.	Spring 2008 thru Spring 2010
	Septic System Pump-out Video	Cable Access Channel/Town Website	Obtain viewer counts and # of hits on Website	Spring 2007
Lawn/Landscaping Practices	Develop Phosphorus Free Landscaping Brochure encouraging soil tests, where to obtain soil tests and use of phosphorus-free fertilizer	Post on Town Website, Leave in Town Hall, Somers Library, use for business visits.		Spring 2008
	Establish Plant-incentive program	Note in brochure, advertise at businesses, on website and in public buildings		Depends on identifying a funding source for plant giveaway.
	Meet with Chamber of Commerce to identify businesses	Meet with local businesses to encourage purchase of Phosphorus-Free fertilizer and discuss free-annual program for showing proof of soil test.	50% of commercial businesses to stock phosphorus-free fertilizer within 1 year of meeting and 5% of customers to take advantage of free annual for showing proof of soil test.	Begin Spring/Summer 2008 and continue through Spring/Summer 2009
Impacts of Development on Water Quality	Develop informational brochure for board/committee members	Provide brochure to boards/committees, post on Town website and cable access		Summer 2007
	Create low impact development information packet for developers / applicants	Disseminate with applications and permits	20 packets disseminated in the first year. 50% of all applications to include low impact techniques	Summer 2007

3. TOWN OF SOMERS PUBLIC PARTICIPATION/ INVOLVEMENT PROGRAM (MINIMUM MEASURE 2)

The Town of Somers Public Participation / Involvement program consists of three components- general information, regulatory mandates and other involvement programs. It is important to note that there is overlap among minimum measure 1: Public Outreach and Education and minimum measure 2: Public Participation / Involvement.

A. Town Program Goals and Objectives

The goals and objectives for the Town of Somers in regard to this minimum measure are to involve as many people in the stormwater program as possible. In order to successfully involve the public, citizen organizations, businesses etc. the Town will make a concerted effort to make stormwater information publicly available for anyone interested in reviewing it.

B. General Information

Stormwater Contact
The Town of Somers has designated the Town Planner as the Stormwater Coordinator. Any concerns, complaints or stormwater inquiries should be made to the Department of Planning and Engineering.

Stormwater Hotline
The Town of Somers will create a stormwater hotline. Advertisement for the hotline will be placed on the Town website and on the Town cable access channel. The hotline will encourage the public to report activities that relate to activities that may compromise stormwater quality.

Interested Groups and Individuals
The target audiences for public participation / involvement include the following:

- Homeowners
- Community Neighborhood Groups
- Businesses
- Girl/Boy Scouts

C. Regulatory Mandates

State and local public notice requirements- The Town of Somers is currently required to notice public hearings regarding site plan and subdivision approvals and for projects seeking environmental permits that appear before the Planning Board. Public notices are posted in the local newspaper and the Town House, appear on the Town's website, and are printed on meeting agendas. The Town of Somers will continue to meet local and state public notice requirements

through these avenues, in addition, the Town will require developers to post stormwater permits at the entrance to each construction site.

Public Hearings- As part of the project review process before the Planning Board, public hearings regarding subdivision, site plan and environmental permit approvals are held. These public hearings provide opportunities for the public to participate in the review of projects seeking approvals before the Planning Board. These public hearings are televised via the Town of Somers cable access channel.

D. Other Involvement Programs

Regional Outreach and Education Program- The NYSDEC awarded Westchester County and 32 municipalities funding to develop a regional program to address Public Outreach and Education and Public Participation / Involvement. The outreach and education program will enhance municipal efforts and will create a central resource for educational tools and materials through a multi-media, downloadable, website, in addition to other outreach efforts. The Westchester County Department of Planning is coordinating this program and the Town of Somers is a participant. However, until the program is up and running, the Town will continue to promote public participation and involvement through the following programs:

Earth Day Programming- Each Earth Day the Town of Somers administers programming to educate and involve the public. In the past, the Town has held a photo exhibit, conducted a walking tour, held seminars regarding stormwater impacts to water quality, etc. These efforts will continue on a yearly basis in celebration of Earth Day. Education regarding phosphorus will be incorporated into 2007 and 2008 activities.

Town-wide Clean-Up- Each year a Town-wide clean-up is held, whereby participants collect trash and debris from road-side areas, streams, parks etc. The Town Highway Department collects and disposes of the collect trash.

Westchester County Citizens Volunteer Monitoring Program (WCCVMP)- The Town of Somers will designate a monitoring team to monitor water quality parameters at one or two locations in the Town of Somers. Physical, chemical and biological parameters will be monitored as indicated in Table 3.1. For more information on the Westchester County Citizens Volunteer Monitoring Program visit *www.westchestergov.com/waterquality*

Table 3.1 WCCVMP Water Quality Monitoring Parameters

Physical	Chemical	Biological
Flow	Alkalinity	Macroinvertebrates
Turbidity	Salinity	(water critters)
Substrate	Conductivity	
Water Appearance	Dissolved Oxygen	
Stream Banks and Channel	Nitrate-Nitrogen	
Stream Habitat	pH	
Riparian Zone	Phosphate	
Water Temperature		

Girl/Boy Scout Water Quality Badge- The Town of Somers Stormwater Coordinator will work with the Conservation Board and the Open Space Committee to develop a water quality program for local boy/girl scouts whereby the scouts will receive a water quality patch for undertaking a stormwater quality activity.

E. Best Management Practices and Measurable Goals

The following table (Table 3.2) summarizes the best management practices to be implemented as part of this minimum control measure

Table 3.2. Public Participation / Involvement Best Management Practices

Best Management Practice	**Delivery Method**	**Measurable Goal**	**Time Frame**
Public Notice Requirements	Local Newspaper and Posting in Town House	The Planning Department will track the number of notices printed in the local paper and posted in the Town Hall	On-going
Public Hearing	Occur at Planning Board meetings	The Planning Department will identify the number of participants at each public hearing.	As occurs at each bi-monthly Planning Board Meeting beginning in 2007.
Earth Day Programming	Displays in Town House Town Library, programs in Town Library	Obtain number of visitors/participants	Spring 2007 / 2008
Town-wide clean-up	Cable Access Channel/Town Website advertising	Obtain list of participants and number of bags collected.	Spring 2007 / 2008
Westchester County Citizens Volunteer Monitoring Program	Work with Open Space Committee and Conservation Board to identify monitoring team	Track monitoring events using Westchester County CVMP website	Spring-Fall 2007 / 2008
Water Quality Patch	Work with Girl/Boy Scout Troop leaders to develop water quality patch program	Number of girl/boy scouts that earn patch	Spring - Fall 2007 / 2008

4. ILLICIT DISCHARGE, DETECTION AND ELIMINATION CONTROL (MINIMUM MEASURE 3)

The Town of Somers is committed to keeping our water clean. The Town Board has adopted regulations that will make it illegal to dispose of polluted waters into areas or receptacles where water quality impairments could occur. Polluted waters, when discharged into our streams and other waterbodies are called illicit discharges. Illicit discharges within the town are often related to flows associated with sewage and septage, washwater, liquid wastes, tap water, landscape irrigation, and groundwater and spring water. The most common illicit discharges include failing septic systems, old or damaged sanitary sewer pipes, and illegal connections to a storm drain or catch basin.

A. Program Goals and Objectives

- The Town of Somers hopes to eradicate all dry weather discharges (from illicit discharges) throughout the Town.

B. Program Implementation

Development of a Storm Sewer Map- The Town of Somers has contracted with Azertia USA to create the Town's Storm Sewer Map using a GPS system and GIS compatible software. A copy of the town's contract is found in Appendix A. The Azertia contract is currently being executed and will include all existing stormwater discharge points from pipes, detention facilities, swales and any conveyance located on Town owned property. In addition our map will include all catch basins and collection systems to assist us in the illicit discharge detection and elimination program. Large private property such as commercial sites or condominium sites with drainage systems or drainage features will need to be mapped by the individual property owners and ultimately, the town will require the issuance of a discharge permit for private property owners to discharge into the Town owned conveyance system. This will be accomplished through the Town's stormwater ordinance.

Somers will be mapping the Town's entire stormwater conveyance system. This includes mapping all inflows, intakes and connections to the conveyance system; roads (paved and unpaved, curbed and uncurbed); parking lots; swales (including road side drainage and catch basins); and post-construction stormwater management practices (including but not limited to detention and retention ponds, infiltration systems, filtering systems, hydrodynamic units, other). The mapping that the Town is undertaking exceeds the NYSDEC requirements under this minimum measure. Mapping the entire system will provide more information to the Town regarding long term maintenance of the system and will provide information that can be used in other applications such as the development permit process, road maintenance work programming, site planning, etc. As such, the mapping system currently being developed for the

Town includes the elements required under the NYSDEC Heightened Permit Conditions.

The Town's consultant, Azertia is coordinating with the Town Highway Department to complete the fieldwork necessary to develop the storm sewer map. Once the map is complete, it will be managed through the Town Engineer's office in coordination with the Town's Geographic Information System (when it is acquired). The Highway Department Foreman and or the Highway Superintendent will need to work closely with the Department of Engineering in order to update the storm sewer map on a regular basis. The Highway Department will be required to submit quarterly summaries of the maintenance work associated with the stormwater system. Global Positioning System (GPS) equipment will be purchased to expedite information gathering and reporting, as well as to reduce the need to hire independent consultants.

As part of the ongoing map maintenance responsibility, a field survey of outfall locations and other stormwater drainage infrastructure, including stream analysis, will be undertaken by a Town Stormwater Survey Team, using handheld GPS units. The Town Stormwater Survey Team may require the Town to hire two new staff level positions in order to undertake this activity in undeveloped areas or areas located on private property that do not contain existing access easements. One of the priorities for the Town Stormwater Survey Team will be to obtain permission to access private property to conduct the stream analysis. The Stormwater Survey will, at a minimum, include collection of the following information:

- Location of the outfall or drainage component on a map using street, intersection and distance along stream corridors
- Involve the assignment of a unique identifier (such as a number or alpha numeric code) to each stormwater feature;
- Age of the stormwater feature;
- Material composition of the stormwater feature;
- Dimensions of the stormwater feature.
- Section, Lot and Block parcel identification information for the property that the stormwater feature is located on.

To assist in the collection of this information, the Stormwater Survey Team will use the Center for Watershed Protection's Outfall Reconnaissance Inventory/Sample Field Sheet, from the *Illicit Discharge Detection and Elimination Manual,* to assist with information collection. This manual can be downloaded from the Center for Watershed Protection at www.cwp.org.

Work associated with this minimum measure will be prioritized according to the age of development areas throughout town and in relation to known water quality information. Areas located throughout the Town with older development projects (projects constructed pre-1990) are more likely to have certain illicit discharges.

For example, older homes are more likely to have failed or failing septic systems strictly due to the age of the septic system and lack of maintenance. Newer development projects more than likely addressed the discharges that can become illicit during the project permit review processes- primarily due to increased Westchester County Health Department septic system requirements, New York City Department of Environmental Protection (NYCDEP) Water Quality Rules and Regulations, and other stormwater quality requirements that have been put into effect over the past decade. In order to develop the field survey schedule, priorities will be established using FactsViewer/GIS to overlay the older development projects with the NYCDEP's subwatershed delineations and information obtained from the Croton Watershed South Stakeholder Report (NYCDEP Bureau of Water Supply, May 2004) and found in Table 4.1. For example, a subwatershed with high phosphorus levels and high turbidity levels may be indicative of illicit activities. In addition, land use will also be considered, given that certain land uses, such as dry cleaners and gas stations, may lead to higher risk of illicit discharges. This exercise will identify the areas that should be field surveyed first, with the ultimate goal of surveying the entire area of the Town. Ideally a map should be compiled regarding this information; however this is not possible given the Town's existing mapping capabilities. The Town is working towards acquisition of a GIS system which will enable mapping of this information in relation to water quality conditions and other overlay resources. It is expected that a GIS system for the Town will be up and running in 2008.

Once the field survey has been completed, additional information will continue to be gathered in relation to drainage features identified on the Town's Storm Sewer Map. All information will be maintained using FactsViewer XF version 3.2, revision 7, obtained as part of the Town's mapping contract. The stormwater map and its component elements will be integrated into the Town's GIS system (anticipated by 2008).

Illicit Discharge, Detection and Elimination Ordinance- The Town of Somers' local law to address illicit discharges was adopted in March 2006 and is known as Chapter 117 Illicit Discharges. The local law can be accessed via the Town of Somers' website located at www.somersny.com/links. Chapter 117 includes the following sections:

- Purpose/Intent
- Definitions
- Applicability
- Responsibility for Administration
- Severability
- Discharge Prohibitions
- Prohibition Against Contaminating Stormwater
- Requirement to Prevent and Reduce Stormwater Pollutants by the Use of Best Management Practices
- Suspension of MS4 Access-Illicit Discharges in Emergency Situations

- Industrial or Construction Activity Discharges
- Access and Monitoring of Discharges
- Notification of Spills
- Enforcement
- Appeals of Notice of Violation
- Corrective Measures After Appeal
- Injunctive Relief
- Alternative Remedies
- Violation Deemed a Public Nuisance
- Remedies Not Exclusive

The Town of Somers Illicit Discharge law was compared with the EPA/NYSDEC illicit discharge requirements. This comparison revealed that the only aspect not contained in the Town's law was the regulation of septic systems. In Westchester County, the Westchester County Department of Health has the authority to regulate new septic systems and certain repairs. However, the Town of Somers works closely with the County Health Department to insure that failed systems are repaired. If the Town is notified through complaints or through field detection that there is a failed septic system, the Westchester County Department Health is contacted. Once contacted, the Westchester County Department of Health will take corrective action. Therefore, at this time, it is unnecessary for the Town to include provisions in its local law regarding regulation of septic systems.

Table 4.1. Town of Somers Subwatershed Areas and Management Concerns

General Location	Subwatershed Areas	Management Concern
Northwest Corner	Muscoot River,	TSS, Phosphorus, Wetlands,
	Hallocks Mill Brook	Phosphorus, Pathogens
East/Central	Plum Brook	Pathogens, TSS, Phosphorus, Wetland
	Angle Fly Brook	Wetland
	Muscoot Reservoir	Phosphorus
	East Branch Croton River	Modify drainage outlets on roads parallel to the east branch of Croton River
	Croton River	Phosphorus
West/Central	Muscoot River	TSS, Phosphorus, Wetlands
	Amawalk Reservoir	Phosphorus, Increase Travel Time b/w road and reservoir
	Hallocks Mill Brook	Pathogen, Phosphorus, Reduce flow/velocity along roads adjacent to trout streams
North	Amawalk Reservoir	Phosphorus, increase travel time b/w road and reservoir
	Lake Shenorock	TSS, Phosphorus, septics, centralized stormwater controls @ lake
North	Plum Brook	Pathogens, TSS, Phosphorus, Wetland
North	Plum Brook	Pathogens, TSS, Phosphorus, Wetland
	Muscoot Reservoir	Phosphorus
Northeast	Croton Falls Reservoir	*N/A*
	East Branch Croton River	Modify drainage outlets on roads parallel to the east branch of Croton River
	Croton River	Phosphorus
Northeast	Croton River	Phosphorus
East	Croton River	Phosphorus
Central	Angle Fly Brook	Wetland
	Amawalk Reservoir	Phosphorus, increase travel time b/w road and reservoir
Central	Angle Fly Brook	Wetland
	Amawalk Reservoir	Phosphorus, increase travel time b/w road and reservoir
South/Central	Angle Fly Brook	Wetland
	Muscoot River	TSS, Phosphorus, Wetlands
South/Central	Angle Fly Brook	Wetland
	Muscoot River	TSS, Phosphorus, Wetlands
Southwest	Hallocks Mill Brook	Pathogen, Phosphorus, Reduce flow/velocity along roads adjacent to trout streams
Southwest	East New Croton Reservoir	Expand drainage path along Route 35

Methodology to Detect and Address Non-Stormwater Discharges, Including Illegal Dumping into the MS4- Utilizing the information gathered through the field survey conducted by the Town of Somers Stormwater Survey Team, combined with complaints and other observations submitted to the Town, identification of illicit discharges should occur. Further field screening activities should be conducted during dry-weather conditions, when non-stormwater flows can be detected. Inspection field sheets will be completed for each outfall that is screened, using the Inventory/Sample Field Sheet from the Illicit Discharge

Detection and Elimination Manual. The field screening inspection sheets will be used to enter findings into a central database system through the FactsViewer software / GIS system. Field screening will be conducted by the Stormwater Survey Team using handheld GPS units and will provide ongoing evidence of eroding channels and streambeds. Once identified through field screening, areas will be targeted for future remediation and stabilization.

If field screening results in the identification of an illicit discharge, the Stormwater Survey Team will need to identify the source of the illicit discharge. Visual and/or odor indicators will be used as a first level analysis to determine the type and source of the illicit discharge. If the type and source of the illicit discharge cannot be ascertained, water quality sampling will be undertaken to determine whether or not the discharge is illicit.

If the source of an illicit discharge cannot be detected through a first level analysis, the Stormwater Survey Team will need to employ additional measures to narrow down the source of the illicit discharge. Additional measures may include video inspection, smoke testing, dye testing, aerial infrared and thermal photography.

Removing the Source of the Illicit Discharge- Removing the source of the illicit discharge has been included in the Town's Illicit Discharge, Ordinance (Chapter 117). The Town Engineer has the enforcement authority to issue a notice of violation with a date certain response timeframe. The ordinance includes an appeals process if the owner of the illicit discharge does not agree with the violation. In addition, the ordinance also includes fines associated with the violation and a specific timeframe to correct the violation. The ordinance also provides the ability for the Town to assign a tax lien on private property if an illicit discharge remains unresolved and the Town is forced to correct the violation.

Evaluation and Assessment of the IDDE Program- Throughout the implementation of the IDDE Program, the Town Engineer's office will be keeping documentation regarding activities related to each phase of the program. Using FactsViewer/GIS, the information collected by the Highway Department and the Stormwater Survey Team will be cataloged and used to determine the number of outfalls identified and inspected on a quarterly, semi-yearly and yearly basis. In addition, the number of illicit discharges detected and eliminated can be ascertained. The amount of funding spent on program implementation, including corrective action can also be determined. This information is helpful for annual reporting purposes and can be useful to benchmark future goals and objectives regarding the program.

Educate Public Employees, Businesses and the General Public- Identification and detection of Illicit Discharges will be a town-wide effort and will involve the Highway Department, Building Department and the Planning and Engineering Department as well as the business community and the general public.

1. Educate the municipal employees that will assist with implementation of the IDDE program. All staff that conduct field work as part of their job responsibilities will receive an Illicit Discharge and Detection hand-out which explains what they should be looking for when conducting field work. Yearly hand-outs will be provided to remind employees of their responsibility related to illicit discharge and detection. Instructions will be provided in the hand-out information to inform employees that if an Illicit Discharge is detected, they should send notification to the Town Engineering Department. The Town Stormwater Survey Team will develop the Illicit Discharge and Detection hand-out.

2. Educate the businesses most likely to have illicit discharges. The Building Inspector will be required to make periodic site inspection at service stations to verify that all floor drains have been removed, where building permits have not been issued for this purpose. In addition, businesses most likely to cause illicit discharges will receive an illicit discharge notification packet, developed by the Town Stormwater Survey Team, explaining the definition of an illicit discharge and the ramifications that can ensue if one exists. The information will include a grace period whereby operators of illicit discharges can correct the illicit discharge within a specified timeframe without penalty.

3. Educate the General Public. Some illicit discharges, such as failing septic systems, grey water connections to the stormwater system, etc. are under the direct control of private homeowners. Providing homeowners with illicit discharge, detection and elimination information can assist with control of illicit discharges associated with private property use. The Illicit Discharge and Detection hand-out will be posted on the Town's website, cable access channel, at the Town Library and in the Town office buildings to inform the public that they can play a role in Illicit Discharge and Detection. In addition, an emergency hot line will be set up to allow for the public to call in potential violations for investigation and for the public to self-report illicit discharges for a specified period of time without penalty, provided the illicit discharge is corrected.

C. Determination of Appropriate Best Management Practices (BMP) and Measurable Goals

The methods to remedy the actual illicit discharges that are identified through the Town's Illicit Discharge, Detection and Elimination Program will be determined on a case-by-case basis, depending on the site conditions and constraints that may exist. However, as a rule of thumb, the Engineering Department will be guided by the National Menu of Best Management Practices, available on the NYSDEC and USEPA web sites. Table 4.2 identifies the programmatic BMPs, measurable goals and the associated implementation timeframe.

Table 4.2 Best Management Practices and Measurable Goals

Best Management Practice	**Implementation Timeframe/Measurable Goal**
Complete Daft Storm Sewer Map	75% of all outfalls mapped by end of 4th Quarter 2006.
Verify Storm Sewer Map Information	Conducted with field surveys.
Hire Town Stormwater Survey Team	Spring 2007
Acquire two handheld Global Positioning System Units	After hire of Stormwater Survey Team
Field Survey of Outfall Locations and other stormwater drainage infrastructure, including priority area identification	Inspect 25% of outfalls each quarter commencing with hiring of Stormwater Survey Team. Identify no less than 10 illicit discharges per year for the first three years. Undertake at least two stream stabilization projects per year.
Update Database associated with storm sewer map	Quarterly, starting with receipt of draft database and hiring of Stormwater Survey Team.
Develop Illicit Discharge Ordinance	COMPLETED March 2006
Develop Training Hand Out	Spring/Summer 2007, following hire of Stormwater Survey Team
Create Stormwater Hotline	Spring/Summer 2007, following hire of Stormwater Survey Team
Disseminate Training Information	Spring/Summer 2007, following hire of Stormwater Survey Team
Create Business IDDE Information Packet	Spring/Summer 2007, following hire of Stormwater Survey Team
Post Information on Town Website, Cable Access Channel and in Town Office Buildings	Spring/Summer 2007, following hire of Stormwater Survey Team
Evaluate IDDE Program	Each Quarter, following hire of Stormwater Survey Team

D. Resources with Additional Information

- Illicit Discharge Detection and Elimination Manual-A Guidance Manual for Program Development and Technical Assessments. Center for Watershed Protection. October, 2004. www.cwp.org

- *Illicit Discharge Detection and Elimination Manual A Handbook For Municipalities*. New England Interstate Water Pollution Control Commission. January, 2003. http://www.neiwpcc.org/PDF_Docs/iddmanual.pdf

5. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL
(MINIMUMUM MEASURE 4)

A. Program Goals and Objectives

The Town of Somers will create mechanisms to control the quality of stormwater runoff from construction sites at all construction sites that cause the disturbance of one acre of land or greater, including planning, installation and maintenance of erosion and sediment control practices.

Control of stormwater quality from construction sites will be achieved through the Town's erosion and sediment control ordinance, providing staff training regarding review of erosion and sediment control plans, requiring contractor education prior to ground breaking, and conducting site inspections at all construction sites.

B. Program Implementation

Stormwater Management and Erosion and Sediment Control Ordinance- The Town of Somers has a local zoning code, subdivision regulations, site plan regulations, and an erosion and sediment control ordinance. These regulations may or may not meet the technical standards related to New York State SPDES permit GP-02-01 and Minimum Control Measures 4 and 5. In order to determine the equivalence of the Town's existing regulations with the State requirements, the Town of Somers utilized the NYSDEC Stormwater Management Gap Analysis Workbook for Local Officials (August 2005).

The Town's regulations were used to complete the "Preliminary Local Codes Assessment Worksheet to determine local code compliance with the NYSDEC model code requirements. The Town of Somers has not yet adopted a Stormwater Control Ordinance. Therefore, most of the Preliminary Local Codes Assessment Worksheet categories were not identified. As such, the Town of Somers will adopt the Model Local Law for Stormwater Management and amend referenced sections of the Code of the Town of Somers, accordingly.

In February 2006, the Town adopted the 2003 NYS Model Erosion and Sediment Control Law, which is currently available through the Town's website at www.somersny.com/links/Towncode. Review of the Town's law and comparison to the NYS model law revealed the following changes are needed:

- §93-3A. Applicability. Expand definition to include any activity that results in the cut and/or fill of 20 c.y. or greater of material and creation of additional impervious surfaces.

- §93-3C. Regulated activities subject to administrative permit. Expand description to include "…or cut and fill involving 20 c.y. or greater of material.

- §93-5A. Selection of Control Measures. Add reference to NYS Standards and Specifications for Erosion and Sediment Control as updated and/or amended.

- §93-5L. Construction of access routes. Change reference to Westchester County best management practices to NYS Standards and Specifications for Erosion and Sediment Control, as updated and/or amended.

- §93-50. Grading. Replace “the dust control” with “control of dust”.

- §93-6J. Administrative Review. Change “§93-7” to §93-8.

- §93-8A(2)(b). Insert “existing” before “floodplains” and add “and subwatersheds” after “watersheds”

- §93-8A(2)(e). Add new section to require narrative description of the proposed project.

- §93-8A(2)(d). Insert “clearing” after “excavation:”

- §93-8A(3)(c). Change sentence after of to “erosion and sediment control practices including easements and estimates of the cost of maintenance.

- §93-8A(3)(e). New section to require identification of stockpile locations, staging areas and access points.

- §93-8A(4)(b). Add “and further described in the NYS Standards and Specifications for Erosion and Sediment Control, as updated and/or amended.”

- §93-9. Waiver of Required Submittals. Change “permitting authority” to “Planning Board”.

- §93-12B. Review of application; approval. Add “water” to the “Soil and Conservation District.”

- §93-12C. Basis for approval. Add “(4). Erosion and Sediment Control permit applications submitted contingent with site plan, subdivision, wetland and steep slope permits shall be approved as part of site plan, subdivision, wetland and steep slope permit approvals.”

- §93-14. Inspections. Add new paragraph to the following effect: “For projects which do not involve site plan, subdivision or other environmental permits the Town Engineer or his/her authorized representative may alter the inspection schedule to no fewer inspections than the start of construction and the successful establishment of landscaping in public areas.

- §93-14C. Inspections. Reword to reflect NYS Erosion and Sediment Control Model Ordinance language.

Require submission of stormwater pollution prevention plan and erosion and sediment control plan- The Town of Somers has been asking applicants to submit stormwater pollution prevention plans and erosion and sediment control plans since the early 1990's, even though the legal authority regarding erosion and sediment control was established in 2006 and the legal authority regarding stormwater management is set to be acquired in 2007. The erosion and sediment control plan and the stormwater pollution prevention plan have been submitted with site plan and subdivision applications as part of the Planning Board's review under the State Environmental Quality Review Act.

Develop procedures to review stormwater pollution prevention plans and erosion and sediment control plans- The Town of Somers currently has procedures in place regarding site plan, subdivision, wetland, steep slope and tree cutting permitting processes. These processes include the submission of an application, fees and associated materials to the Planning and Engineering Department. The project applications are provided to the Planning Board and are referred to relevant committees and agencies. The Town Engineer and Town Planner (and/or other Town consultants) review the project applications for consistency with the Code of the Town of Somers.

When the Erosion and Sediment Control ordinance is updated and the Stormwater Management Ordinance is adopted, the checklists regarding stormwater pollution prevention and erosion and sediment control plan review found in the New York State Stormwater Management Design Manual (August 2003) and the New York State Standards for Erosion and Sediment Control (August 2005) will be utilized for staff reviews.

Develop procedures to allow public comment on stormwater pollution prevention plans and erosion and sediment control plans- As part of the site plan and subdivision approval processes, the Town of Somers Planning Board involves the public by holding public hearings and allowing for the submission of written comments. Holding a public hearing is also a requirement under the State Environmental Quality Review Act (SEQR).

The stormwater pollution prevention plans and the erosion and sediment control plans are currently subject to public comment and review through the existing public hearing process.

Procedures for Site Inspection and Enforcement Regarding Permits Which Require Stormwater Pollution Prevention Plans and Erosion and Sediment Control Plans- The Town of Somers requires an applicant to submit a construction schedule and post a bond for erosion and sediment control and other environmental permits prior to receiving resolutions for subdivision or site plan approval. The Code of the Town

of Somers requires the Town Engineer or an authorized representative to make inspections to ensure compliance with the site development and erosion and sediment control plan. Inspections are intended to occur before the start of construction, installation of sediment and erosion control measures, completion of site clearing, completion of rough grading, completion of final grading, close of the construction season, completion of final landscaping, and after successful establishment of landscaping in public areas. Currently, the Town Engineer and the Assistant Engineer handle site inspections for erosion and sediment control plans. For larger projects, the Town may hire a Professional Consultant to monitor and inspect stormwater and erosion and sediment controls. The Town Engineer or their designated representative may choose to reduce the frequency of inspection at sites that do not require other approvals or environmental permits. If the inspection schedule is to be altered, the number of inspections may not be limited to fewer than two inspections which must include the start of construction and the completion of landscaping.

In addition, the proposed changes to the erosion and sediment control law will require the applicant (developer) to designate a “responsible party” to inspect and document the effectiveness of all erosion and sediment control practices, complete an inspection report every 7 days and within 24 hours of a storm resulting in 0.5 inches of precipitation or more. All reports will be delivered to the Department of Planning and Engineering and a copy will be left on site in the site log book.

Once the Town of Somers adopts the Model Local Law for Stormwater Management, all new subdivision and site plans will be reviewed using the NYS standards as incorporated into the Model Local Law for Stormwater Management. In addition, the Town Engineer or his/her representative will be required to inspect stormwater management practices to ensure that they are constructed according the Stormwater Pollution Prevention Plan and that they are being operated and maintained after construction is complete. In addition, the Town will require applicants that develop SWPPPs to submit reports regarding the long term maintenance and monitoring of stormwater management practices.

C. Best Management Practices and Measurable Goals

In order to successfully implement the Town's program, measurable goals should be established. Many times, the BMP is either implemented or not, however there are several intermediate steps that can be identified to ensure the success of BMP implementation. Table 5.1 identifies quantifiable targets to ensure that the listed BMPs will be implemented by the target dates.

Table 5.1 BMPs and Measurable Goals

BMP to be completed	Implementation Target Date	Quantifiable Target
Revise and Adopt Draft Local Law for Stormwater Management	By March 2007	Submit draft law to Planning Board/Town Board by December 2006 Submit Final law to Town Board for approval by February 2007. File local law with NYS by March 2007
Amend Existing Erosion and Sediment Control Law	By March 2007	Submit draft amendments to Planning Board/Town Board by December 2006 Submit Final Amendments to Town Board for approval by February 2007. File amendments with NYS by March 2007
Provide Staff Training regarding review of SWPPPs and Erosion and Sediment Control Plans	Spring 2007	Staff to attend training for erosion and sediment control and stormwater plan review. Incorporate NYS checklists for plan review into application files.

Table 5.1 BMPs and Measurable Goals (continued)

Site Inspections	Revolving	The Engineer and Town Engineer will complete site inspection reports for each inspection related to erosion and sediment control and stormwater management
Contractor Training	Revolving	The Assistant Engineer will provide the existing construction site operators with a site log book and a list of the required information to be added to each book. The site log book will be maintained on site. All inspection reports will be kept in the log book. New construction sites will be required to develop and maintain a log book for their construction site.
Submission of Annual Reports regarding Stormwater Management Practice Maintenance	Revolving	Owners or operators of stormwater management practices will provide routine maintenance reports to the Planning and Engineering Department on a quarterly basis.

6. POST-CONSTRUCTION RUNOFF CONTROL
(MINIMUM MEASURE 5)

A. Program Goals and Objectives

Minimum Measures 5 requires MS4 operators to develop, implement and enforce a program to reduce pollutants, with a focus on phosphorus reduction, in stormwater runoff from new development and redevelopment projects that involve land disturbance of greater than or equal to 1 acre. As such, the Town of Somers will reduce the volume and improve the quality of stormwater runoff by disconnecting impervious surfaces and installing and maintaining structural and nonstructural stormwater controls through the development and implementation of strategies which include a combination of structural and/ or non-structural best management practices (BMPs) through:

- Creation of an ordinance or other regulatory mechanism requiring the implementation of post construction runoff controls;
- Ensuring adequate long-term operation and maintenance of controls;
- Identification of the appropriate best management practices and measurable goals.

B. Program Implementation

Stormwater Management Ordinance- In order to effectively implement this minimum control measure, the Town of Somers, using the Chester County Post Construction Stormwater Management Model Ordinance, will develop a post-construction stormwater management ordinance to address the implementation, operation and maintenance of post-construction stormwater controls for new development and redevelopment projects.

Require submission of stormwater pollution prevention plans which identify post-construction stormwater control practices- Once the Town of Somers' post-construction stormwater management ordinance (Appendix B) has been promulgated, the existing project review processes will be amended to require a post-construction stormwater permit which provides for identification of post-construction stormwater controls and associated information in the stormwater pollution prevention plan associated with subdivisions, site plans and environmental permits.

Develop procedures to review stormwater pollution prevention plans containing post-construction stormwater controls-The required stormwater pollution prevention plans will be reviewed as part of the ongoing project review processes currently in place for subdivision and site plan review.

Develop procedures to allow public comment on stormwater pollution prevention plans containing post-construction stormwater controls- The Town of Somers conducts public hearings to comply with the State Environmental Quality Review Act (SEQR) and as part of the project review process for subdivision, site plan and certain environmental permits. The stormwater pollution prevention plans will be subject to public comment and review through these public hearings.

Procedures to ensure adequate long-term operation and maintenance of controls- Once the stormwater pollution prevention plans containing post-construction stormwater controls are approved and constructed, the Stormwater Survey Team will become the entity responsible for ensuring that the post-construction stormwater controls are being operated and maintained according to the stormwater pollution prevention plans approved through the subdivision, site plan and environmental permitting processes. The Stormwater Survey Team will keep track of all post-construction stormwater controls through a permitting process which requires all operators of post-construction stormwater controls to provide annual reports to continue operation. Per completion of construction, operators of post-construction stormwater controls will be provided with a permit to continue operation of the stormwater management practice. The permit will require operators to submit annual reports documenting frequency of inspection and maintenance of stormwater practices. If annual reports are not received, the stormwater operator will be fined and will need to apply for a new permit to operate the stormwater management practices. Information pertaining to these permits will be tracked using the Town of Somers FactsViewer/GIS. The Stormwater Survey Team will inspect post-construction controls at least quarterly and in priority areas more frequently as deemed necessary. Quarterly updates will be provided to the Stormwater Coordinator and will provide an annual summary regarding site inspection and maintenance reporting for all post-construction controls.

In addition, the Stormwater Survey Team will identify existing stormwater management practices and operators that are not currently part of the Town of Somers' development permitting processes. The Stormwater Survey Team will work with the identified operators to issue permits to operate based on submitted plans detailing type of practice, age of practice, responsible entity, maintenance and inspection schedules, etc. The legal authority to permit existing post-construction stormwater management practices will be incorporated into the Town of Somers' Post-Construction Stormwater Management Ordinance.

C. Determination of Appropriate Best Management Practices and Measurable Goals

In order to successfully implement the Town's program, measurable goals should be established. Many times, the BMP is either implemented or not, however there are several intermediate steps that can be identified to ensure the success of BMP implementation. Table 6.1 identifies quantifiable targets to ensure that the listed BMPs will be implemented by the target dates.

Table 6.1 Post Construction Stormwater Best Management Practices and Measurable Goals

Best Management Practice	**Measurable Goal**	**Implementation Timeframe**
Post-Construction Stormwater Management Ordinance	Develop Draft Legislation	Fall 2007
	Submit to Town Board for Review	Winter 2007/2008
	Committee Review	Winter 2007
	Submit Local Law to NYS for Filing	Spring 2008
Develop Permit Process	Create Post-Construction Stormwater Management Permit Form	By Spring 2008
Amend Planning Board Review Processes to include Post-Construction Stormwater Management Permits	Develop tracking system regarding permit holders for inspection and enforcement procedures.	By Spring 2008
Identify existing post-construction stormwater controls not part of the development process. Issue permits.	Number of operators and practices identified and permits issued.	By Fall 2008
Create Annual Reporting Reminder for Permit Holders	Draft Reminder Notice, Post on website, cable access, etc.	Summer 2008
Establish Enforcement Procedure	Enforce permit holders who did not submit annual reports	Winter 2007/2008

7. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS (MINIMUM MEASURE 6)

A. Town Goals and Objectives

The Good Housekeeping Activities Checklist (Appendix C) was completed for each of the listed impacted activities which can contribute pollution to the storm drain system. Two (2) Town of Somers departments, the Highway Department and the Parks and Recreation Department, are the municipal departments that undertake the identified impacted activities. More detail regarding the actual responsibilities of the Highway Department and the Parks and Recreation Department is included in the following sections related to the Facilities Site Assessment.

In order to properly control the quality of stormwater involved with good housekeeping activities, the Town of Somers will control the amount of nutrients entering receiving waters through changes in good housekeeping practices and through the use of technology and education of municipal employees regarding water quality impacts of daily work program responsibilities.

B. Facilities Assessment and Department Policies

The Town of Somers developed a Facilities Assessment and Department Policies for each Municipal Department undertaking one or more impacted activity. All Town owned property, including Town owned roadways were included in the Facilities Assessment and Department Polices for the Parks and Recreation Department and the Highway Department. Separate Facilities Assessments and Department Policies were developed for each department and are subsequently discussed in the following sections.

A. Parks and Recreation Department

Description of Department Human Resources-The Parks and Recreation Department Maintenance crew maintains all Town and Park property (except for town roadways and the Highway Garage). The Maintenance crew consists of the following staff:

- A Park Foreman (full time)
- An Assistant Park Foreman (full time)
- A Maintenance Mechanic Buildings and Grounds Crewman (full time)
- A Maintenance Repair Man (full time); and
- One seasonal position (full time mid April – early November)

Site Maps-Site maps were prepared for each municipal park including town owned or operated property. Each site map includes the following features:

- An outline of the entire property
- Location of "impervious" areas—paved areas, buildings, covered areas
- Locations where materials are directly exposed to stormwater
- Location of buildings and activity areas (e.g., fueling islands, garages, waste container area, wash racks, hazardous material storage areas, etc.)
- Location of lawn/landscape maintenance areas (mow/no-mow zones).

Additional features consisting of drainage areas and direction of flow, nearby waterbodies and storm drain inlets and existing stormwater controls will be added to the site maps when the Town of Somers obtains its geographic information system (GIS).

These maps are currently not GIS or FactsViewer compatible and therefore are not included in this plan. They are available for viewing in the Stormwater Coordinators office. The Town anticipates obtaining its GIS system by 2008. At this time, this information will be incorporated as a GIS datalayer.

List of Significant Materials, Pollution Generating Activities, and identification of Potential Pollutants- An inventory of bulk materials (grass clippings, wood chips, stone, salt, lumber, mulch, soil, etc) stored at each site and potential pollution generating activities was undertaken on a site by site basis. The following tables (7.1-7.9) are organized by town owned or operated property and contains a list of the significant materials (stored outside) and pollution generating activities for each site, the geographic location of the materials and/or activities, and the potential pollutant threat. Some properties may contain significant amounts of material which may or may not be of pollution concern. However, pollutant sources may exist at properties which do not contain significant amounts of material.

Table 7.1 REIS PARK

Significant Material/ Pollutant Generating Activity	**Geographic Location**	**Potential Pollutant**
Ball Field Clay Bin (wood slats) located on pavement.	Located at gate to upper parking lot	Particulates from clay
Snow/Soil Dump	Located at gate to upper parking lot	Salt/Sediment
1-small dump truck 2-ride on mowers 1-utility vehicle 1-large tractor		Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Lawn Mowing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Lawn Fertilizing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Dry line and Ball field Skin Paint.	All Athletic Fields at the Park (See Site Map)	Phosphorus, Nitrogen
Seasonal Leaf Blowing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Snow Plowing	Parking Areas and Roadways (no upper lot)	Sediment, salt/salt-brine if present
Winter Salting	Walkways and Steps	Magnesium Chloride
Black Top Parking Areas and Roadways	Main Parking Lot, Upper Parking Lot	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus

Table 7.2 REIS HOMESTEAD- Outdoor

Significant Material/ Pollutant Generating Activity	**Geographic Location**	**Potential Pollutant**
3 snow plows and a 20' equipment trailer	Along western access road from Sunderland Lane	Winter: salt, sediment, hydrocarbons, heavy metals Summer: metals, hydrocarbons,
Black Top Parking Areas and Roadways	Main Parking Lot, Upper Parking Lot	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Snow Plowing	Parking Areas and Roadways	Sediment, salt/salt brine if present
Winter Salting	Walkways and Steps	Magnesium Chloride

Table 7.3 VAN TASSELL PARK- Outdoor Storage

Significant Material/ Pollutant Generating Activity	**Geographic Location**	**Potential Pollutant**
Lawn Mowing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Lawn Fertilizing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Seasonal Leaf Blowing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
2 vans 1 large back hoe Various tractor implements 1 pick up truck		Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus

Table 7.4 VAN TASSELL PARK- Outdoor Storage (Continued)

6-8 police patrol cars	Lower Parking Area	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Field Lining Ball field Skin Paint	One Field (See Site Map)	Pulverized limestone powder which mixes with sediment.
Black Top Parking Areas and Roadways	Three parking areas located near southeastern section of property.	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Snow Plowing	Parking Areas and Roadways	Sediment, salt/salt brine if present
Winter Salting	Walkways and Steps	Magnesium Chloride

Table 7.5 KOEGEL PARK CARETAKERS RESIDENCE- Outdoor Storage

Significant Material/ Pollutant Generating Activity	**Geographic Location**	**Potential Pollutant**
Lawn Mowing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Lawn Fertilizing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
Seasonal Leaf Blowing	Specified areas throughout Park (See Site Map)	Phosphorus, Nitrogen
2 personal vehicles 1 pickup truck 1 ride on mower		Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Black Top Parking Areas and Driveway	Three parking areas located near southeastern section of property.	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Snow Plowing	Parking Areas and Roadways	Sediment, salt/salt brine if present
Winter Salting	Walkways and Steps	Magnesium Chloride

Table 7.6 ELEPHANT HOTEL & OLD BET ANNEX (TOWN HOUSE) & BAILEY PARK

Significant Material/ Pollutant Generating Activity	**Geographic Location**	**Potential Pollutant**
Lawn Mowing	Specified areas throughout Property(See Site Map)	Phosphorus, Nitrogen
Lawn Fertilizing	Specified areas throughout Property (See Site Map)	Phosphorus, Nitrogen
Seasonal Leaf Blowing	Specified areas throughout Property (See Site Map)	Phosphorus, Nitrogen
2-3 Town-owned vehicles	Parked in main parking lot at designated spaces.	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Black Top Parking Area	Main parking lot between Elephant Hotel and Annex.	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus
Snow Plowing	Parking Areas and Roadways	Sediment, salt/salt brine if present
Winter Salting	Walkways and Steps	Magnesium Chloride

Table 7.7 WEST SOMERS PARK

Significant Material/ Pollutant Generating Activity	Geographic Location	Potential Pollutant
Lawn Mowing & Trimming	Specified areas throughout Property(See Site Map)	Phosphorus, Nitrogen

Table 7.8 FIREMAN'S FIELD

Significant Material/ Pollutant Generating Activity	Geographic Location	Potential Pollutant
Lawn Mowing	Specified areas throughout Property(See Site Map)	Phosphorus, Nitrogen
Field Lining using dry line powder marker	Three Fields (See Site Map)	Phosphorus, Nitrogen
Seasonal Leaf Blowing	Specified areas throughout Property (See Site Map)	Phosphorus, Nitrogen

Table 7.9 ST. JOE'S FIELD

Significant Material/ Pollutant Generating Activity	Geographic Location	Potential Pollutant
Lawn Mowing	Specified areas throughout Property(See Site Map)	Phosphorus, Nitrogen
Field Lining using dry line powder marker	Three Fields (See Site Map)	Phosphorus, Nitrogen
Seasonal Leaf Blowing	Specified areas throughout Property (See Site Map)	Phosphorus, Nitrogen

Existing Policies Regarding Potential Pollutant Generating Activities- All work is documented monthly in the Parks and Recreation Forman's report. This report is submitted to the Stormwater Coordinator upon its completion.

Summer

Lawn Mowing and Trimming- The Parks and Recreation Department mows and trims all athletic fields twice per week from April through September at Reis Park and Van Tassell Park. Athletic fields at St. Joe's field, Fireman's Field, Reis are mowed once a week. All other areas are mowed and trimmed once per week. All grassed areas are cut no lower than 2.5 inches.

Application of Fertilizers - Fertilizers are applied to most properties. However select areas at Reis Park (Mt. Zion cemetery, north of main parking area), Fireman's Field, St. Joe's Field, side and rear yards of the Elephant Hotel and Old Bet Annex property, and West Somers Park do not receive the application of fertilizers. All fertilizers applied to town owned property are phosphorus free. No more than two pallets of fertilizer are stored inside the lower barn at Van Tassell Park, for no more than one week.

Application of Pesticides- The Parks and Recreation Department follows an IPM approach to turf management to reduce the need for pesticide applications. Pesticides are only used when necessary and never in an ongoing blanket coverage program. Pesticides are known to be applied to the baseball diamond

at St. Joe's Field, along the road frontage at the Elephant Hotel and Old Bet Annex, and on the sand tennis courts at Reis Park.

Fall

Leaf Collection**-** Seasonal leaf blowing occurs on each of the Town owned properties. Most of the leaves are blown into the woods, located at the edge of many of the maintained areas. Leaves that are picked up and removed are disposed of at the Town Highway Garage.

Winter

Snow Plowing**-** The Parks and Recreation Department plows the parking areas and driveways for each of the Town owned properties. Snow is pushed to the sides of the paved areas and in instances where a pile becomes an obstruction; the snow is removed to the middle parking area (near the clay bin) at Reis Park and pushed over the side of the hill.

Winter Salting**-** The Parks and Recreation Department does not salt the roads or parking areas. If salting is necessary, the Town Highway Department will salt the roads and parking areas. However, the Parks and Recreation Department does use limited amounts of Magnesium-Chloride to melt ice on steps and walkways leading to buildings. During a typical winter, the Parks and Recreation Department uses approximately fifty (50lb) bags of Magnesium-Chloride. This material is stored in the lower barn at Van Tassell Park and is used because it is the least harmful to nearby vegetation and does not harm concrete or other building materials.

Material Storage- Materials stored at each of the parks are discussed below.

Reis Park**-** The following materials are stored inside:

- A 55 gallon steel drum for collecting waste motor oil from vehicles and machines;
- Up to 30 gallons of gas and diesel fuel in five gallon cans (stored in a fuel cabinet);
- Up to 30 quarts of motor oil stored in a fuel cabinet;
- Up to six-one gallon containers of biodegradable cleaning material (stored on open shelves);
- Up to twelve aerosol cans of wasp spray stored in office cabinet.

Van Tassel Park-The following materials are stored inside:

- Up to two pallets of ball field conditioner;
- Up to one pallet of magnesium-chloride (Ice Melt);
- Up to one pallet of dry line marker;
- Up to two pallets of phosphorus-free fertilizer stored for no longer than one week.

Existing Best Management Practices and Potential Pollutants- Table 7.10 lists the Best Management Practices for each activity which may potentially generate pollutants. The activities can be applied to all Town properties owned and operated by the Parks and Recreation Department.

Table 7.10 Parks and Recreation Department Best Management Practices and Implementation Timeframe

Significant Material/ Pollutant Generating Activity	Potential Pollutant	BMP	Implementation Target Date
Ball Field Clay Bin (wood slats) located on pavement.	Particulates from clay	Replace wood slat bin, with impermeable covered storage bin. Elevate bin to remove from drainage path	By Fall 2008
Vehicle/Equipment Storage	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus	Wash vehicles/equipment. If vehicles are stored for long periods of time, use oil drip pans to prevent leaks from entering storm drain system.	Wash equipment after use and before long term storage (>2 weeks). Use oil drip pans under vehicles being stored for >2 weeks. Check oil drip pans every 2 weeks while vehicles are being stored.
Lawn Mowing and Trimming	Phosphorus, Nitrogen	Train crew to maintain clippings on lawn area and away from roads, parking areas, waterbodies or catchbasins. Sweep clippings from impervious surfaces after mowing.	Training program to be established Winter/Spring 2007 and repeated yearly before spring clean-up. All maintenance crew to be trained yearly starting in 2007.
Lawn Fertilizing	Phosphorus, Nitrogen	Test soil before fertilizer application. Continue use of phosphorus free fertilizer	Take soil samples (three samples) at each property in the Spring, Summer and Fall, starting in 2007.
Seasonal Leaf Blowing	Phosphorus, Nitrogen	Blow leaves away from impervious surfaces, waterbodies and components of the storm drain system.	Each fall starting in 2007
Snow Plowing	Sediment, salt/salt-brine if present	Relocate current snow stockpile from clay bin/soil stockpile area, away from drainage path.	By 2008
Winter Salting	Magnesium Chloride	Sweep walkways and steps to prevent magnesium chloride from entering the storm drain system	After each major storm, when needed, and after the Spring snow melt. (2007)
Black Top Parking Areas and Roadways	Winter: salt, sediment, hydrocarbons, heavy metals Summer: heavy metals, hydrocarbons, nitrogen, phosphorus	Work with the Highway Department to incorporate sweeping into Highway Department protocol to prevent potential pollutants from entering the storm drain system	Spring 2007

New Best Management Practices and Measurable Goals

In order to successfully implement the BMPs identified in the previous section, measurable goals should be established. Many times, the BMP is either implemented or not, however there are several intermediate steps that can be identified to ensure the success of BMP implementation. Table 7.11 identifies quantifiable targets to ensure that the BMPs will be implemented by the target dates.

Table 7.11 BMPs and Measurable Goals

BMP to be completed	Implementation Target Date	Quantifiable Target
Replace wood slat bin, with impermeable covered storage bin. Elevate bin to remove from drainage path	By Fall 2008	Include cost of replacing bin in Department Budget Work with Engineering Department to design storage
Wash and Inspect vehicles/equipment. If vehicles are stored for long periods of time, use oil drip pans to prevent leaks from entering storm drain system.	Wash equipment after use and before long term storage (>2 weeks). Use oil drip pans under vehicles being stored for >2 weeks. Check oil drip pans every 2 weeks while vehicles are being stored.	Develop equipment maintenance/inspection log; Use log for all maintenance/inspection.
Train crew to maintain clippings on lawn area and away from roads, parking areas, waterbodies or catchbasins. Sweep clippings from impervious surfaces after mowing.	Training program to be established Winter/Spring 2007 and repeated yearly before spring clean-up.	Develop training protocol, including test. Conduct training seminar Schedule annually
Test soil before fertilizer application. Continue use of phosphorus free fertilizer	Take soil samples (three samples) at each property in the Spring, and Fall, starting in 2007.	Include sample analysis in annual budget Submit analysis reports to Stormwater Coordinator for annual reporting.
Blow leaves away from impervious surfaces, waterbodies and components of the storm drain system.	Each fall starting in 2007	Incorporate into training program Note in monthly reports
Relocate current snow stockpile from clay bin/soil stockpile area, away from drainage path.	By 2008	Identify new area on site map
Sweep walkways and steps to prevent pollutants from entering the storm drain system	After each major storm, when needed, and after the Spring snow melt. (2007)	Incorporate into work program and note activity in monthly report
Work with the Highway Department to coordinate sweeping program to prevent potential pollutants from entering the storm drain system	Spring 2007	Document exchanges and note in monthly report
Identify areas surrounding stormwater features to implement water quality improvements	Spring 2008	Identify water quality restoration areas such as rain gardens at Bailey Park Van Tassell Park, Reis Park near softball field outlet and along Route 139. Spring 2007 Obtain funding for restoration Summer/Fall 2007 Implement projects Spring 2008

B. Highway Department

Description of Department Human Resources- Highway Department responsibilities are conducted by the following staff:

- A Highway Superintendent
- A Deputy Highway Superintendent
- A Highway Foreman
- Two office staff
- Sixteen hourly employees, some with the following responsibilities:
    - One Mechanic
    - Two Mechanic Helpers
    - Seven Motor Equipment Operators (including two Roadside Mowers and one Welder)
    - Two Heavy Motor Equipment Operators
    - Three Skilled Road Maintainers
    - One Road Maintainer

Site Maps- A site map was prepared for the Highway Garage which included the following features:

- An outline of the entire property
- Location of "impervious" areas—paved areas, buildings, covered areas
- Locations where materials are directly exposed to stormwater
- Location of buildings and activity areas (e.g., fueling islands, garages, waste container area, wash racks, hazardous material storage areas, etc.)
- Location of lawn/landscape maintenance areas (mow/no-mow zones).

Additional features consisting of drainage areas and direction of flow, nearby waterbodies and storm drain inlets and existing stormwater controls will be added to the site maps when the Town of Somers obtains its geographic information system.

This map is currently not in GIS or FactsViewer format and therefore, it is not included in this plan. The map is available for viewing in the Stormwater Coordinators office. The Town anticipates obtaining its GIS by 2008. When the GIS is acquired, this information will be incorporated as a datalayer.

List of Significant Materials, Pollution Generating Activities, and identification of Potential Pollutants- An inventory of bulk materials (grass clippings, wood chips, stone, salt, lumber, mulch, soil, etc.) stored at each site and potential pollution generating activities was undertaken on a site by site basis. The following Table 7.12 contains a list of significant materials (stored outside) and pollution generating activities for each site, the geographic location of the materials and/or activities, and the potential pollutant threat.

Table 7.12 Somers Highway Garage and Roadways

Significant Material/ Pollutant Generating Activity	Geographic Location	Potential Pollutant
Town/State Roadways	Town-wide	Salt, Sediment, Metals, Hydrocarbons
Roadside Maintenance Activities (Mowing, Trimming, etc.)	Town-wide (Seasonal)	Phosphorus, Nitrogen, etc.
Winter Road Maintenance Activities	Town-wide (Seasonal)	Salt, Sediment, Metals, Hyrdocarbons, etc.
Roadway to and around back lot	Highway Garage-Back Lot	Sediment and associated pollutants
Impervious area surrounding Highway building	Highway Garage	Sediment, Salt, Metals, Hydrocarbons, etc.
Equipment Storage Areas	Highway Garage	Sand, Salt, Metals, etc.
Winter Cold Patch Stockpile	Highway Garage	Metals, Hydrocarbons
Salt Shed	Highway Garage	Calcium Chloride
Old street sweeping sand Stockpile	Highway Garage-Back Lot	Sediment
Drainage Pipe Storage	Highway Garage-Back Lot	Metals
Used Drainage Pipe Storage	Highway Garage-Back Lot	Metals
Topsoil Stockpile	Highway Garage-Back Lot	Sediment

Existing Policies Regarding Potential Pollutant Generating Activities-

Equipment- The Highway Department currently utilizes the following vehicles to conduct work related to maintaining town roads and road rights-of-ways:

- 21 Trucks
- 3 Backhoes
- 2 Front End Loaders
- 1 Skid Steer
- 26 Plows

Equipment Maintenance- Equipment is currently maintained on an as needed basis. Winter maintenance equipment is inspected during the fall, before the onset of winter.

Training- Training regarding proper use and maintenance of equipment is currently conducted in an oral fashion on an "as needed basis".

Winter

During the winter months, the Highway Department's primary responsibilities consist of:

- Removing Snow and Ice from Roadways;
- Addressing public complaints; and
- Undertaking emergency road repair/clearing work.

Snow and Ice Control

- *Routing*-There are currently 13 winter road maintenance routes, which require a minimum of 16 trucks, up to a maximum of 23 trucks for snow and ice removal. Routes have been identified on a Town of Somers Road Map.
- *Material Use*-The Highway Department does not use sand for winter road maintenance purposes. However salt and a salt-brine mixture are used.
- *Equipment Calibration*- Equipment is currently not calibrated. The amount of salt/salt brine used during winter months is hand calculated based on number of buckets, weight and solution used. Currently, two trucks have calibrators, but they are not put to use.

Spring/Summer/Fall

During the Spring/Summer/Fall the Highway Department's primary responsibilities consist of:

- Road Drainage Work- Road drainage work consists of the following activities:
    - *Catchbasin Cleaning*- Conducted from March-April only (due to Westchester County West-Nile Virus Program). Sometimes opportunities exist to clean catchbasins during the winter months. Cleaning is based on spot-checking and complaints. On rainy days or before heavy storms crews clean the pathway and tops to catch basins that they know are problematic. These areas rotate after each storm.
    - *Catchbasin Repair/Replacement*- Occurs based on spot-checking and complaints.
    - *Curb Replacement*- Occurs based on spot-checking and complaints.
    - *Sediment Trap Installation and Maintenance*- Sediment traps are typically installed prior to the point of discharge around lakes and waterbodies throughout town. When road drainage work occurs, new sediment traps are constructed and existing traps are maintained, based on spot-checking and complaints.

- Road Paving- The following activities are associated with road paving:
    - Pothole Patching- Occurs based on spot-checking and complaints.
    - Road Paving- In 2002 all Town roads were inspected and assigned a condition rating from 1-10 (1-poor, 10 best). A ten-year paving program was established. The poor roads are addressed before the best roads, unless there is a change in road condition. Often times roads that are shorter in length and in proximity to a larger road being paved, will also be paved.

        - Road Bed Preparation- Performed by the Highway Department.
        - Driveway Apron Paving- Performed by Highway Department
        - Road Paving- Performed by a subcontractor with Highway Department supervision

- Roadside Maintenance- The following activities are included in roadside maintenance:
    - Tree Removal- Standing, dead or overhanging branches are removed. This work is based on spot-checking and complaints. All brush < 12 inches is chipped. All brush >12 inches is loaded into a truck and stockpiled at the Highway Department (Back-Lot) until annual tub grinding occurs.
    - Roadside Mowing- Based on spot-checking and complaints. There is no application of herbicides or pesticides.
    - Lawn Repair- Includes grading, raking, seeding and mulching lawn areas that have been impaired by Highway Department activities.
    - Litter Pick-Up

Best Management Practices and Potential Pollutants

Table 7.13 lists the Best Management Practices for each activity which may potentially generate pollutants. The activities can be applied to all Town Roads and the Highway Garage. Some pollutant generating activities (such as winter road maintenance) require the development of new polices and guidelines. Development of the policies and guidelines will assist with preventing pollution from entering the Town's waterways. Additional policies and guidelines are explained in the next section.

Table 7.13 Highway Department Best Management Practices and Implementation Timeframe

Significant Material/ Pollutant Generating Activity	Potential Pollutant	BMP	Implementation Target Date
Town/State Roadways (including catchbasins)	Salt, Sediment, Metals, Hydrocarbons, etc.	Implement a street sweeping program; Create a catchbasin maintenance and replacement program for town roads- discuss issue with state for state roads Create a sediment trap maintenance program	Winter/ Spring 2007
Roadside Mowing and Trimming Activities	Phosphorus, Nitrogen	Incorporate street blowing to ensure trimmings do not enter storm drain system	Spring 2007
Winter Road Maintenance (Snow and Ice) Activities	Salt, Sediment, Metals, Hydrocarbons, etc.	Develop a Calibration training program Assess automatic calibration equipment pilot program	Winter 2006/2007
Roadway to and around back lot	Sediment and associated pollutants	Spread layer of woodchips and/or crushed stone along dirt roadways leading to and around back-lot	By Spring 2007
Impervious area surrounding Highway building	Sediment, Salt, Metals, Hydrocarbons, etc.	Sweep parking area at least monthly and during winter months sweep more frequently (if needed) in relation to storm conditions	Winter/Spring 2007 and at least monthly thereafter.
Equipment Storage Areas	Sand, Salt, Metals, etc.	Wash equipment after use and before long term storage (>2 weeks). Use oil drip pans under vehicles being stored for >2 weeks. Check oil drip pans every 2 weeks while vehicles are being stored.	Institute practice as of Spring 2007
Winter Cold Patch Stockpile	Metals, Hydrocarbons	Implement run-off control practice around stockpile.	Institute practice for Winter 2008
Salt Shed	Calcium Chloride	Keep perimeter and access/egress area clear of sediment, salt and other debris. Sweep during and after every storm event.	Institute practice for Winter 2006/2007
Old street sweeping sand Stockpile	Sediment	Implement run-off control practice around stockpile.	Institute practice Spring 2008
Topsoil Stockpile	Sediment	Implement run-off control practice around stockpile.	Institute practice Spring 2008
Used Drainage Pipe Storage	Metals	Implement run-off control practice around stockpile.	Institute practice Spring 2008

New Policies and Procedures Regarding Potential Pollutant Generating Activities- Given the Town of Somers responsibilities in relation to stormwater, the existing policies and procedures for managing town roads must be altered to consider water quality. The following new and revised policies will be implemented by the Highway Department so that the pollutant potential from highway activities can be reduced. It is important to note that there are some responsibilities of the Highway Department which do not impact water quality, but may pose a contradiction in work programming for water quality protection due to staff and budget limitations. For example, road paving is an activity which occurs during work season one, at the same time that road drainage work and roadside maintenance occurs. Many times there are not enough staff to conduct all three activities simultaneously and budgets may not be conducive to subcontracting or hiring additional assistance. Therefore, careful balancing of highway responsibilities and water quality protection measures must occur.

Work responsibilities of the Highway Department are divided into two seasons- work season one consists of work conducted during the spring, summer and fall. Work season two consists of work conducted in the winter. The new policies and procedures regarding potential pollutant generating activities are described in relation to the two work seasons.

WORK SEASON ONE (SPRING, SUMMER AND FALL)

A. Training

One of the most important aspects of water quality protection is ensuring that employees are trained according to their job responsibilities. The Town of Somers Highway Superintendent will coordinate training for all Highway Department employees. A formal training session will be held before work season one occurs and from time to time seasonal refresher classes will be held to ensure that seasonal operations run smoothly. Training shall include all new policies and procedures discussed in this section, including documentation of all job responsibilities.

Spring 2007 Training will be held on (Date to be supplied by Highway Superintendent)

B. Equipment

Job performance largely depends on whether or not equipment is working properly. Prior to work season one, each piece of equipment should be inspected and where necessary repaired to ensure ongoing operation.

Formal Inspection- All equipment shall be mobilized on one day for a formal equipment inspection in preparation of the coming season. Before each

piece of equipment is inspected, employees shall be taught the following parameters of the equipment:

- Strengths and Weaknesses
- Performance Capabilities
- Load and Weight Limits
- Specifications
- Safety Factors
- Attachments and Modifications

Once the above information is disseminated, a detailed and complete inspection should be made of each piece of equipment and all accessories.

The detailed equipment inspection checklist (Appendix D) shall be completed for each piece of equipment, including accessories. The inspection sheets must be signed, dated and filed in the Highway Superintendent's office. In addition, copies of the inspection sheets should be submitted to the Stormwater Coordinator no later than five (5) days after the formal training occurs.

Daily User Inspections- In addition to formal inspections, before each operator uses a piece of equipment, the equipment should be inspected for proper operation and safety. Daily inspections are not as detailed as formal inspections.

A daily inspection card (as shown in Appendix E) shall be completed and initialed for each piece of equipment. This card shall be reproduced and a copy is to be kept in the cab of each truck during operational hours. At the end of the shift, the operator shall submit the card to the Highway Superintendent.

C. Routing

Currently routing is not applied to work season one activities, such as road drainage work or roadside maintenance. Rather, work is often times responsive, addressing a spot-checked problem or complaint and sometimes an emergency situation.

The routing system currently used for winter maintenance activities should be used throughout the year, regardless of season or activity.

As Season One activities are described, the Routing system contained in Table 7.14 will be referenced. Table 7.14 also provides the general location, the subwatershed area and the management concerns encompassed within each route. The subwatershed area is included because of the effect that certain maintenance activities may have on pollution generation.

Table 7.14 Highway Routes and Subwatershed Areas

Route Number	Name of Route	General Location	Subwatershed Areas	Management Concern
1	Granite Springs	Northwest Corner	Muscoot River,	TSS, Phosphorus, Wetlands,
			Hallocks Mill Brook	Phosphorus, Pathogens
2	State Roads	East/Central	Plum Brook	Pathogens, TSS, Phosphorus, Wetland
			Angle Fly Brook	Wetland
			Muscoot Reservoir	Phosphorus
			East Branch Croton River	Modify drainage outlets on roads parallel to the east branch of Croton River
			Croton River	Phosphorus
3	Amawalk	West/Central	Muscoot River	TSS, Phosphorus, Wetlands
			Amawalk Reservoir	Phosphorus, Increase Travel Time b/w road and reservoir
			Hallocks Mill Brook	Pathogen, Phosphorus, Reduce flow/velocity along roads adjacent to trout streams
4	Shenorock	North	Amawalk Reservoir	Phosphorus, increase travel time b/w road and reservoir
			Lake Shenorock	TSS, Phosphorus, septics, centralized stormwater controls @ lake
5	Lincolndale	North	Plum Brook	Pathogens, TSS, Phosphorus, Wetland
6	Wilner Road	North	Plum Brook	Pathogens, TSS, Phosphorus, Wetland
			Muscoot Reservoir	Phosphorus
7	Anasville	Northeast	Croton Falls Reservoir	*N/A*
			East Branch Croton River	Modify drainage outlets on roads parallel to the east branch of Croton River
			Croton River	Phosphorus
8	Deans Bridge	Northeast	Croton River	Phosphorus
9	Purdys	East	Croton River	Phosphorus
10A	Lake Road Pt. 1	Central	Angle Fly Brook	Wetland
			Amawalk Reservoir	Phosphorus, increase travel time b/w road and reservoir
10B	Lake Road Pt. 2	Central	Angle Fly Brook	Wetland
			Amawalk Reservoir	Phosphorus, increase travel time b/w road and reservoir

Table 3.7M Highway Routes and Subwatershed Areas (Continued)

11A	Billingsly, Cobbling Rock	South/Central	Angle Fly Brook	Wetland
			Muscoot River	TSS, Phosphorus, Wetlands
11B	Plum Brook Sunderland	South/Central	Angle Fly Brook	Wetland
			Muscoot River	TSS, Phosphorus, Wetlands
12A	South Somers Pt. 1	Southwest	Hallocks Mill Brook	Pathogen, Phosphorus, Reduce flow/velocity along roads adjacent to trout streams
12B	South Somers Pt. 2	Southwest	East New Croton Reservoir	Expand drainage path along Route 35

D. Street Sweeping

The Highway Department discontinued street sweeping activities when the use of sand was discontinued as part of snow and ice control. During Spring 2006, the Highway Department conducted a pilot street sweeping program, targeting the North/Northwest portion of Town. An ideal street sweeping program would be to street sweep the entire Town at least once during work season one and street sweep priority basins several times a year (during season one and season two). Examination of Table 3.7M identifies the following routes as having areas with a management concern related to total suspended sediment (TSS).

- Route #1 Granite Springs - Muscoot River Subwatershed,
- Route #2 State Roads - Plum Brook Subwatershed,
- Route #3 Amawalk - Muscoot Subwatershed,
- Route #4 Shenorock - Lake Shenorock Subwatershed,
- Route #5 Lincolndale - Plum Brook Subwatershed
- Route #6 Wilner Road - Plum Brook Subwatershed
- Route #11A Billingsly / Cobbling Rock -Muscoot River Subwatershed
- Route #11B Plum Brook / Sunderland-Muscoot River Subwatershed

Focus should be placed on the listed subwatershed area within each of the listed routes. Using the subwatershed as the point of focus will reduce the time necessary for the street sweeping activity.

Street sweeping should occur on these specific routes at the beginning of work season one and prior to the end of work season one. In addition, the Highway Department, based on department knowledge, should further identify problem areas (typically low lying areas and areas that frequently collect sediment) within the identified subwatersheds prior to the start of work season one. The list of problem areas should be identified on a Town road map and should be provided to the Stormwater Coordinator no later than 5 days after identification.

Throughout work season one and work season two, these identified subwatershed areas should be spot-checked after severe storms and at least on a monthly basis. If deemed necessary by inspection, street sweeping or manual removal of sediment should occur in the problem areas and possibly throughout the subwatersheds (provided time and resources).

Street sweeping activities, including spot-checking, should be noted in a work log in a manner identified in Appendix F. A copy of the street sweeping work log should be provided to the Stormwater Coordinator on a quarterly basis.

E. Road Drainage Work

Road drainage work consists of catchbasin cleaning, catchbasin repair and catchbasin replacement as well as sediment trap installation and maintenance.

These activities are currently conducted as time allows and based on spot-checking and complaints. In order to improve implementation of these activities based on water quality, the routing system noted earlier should be employed. The routing system is incorporated into each of the new policies regarding catchbasins and sediment traps. In addition, it is important to note that road drainage work occurs on all Town owned / operated properties and properties where the Town has right-of-way access. Activities will not be performed on property owned by New York State or held in private ownership unless there are cooperative agreements in place to allow such activity.

Catchbasin Replacement- Most of the catchbasins installed in the 1960's, 70's and 80's were installed without sumps. After 1990 the standards for new construction were changed to require a minimum 18 inch sump within the catchbasin. The Highway Department did not incorporate these new standards, particularly since the installation of catchbasins by the Highway Department has been minimal. In addition some catchbasins located throughout Town have solid concrete tops, which make inspection impossible. These catch basins should be retrofitted with conventional catchbasin frames and grates to allow for inspection. As such, a catchbasin replacement program should be developed. Catchbasins without sumps and catchbasins with concrete tops located on Town owned/operated property and along priority routes (in designated subwatersheds) should be targeted for upgrade to current standards. The following routes and subwatersheds will receive water quality benefits from a catchbasin replacement program:

- Route #1 Granite Springs - Muscoot River Subwatershed,
- Route #2 State Roads - Plum Brook Subwatershed,
- Route #3 Amawalk - Muscoot Subwatershed,
- Route #4 Shenorock - Lake Shenorock Subwatershed,
- Route #5 Lincolndale - Plum Brook Subwatershed
- Route #6 Wilner Road - Plum Brook Subwatershed
- Route #11A Billingsly / Cobbling Rock -Muscoot River Subwatershed
- Route #11B Plum Brook / Sunderland-Muscoot River Subwatershed

While it is the intent to replace all catchbasins without sumps and catchbasins with concrete tops, the first priority should be to target catchbasins in need of replacement on Town owned or operated property and along priority routes / subwatersheds. During work season one, the Highway Department will replace up to 10 catchbasins per year on Town owned properties and along priority routes / subwatersheds. The catchbasin replacement work log (Appendix G) shall be completed for each catchbasin replacement. A copy of the catchbasin work log should be provided to the Stormwater Coordinator on a quarterly basis.

Catchbasin Maintenance- Catchbasin maintenance should occur in a coordinated manner with street sweeping activities at the start of work season one and prior to the beginning of work season two. All 3,000 or so catchbasins throughout

Town should be inspected and cleaned if necessary. Given time and resources, catchbasins located on Town owned or operated property and in the following routes and subwatershed will be prioritized for catchbasin maintenance activities, including spot-checking:

- Route #1 Granite Springs - Muscoot River Subwatershed,
- Route #2 State Roads - Plum Brook Subwatershed,
- Route #3 Amawalk - Muscoot Subwatershed,
- Route #4 Shenorock - Lake Shenorock Subwatershed,
- Route #5 Lincolndale - Plum Brook Subwatershed
- Route #6 Wilner Road - Plum Brook Subwatershed
- Route #11A Billingsly / Cobbling Rock -Muscoot River Subwatershed
- Route #11B Plum Brook / Sunderland-Muscoot River Subwatershed

At the start of work season one the Highway Department will inspect and clean catchbasins located on Town owned or operated property and along priority routes / subwatersheds. All inspection and maintenance activities should be logged into the Catch Basin Inspection / Maintenance Data Sheet (Appendix H). These data sheets should be submitted on a quarterly basis to the Stormwater Coordinator.

Sediment Trap Installation and Maintenance – As recommended in the 1994 Town of Somers Master Plan, the Town Highway Department reviewed all drainage discharge points and installed sediment traps in areas that were feasible to alleviate erosive energies and facilitate silt removal. These sediment traps are typically maintained based on spot-checking and complaints. The Highway Department does not install or maintain sediment traps on State property or property held in private ownership, unless cooperative arrangements have been made. Where necessary, the Town will work to acquire cooperation. For water quality purposes, installation of sediment traps along the following Routes / subwatersheds should occur:

- Route #2 State Roads-East Branch Croton River
- Route #7 Anasville-East Branch Croton River
- Route #10B Lake Road Pt. 2- Amawalk Reservoir
- Route #12A South Somers Pt. 1- Hallocks Mill Brook

Sediment traps located throughout the Town should be cleaned at least yearly. However, for water quality purposes, maintenance of sediment traps along the following Routes / subwatersheds should occur at the beginning of work season one and should be inspected and cleaned if necessary prior to the onset of work season two. All work should be documented in the sediment trap inspection / maintenance data sheet (Appendix I). This data sheet shall be submitted on a quarterly basis to the Stormwater Coordinator.

- Route #1 Granite Springs - Muscoot River Subwatershed,
- Route #2 State Roads - Plum Brook Subwatershed,
- Route #3 Amawalk - Muscoot Subwatershed,
- Route #4 Shenorock - Lake Shenorock Subwatershed,
- Route #5 Lincolndale - Plum Brook Subwatershed
- Route #6 Wilner Road - Plum Brook Subwatershed
- Route #11A Billingsly / Cobbling Rock -Muscoot River Subwatershed
- Route #11B Plum Brook / Sunderland-Muscoot River Subwatershed

F. Roadside Maintenance

Roadside maintenance currently consists of tree removal, roadside mowing, lawn repair and litter pick-up. Roadside mowing and lawn repair can have the greatest impact to water quality because of the residual debris remaining after the activity occurs. For example, grass clippings and sediment may enter the street because of mowing and lawn repair activities. As a policy, after all roadside maintenance work, crewman should sweep or use a blower to ensure that residual debris is not left on impervious surfaces.

As part of Work Season One training, sweeping/blowing of residual debris should be incorporated into the job responsibility.

WORK SEASON TWO (WINTER)

A. Training

One of the most important aspects of water quality protection is ensuring that employees are trained according to their job responsibilities. The Town of Somers Highway Superintendent will coordinate training for all Highway Department employees. A formal training session will be held before the start of work season two and from time to time seasonal refresher classes will be held to ensure that seasonal operations run smoothly. Training shall include all new policies and procedures discussed in this section, including documentation of all job responsibilities. In addition, work season two training should include the following:

- Properly covered storage
- Good maintenance of storage areas (after loading, all areas should be swept clean)
- Good maintenance and knowledge of equipment
- Proper spreader calibration
- Proper chemical application
- Plowing and spreading routes
- Plows, spreaders and loaders
- Emergency repair and refueling

- Preventive maintenance
- Quantities of chemicals and abrasives for varying conditions
- Special deicing problems (bridges, curves, ramps and intersections)
- Safety practices and equipment

Winter 2007/2008 Training will be held on (Date to be supplied by Highway Superintendent)

B. Equipment

Job performance largely depends on whether or not equipment is working properly. Prior to work season one, each piece of equipment should be inspected and where necessary repaired to ensure ongoing operation.

Formal Inspection- All equipment shall be mobilized on one day for a formal equipment inspection in preparation of the coming season. Before each piece of equipment is inspected, employees shall be taught the following parameters of the equipment:

- Strengths and Weaknesses
- Performance Capabilities
- Load and Weight Limits
- Specifications
- Safety Factors
- Attachments and Modifications

Once the above information is disseminated, a detailed and complete inspection should be made of each piece of equipment and all accessories including:

- Spreaders
- Controls
- Plows
- All Electrical Equipment
- Safety Equipment
- Repairs and Procedures
- Preventative Maintenance
- Route Familiarization.

The detailed equipment inspection checklist (Appendix D) shall be completed for each piece of equipment, including accessories. The inspection sheets must be signed, dated and filed in the Highway Superintendent's office. In addition, copies of the inspection sheets should be submitted to the Stormwater Coordinator no later than five (5) days after the formal training occurs.

During the formal inspection for winter maintenance equipment, all spreaders shall be calibrated (even though two trucks have automatic calibration equipment) and calibration cards shall be kept in the vehicles with copies provided to the Highway Superintendent. For trucks without automatic calibration equipment, calibration processes are fully described in Appendix J.

The two trucks equipped with automatic calibration will be used to test the adequacy of the equipment. This calibration pilot program will be conducted during the 2006/2007 Work Season Two time period. At the end of Work Season Two, a final analysis of the automatic calibration pilot program will be conducted. A written summary of the analysis and findings will be submitted to the Stormwater Coordinator no later than 5 days after the end of Work Season Two.

Daily User Inspections- In addition to formal inspections, before each operator uses a piece of equipment, the equipment should be inspected for proper operation and safety. Daily inspections are not as detailed as formal inspections.

A daily inspection card (as shown in Appendix E) shall be completed and initialed for each piece of equipment. This card shall be reproduced and a copy is to be kept in the cab of each truck during operational hours. At the end of the shift, the operator shall submit the card to the Highway Superintendent.

C. Routing

Currently routing is applied to work season two activities. However the subwatershed management concerns (Table 3.7M) are currently not incorporated into work season two activities. These management concerns will be considered by all operators as snow and ice control proceeds throughout season two.

D. Street Sweeping (Work Season Two)

Examination of Table 3.7M identifies the following routes as having areas with a management concern related to total suspended sediment (TSS).

- Route #1 Granite Springs - Muscoot River Subwatershed,
- Route #2 State Roads - Plum Brook Subwatershed,
- Route #3 Amawalk - Muscoot Subwatershed,
- Route #4 Shenorock - Lake Shenorock Subwatershed,
- Route #5 Lincolndale - Plum Brook Subwatershed
- Route #6 Wilner Road - Plum Brook Subwatershed
- Route #11A Billingsly / Cobbling Rock -Muscoot River Subwatershed
- Route #11B Plum Brook / Sunderland-Muscoot River Subwatershed

Focus should be placed on the listed subwatershed area within each of the listed routes. Using the subwatershed as the point of focus will reduce the time necessary for the street sweeping activity.

At the beginning of work season two, the Highway Department, based on department knowledge, should review the list of problem areas (typically low lying areas and areas that frequently collect sediment) identified and mapped during work season one and determine whether or not the list is valid in relation to work season two activities. The list of problem areas and the associated map should be provided to the Stormwater Coordinator no later than 5 days after verification/identification.

Throughout work season two, these identified subwatershed areas should be spot-checked after severe storms and at least on a monthly basis. If deemed necessary by inspection, street sweeping or manual removal of sediment should occur in the problem areas and possibly throughout the subwatersheds (provided time and resources).

Street sweeping activities, including spot-checking, should be noted in a work log in a manner identified in Appendix F. A copy of the street sweeping work log should be provided to the Stormwater Coordinator on a quarterly basis.

APPENDIX A. STORMWATER MAPPING PROPOSAL

APPENDIX B. TOWN POST-CONSTRUCTION STORMWATER CONTROL ORDINANCE

APPENDIX C.

SOMERS GOOD HOUSEKEEPING ACTIVITIES CHECKLIST

APPENDIX D. DETAILED EQUIPMENT CHECKLIST

APPENDIX E. DAILY EQUIPMENT CHECKLIST

APPENDIX F. STREET SWEEPING LOG

APPENDIX G. CATCH BASIN REPLACEMENT WORK LOG

APPENDIX H. CATCH BASIN INSPECTION MAINTENANCE DATA SHEET

APPENDIX I. SEDIMENT TRAP INSPECTION MAINTENANCE DATA SHEET

APPENDIX J. SPREADER CALIBRATION