

City of Groton Small MS4 Permit 2004 - 2009

Permit Number: 2004-0001

Permit Type:General

Date Issue: 1/9/2004

Date Expire: 1/8/2009

Issued By: ConnDEP

Co-Permitted With:

Name: City of Groton
295 Meridian Street

Groton CT 06340

Population: 9,000

Households: 5,000

Area (ac): 3.20

Website: <http://www.cityofgroton.com/>

Receiving Streams: Grove Brook, Bliven Brook, Fairview Brook, Tributary Birch Plain Creek

Receiving Waterbodies: Lake George, Thames River, Trails Pond, Birch Plain Creek, Bakers Cove, Long Island Sound, Pine Island Bay, Beach Pond

Receiving Watersheds: 2000, 3000

Reference Map:

Groton

Connecticut Subregional

Basins and Surface

Water Flow Directions

November 01, 1999

http://resac.uconn.edu/maps_data/ct_maps/pdfmaps/GROTON_bsn.pdf

Chief Elected Official / Principal Executive Officer:

Dennis L. Popp

Mayor

(860) 446-4101

poppd@yurservice.com

Primary Contact:

Al Chapman

Senior Engineering Technical Aide

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Secondary Contact:

Bill Lewis

Public Works Project Engineer

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Contracted Resources:

City of Groton Small MS4 Permit 2004 - 2009

Control Measures performed for this Permit:

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Public Participation/Involvement

What is Required?:

To satisfy this minimum control measure, the operator of a regulated small MS4 must:

1. Comply with applicable State, Tribal, and local public notice requirements; and
2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal storm water management program and, therefore, suggests that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:

1. Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation;
2. Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers;
3. A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and
4. A conduit to other programs as citizens involved in the storm water program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, as encouraged by EPA.

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Goals performed for this Control Measure:

1. Conservation Commission Participation

Participate in Conservation Commission meetings to coordinate Stormwater BMP implementation actions.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Conservation Commission Stormwater Meetings

Al Chapman

S.E.T.A.

12/18/2006

The Commission was contacted so that the January Meeting's agenda can include discussion of the revised Stormwater Pollution Prevention Plan and actions planned for 2007 to meet each control measure.

2. Stormdrain Marker Program

Marking storm drains is an important and simple activity that concerned citizens especially students can do. The markings will contain messages such as "DoNot Dump - Drains Directly to Long Island Sound".

Start Date: 7/1/2004

End Date: 6/30/2006

Dennis Popp

Mayor

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Brochures

Al Chapman

S.E.T.A.

7/1/2004

Boy Scouts handed out brochures to households in the vicinity of the catch basins being marked.

Distribute Stormwater brochures

Al Chapman

S.E.T.A.

7/1/2004

The Boys Scout during the stenciling of Catch Basins will hand out brochures (Something New is Happening in Your Neighborhood) to all households in the vicinity of the catch basins being stenciled.

Notification of Media

Al Chapman

S.E.T.A.

7/1/2004

The New London Day Newspaper was notified. An article was posted in the newspaper on July 7, 2005. The headline was "Scouts Mark Storm Water Drains In Groton In Effort To Help Sound"

Stenciling

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Al Chapman S.E.T.A.
7/1/2004

Boy Scouts marked out all catch basins in the City of Groton.

Stenciling Catch Basins

Al Chapman S.E.T.A.
7/1/2004

The city has acquired 500 storm drain stencils reading "Drains to Waterways and Long Island Sound, No Dumping" The local Boy Scouts will be placing the stencils on the catch basins.

Maintain Stenciling on catch basins (year3)

Bill Lewis P.W.P.E
12/15/2006

The City has checked the catch basin stenciling. Any damaged stenciling has been replaced. In addition, water in the catch basins was observed for any evidence of illicit discharges.

Maitain Stenciling on Catch Basins

Bill Lewis P.W.P.E
1/1/2007

Ths City will check and maintain all catch basin stenciling, all damaged stenciling will be replaced. In addition all catch basins will be inspected for any evidence of illicit discharges.

3. Community Clean-ups

Invole the community through this action to complete clean ups along local water ways, beaches and storm drains. Using volunteers for community clean ups will give citizens first-hand knowledge of the quality of local water bodies and provide a cost-effective means of completing this work.

Start Date: 7/1/2004 **End Date:** 6/30/2009

Al Chapman S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP: Not Applicable

Actions performed for this goal:

Shore cleanup group

Al Chapman S.E.T.A.
12/6/2004

A group will be organized within the next 6 months to clean up of the shores of Birch Plain Creek and Bakers Cove. While cleanup is taking place volunteers will check outfalls for illicit discharges.

Shore cleanup

Al Chapman S.E.T.A.
3/24/2005

Volunteers from Pfizer, Inc., city employees and some city residents did a cleanup of Birch Plain Creek and Baker's Cove. The cleanup was done to coincide with Earth Day. The New London Day was notified and the event was published in the Day newspaper. There were no illicit

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discharges found.

Shoreline cleanup along Elks Club property

Bill Lewis P.W.P.E.
6/11/2006

Volunteers from the Lodge and Boy Scout Troop 14 did a clean up of all shore line property.

Shoreline Clean Up

Bill Lewis P.W.P.E.
6/10/2007

Volunteers from local Boy Scouts and the New London J.R.O.T.C. program will perform shoreline cleanups of the Elks property, Eastern Point beach and the Costa property.

4. Comply with state and local public notice and FOI requirements

The volunteer organizations will be made aware of all state and local public notice and FOI requirements.

Start Date: 7/1/2004 **End Date:** 6/30/2009

Jeff Carver J.E.T.A.

Permit Years: Year 1: X Year 2: X Year 3: X Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Informing the public

Dennis Popp Mayor
12/6/2004

Inform the public about availability of annual reports and Part B of the registration for the general permit and public workshops and meetings. Post notices announcing upcoming meetings and report availability at the City of Groton Municipal Building and the local newspapers. Notices posted in the City of Groton Municipal Building and the New London Day newspaper and will be ongoing throughout the permit term.

Research

Al Chapman S.E.T.A.
12/14/2004

Checked state and local FOI requirements with City Clerk and other agencies.

Posting Notices

Dennis Popp Mayor
12/18/2006

Post notices announcing the availability of the draft plan and the annual reports for review and discuss the plan and take comments. Hold annual public workshops prior to the annual update to the city council and prior to the annual budget development. Post notices at least 30 days prior to submittal of Part B of the registration for the general permit and 30 days prior to submittal of the annual report each year. Hold subsequent workshops annually, prior to annual update to the City Council/ Mayor.

5. Establish Citizen Watch Groups

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Establish citizen watch groups in a certain percentage of neighborhoods and complete outreach to every different population sector. Citizens watch groups can aid local enforcement authorities in the identification of polluters

Start Date: 7/1/2004

End Date: 6/30/2007

Dennis Popp

Mayor

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Establish Coastal Watch Group

Bill Lewis

P.W.P.E.

4/1/2007

Local boaters, fisherman, etc. will be contacted to determine if there is interest in the establishment of a local watch group. If there is an interest, the feasibility of establishing such a group by a local ordinance will be evaluated. If at all feasible, a local ordinance establishing the watch group will be promulgated. Otherwise the watch group will work informally to identify and report any polluters or pollution conditions.

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Public Education and Outreach

What is Required?:

To satisfy this minimum control measure, the operator of a regulated small MS4 needs to:

1. Implement a public education program to distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local waterbodies and the steps that can be taken to reduce storm water pollution; and
2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

An informed and knowledgeable community is crucial to the success of a storm water management program since it helps to ensure the following:

1. Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important. Public support is particularly beneficial when operators of small MS4s attempt to institute new funding initiatives for the program or seek volunteers to help implement the program; and
2. Greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.

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Goals performed for this Control Measure:

1. Develop educational resources

Develop an infra-structure resource to support the public education and outreach program.

Develop brochures (bilingual if necessary) to support the Public Meetings - Print Media Goal in the Public Participation and Involvement Minimum Control Measure.

Create a storm water hotline for information and for citizen reports on polluters.

Identify and train volunteer educators to be used for a Public Education Task Force.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: X Year 2: X Year 3: X Year 4: X Year 5: X **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Educate dog owners about picking up dog waste

Al Chapman

S.E.T.A.

1/5/2004

Signs for picking up dog waste made and installed in city parks. Attached to the signs are dispensers for polyethylene gloves and a fact sheet about dog waste. Garbage cans are provided for disposal and are emptied daily.

Install and maintain signs at coastal access areas

Al Chapman

S.E.T.A.

1/5/2004

Make and install signs telling people not to dump at coastal access areas. Signs will be inspected annually and repaired when necessary.

Brochures

Al Chapman

S.E.T.A.

10/18/2004

Brochures have been developed and to be distributed through the postal service. An ample amount of brochures will be kept at City Hall for distribution.

Conservation Commission

Al Chapman

S.E.T.A.

12/22/2004

Meet with Conservation Commission to discuss Stormwater Plan.

Stormwater Hotline

Al Chapman

S.E.T.A.

12/23/2004

Residents can call The City of Groton Highway Engineering Office between the hours of 7:00AM - 4:30PM. The call will be entered into the City of Groton Roadway Management System Program as a concern/request. It will then be addressed promptly. Calls from 4:30PM - 7:00AM will be taken by the City of Groton Police Department and forwarded to the City of Groton

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Highway Department. In case of an emergency the City of Groton Police Department will contact the person on call for the Highway Department.

Comcast and TVC public television

Jeff Carver J.E.T.A.
12/14/2005

Received airing commitment from Comcast and TVC Public Access channel 12 for the dates of 12/20/2005 at 6PM and 12/21/2005 at 10PM to air the video "After the Storm". Additionally, they committed to airing the video once a month on a regular basis. Updated videos in the future to vary the presentation of the Stormwater content.

Maintain dog waste and coastal access signs

Bill Lewis P.W.P.E.
12/14/2006

All signs were checked for damage. They were in good condition and no repairs were needed.

Make brochures Available at City Hall

Bill Lewis P.W.P.E.
12/14/2006

Brochures have been placed in the lobby at City Hall and are available to any interested persons.

Distribute additional brochures

Bill Lewis P.W.P.E.
3/5/2007

Locate effective means for distributing brochures and implement if feasible. In addition, a letter will be prepared to be distributed with the brochures describing the City's storm water program.

2. Expand educational resources

This goal is for developing infra-structure resource to support your public education and outreach program.

Create an informational web site that describes your city, storm water issues, etc.

Develop a school curricula that can be used to educate students about storm water issues.

Start Date: 7/1/2004 **End Date:** 1/8/2009

Jeff Carver J.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Coordinate with the Town of Groton

Al Chapman S.E.T.A.
2/7/2005

The Town of Groton is responsible for all schools located in the City of Groton. The City will coordinate with the town for all distributions of fact sheets.

Field Trip Eastern Point School

Jeff Carver J.E.T.A.

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12/19/2005

Approximately 50 students had a field trip to the City of Groton Municipal Building. Included in this field trip was a short presentation to educate students on stormwater. Stormwater brochures were distributed to the students during the presentation.

Education Materials to Board of Education

Jeff Carver

J.E.T.A.

12/23/2005

Education material (Informational brochures, and the "After the Storm" video co-produced by EPA and The Weather Channel on 12/23/2005") given to Groton Board of Education for distribution to grades 4-12

Copy of draft to City Clerk

Jeff Carver

J.E.T.A.

1/5/2006

Two (2) copies of the draft Small MS4 Plan were given to the City Clerk for public viewing.

Copy of draft plan to Bill Memorial Library

Bill Lewis

P.W.P.E.

1/3/2007

Two (2) copies of the draft Small MS4 Plan were given to the Bill Memorial Library for public viewing.

3. City Website Update (Year1)

Stormwater plans, brochures, informational links and related information will be placed on the City of Groton website and the Groton Utilities website.. The information may include discussion of storm water management issues with updates performed annually. Topics may include a description of the hydrographic cycle, impacts of increased development, pollutants from developed areas, and impacts to local bodies from storm water pollution. Recycling and sanitation procedurs will also be placed on website for review.

Start Date: 7/1/2004

End Date: 6/30/2005

Bill Lewis

P.W.P.E.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Information developed for Website

Al Chapman

S.E.T.A.

1/9/2004

Websites being setup for the placement of the stormwater plan and education marterials.

4. City Website Update (Year 2)

Review and update the stormwater information provided on the City of Groton website and Groton Utilities website.

Start Date: 7/1/2005

End Date: 6/30/2006

Jeff Carver

J.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

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Actions performed for this goal:

Materials for Website

Jeff Carver

J.E.T.A.

7/1/2005

Development of materials completed. They will be placed on the Websites within the next 2 months.

5. City Website Update (Year 3)

Review and update the stormwater information on the City of Groton website and Groton Utilities website.

Start Date: 1/3/2007

End Date: 6/30/2007

Bill Lewis

P.W.P.E.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

6. City Website Update (Year 4)

Review and update the stormwater information provided on the City of Groton website and Groton Utilities website.

Start Date: 7/1/2007

End Date: 6/30/2008

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

7. City Website Update (Year 5)

Review and update stormwater information provided on the City of Groton website and Groton Utilities website.

Start Date: 7/1/2008

End Date: 6/30/2009

Jeff Carver

J.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

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Illicit Discharge Detection and Elimination

What is Required?:

Recognizing the adverse effects illicit discharges can have on receiving waters, the final rule requires an operator of a regulated small MS4 to develop, implement and enforce an illicit discharge detection and elimination program. This program must include the following:

1. A storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
2. Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on non-storm water discharges into the MS4, and appropriate enforcement procedures and actions;
3. A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4;
4. The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste; and
5. The determination of appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

Discharges from MS4s often include wastes and wastewater from non-storm water sources. A study conducted in 1987 in Sacramento, California, found that almost one-half of the water discharged from a local MS4 was not directly attributable to precipitation runoff. A significant portion of these dry weather flows were from illicit and/or inappropriate discharges and connections to the MS4. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health.

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Goals performed for this Control Measure:

1. Recycling Program

Initiate a recycling program for commonly dumped household wastes such as motor oil, antifreeze, paint, pesticides, etc.

Start Date: 1/1/2004

End Date: 1/1/2005

Al Chapman

S.E.T.A.

Permit Years: Year 1: **X** Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Oil recovery

Bill Lewis

P.W.P.E.

1/1/2004

The City of Groton has in place an oil recovery system which uses oil for heating the Highway Facility. Home owners can bring waste oil to the Town of Groton Transfer Station located at 685 Flanders road.

Town of Groton Hazardous Waste Program

Al Chapman

S.E.T.A.

1/1/2004

The Town of Groton has a Regional Household Hazardous Waste Collection Day which includes the City of Groton.

Antifreeze

Bill Lewis

P.W.P.E.

7/1/2004

Antifreeze is picked up on a call in basis to the company "Advanced Liquid Recycling". Home owners can bring waste antifreeze to the Town of Groton Transfer station located at 685 Flanders road.

2. Drainage System Map

The storm sewer system map is meant to demonstrate a basic awareness of the intake and discharge areas of the system. It is needed to help determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular waterbodies these flows may be affecting. An existing map, such as a topographical map, on which the location of major pipes and outfalls can be clearly presented demonstrates such awareness.

EPA recommends collecting all existing information on outfall locations (e.g., review city records, drainage maps, storm drain maps), and then conducting field surveys to verify locations. It probably will be necessary to walk (i.e., wade through small receiving waters or use a boat for larger waters) the streambanks and shorelines for visual observation. More than one trip may be needed to locate all outfalls.

Start Date: 4/2/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: **X** Year 2: **X** Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

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Actions performed for this goal:

GPS

Al Chapman S.E.T.A.
6/1/2004

The City of Groton has purchased a GPS unit. All stormwater structures will be located by GPS and a map prepared of all facilities (catch basins, manholes, headwalls, waterways, outfalls).

Drainage Map

Al Chapman S.E.T.A.
12/10/2004

A preliminary map has been generated with the GPS showing locations of all City drainage structures, outfalls, waterways, ponds, etc.

3. Outfall Sampling

Begin process of identifying potential sources from where illicit discharges can emanate. Areas to look for are:

1. Industrial parks or areas with large concentrations of industrial business (manufacturing, warehousing, trucking, etc.).
2. Areas where there are large concentrations of septic systems.
3. Areas with older sanitary sewer lines.
4. Building on work performed in the previous two years a certain percentage of illicit discharges will now be detected and eliminated. Detection and elimination efforts will be documented so that the end of year report will detail all illicit discharges that were found, which ones were eliminated and what remedial actions were taken.
5. All outfalls greater than 12" in diameter have been mapped.

Start Date: 4/2/2004 **End Date:** 1/8/2009

Bill Lewis P.W.P.E.

Permit Years: Year 1: X Year 2: X Year 3: X Year 4: X Year 5: X **Accomplished?:** No

Name of Third Party implementing this BMP: Not Applicable

Actions performed for this goal:

Outfall sampling-Year 1

Al Chapman S.E.T.A.
12/1/2004

Sampled six (6) outfalls as per MS4 requirements.

Outfall sampling-Year 2

Al Chapman S.E.T.A.
11/10/2005

Sampled six (6) outfalls as per MS 4 requirements.

Outfall sampling- Year 3

Bill Lewis P.W.P.E.

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11/6/2006

A consultant was retained (GEI Consultants, Inc.) to sample six (6) outfalls as per MS-4 requirements.

4. Detection and Elimination

Building on work performed in the previous two years a certain percentage of illicit discharges will now be detected and eliminated. Detection and elimination efforts will be documented so that an end of year report will detail all illicit discharges that were found, which ones were eliminated and what remedial actions were taken.

Start Date: 7/1/2004

End Date: 1/8/2009

Jeff Carver

J.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP: Not Applicable

Actions performed for this goal:

Inspection of outfalls

Jeff Carver

J.E.T.A.

12/4/2005

32 outfalls were inspected. No visible signs of illicit charges were noticed.

Inpection of outfalls

Bill Lewis

P.W.P.E.

12/18/2006

32 outfalls were inpected in 2005. No visible signs of illicit discharges were obsreved. Outfalls were observed during dry and wet weather. These outfalls and any other public access out falls will be inspected in 2007.

Resident correspondence

Al Chapman

S.E.T.A.

12/18/2006

Check past and current data (requests/complaints) located in the City of Groton Highway Department's " Roadway Management System " to see if there are any concerns relating to storm water. No concerns were found relating to illict discharges.

5. Continuation of Detection and Elimination Efforts

Building on the work begun in the year 3 goal 'Detection and Elimination' efforts will continue so that by years end most illicit discharges will have been detected and eliminated.

Start Date: 7/1/2004

End Date: 1/8/2009

Jeff Carver

J.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP: Not Applicable

Actions performed for this goal:

Local watch group

Bill Lewis

P.W.P.E.

12/11/2006

A local community coastal watch group is being formed. And intrest is being sought for a

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community terra firma watch group.

6. Implement an Information Management System for Tracking Illicit Discharges

The City's ASSIST MCM program will be used to document all important information gathered concerning illicit discharge detection, elimination and actions taken. This information will be included in annual reports and will detail the following:

1. The number of Outfalls Screened
2. The number of illicit discharges discovered during outfall screening.
3. The number of illicit discharges discovered as a result of citizen complaints.
4. The number of illicit discharges that were resolved.
5. The number of Dye or Smoke tests conducted.

Start Date: 7/1/2004

End Date: 6/30/2006

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Tracking software

Bill Lewis

P.W.P.E.

1/3/2007

The city currently obtained software and has implemented a system to track this work.

7. Stormwater Ordinance

Develop an ordinance or other regulatory mechanism that will prohibit (to the extent allowable under State, Tribal, or local law) all non-storm water discharges into the MS4. This ordinance will include appropriate enforcement procedures and actions such as:

1. Fines
2. Civil penalties

Start Date: 7/1/2004

End Date: 6/30/2007

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Existing Ordinances and regulations

Al Chapman

S.E.T.A.

10/4/2004

Check all city ordinances and regulations including Groton Utilities pertaining to meeting requirements of the MS4 permit.

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8. Pollution Reduction

This goal is used to help in your efforts to reduce pollution being introduced into the storm water sewer system.

A certain percentage of restuarants are no longer dumping grease and other pollutants down storm water drains.

Start Date: 12/18/2006

End Date: 6/18/2008

Bill Lewis

P.W.P.E.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Implement existing program under CT. General Statues

Bill Lewis

P.W.P.E.

12/18/2006

A program is in place and is coordinated with the Zoning Official to inspect restaurants for compliance with Connecticut Statue 22a-430b, which covers the discharge of waste water associated with Food Preperation Establishments. This program is implemented and is currently being enforced.

prefomed inspections

Bill Lewis

P.W.P.E.

1/3/2007

16 inspections of storm water drains located next to restaurants have been completed.

If any illicit discharge were to be found the Ledge Light Health District or possibly the Department of Evironmental Protection would be notified.

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Pollution Prevention/Good Housekeeping

What is Required?:

Recognizing the benefits of pollution prevention practices, the rule requires an operator of a regulated small MS4 to:

1. Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system;
2. Include employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State or Tribe, or relevant organizations;
3. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the small MS4 storm water management program. This measure requires the small MS4 operator to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems. While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the small MS4 operator, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

City of Groton Small MS4 Permit 2004 - 2009

Goals performed for this Control Measure:

1. Employee Training Materials

Develop a collection of training materials that will be used to educate staff about pollution prevention and good housekeeping. These resources will come from applicable external sources, such as the EPA, and may be supplemented with materials developed by our own organization.

Start Date: 1/1/2004

End Date: 12/30/2004

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Training program for employees

Al Chapman

S.E.T.A.

1/1/2004

For the past five years the City of Groton has had in place for its Highway Facility a Stormwater Pollution Prevention Plan. Employees have been trained on an annual basis for the past five years.

Stormwater Conference

Al Chapman

S.E.T.A.

11/30/2005

Two City of Groton employees attended a Stormwater Conference put on by the CTDEP.

2. Information Management System

An information management system will be put in place that can be used to track the inventory of stormwater facilities and outfalls. This system will be used by staff to schedule and perform inspections, maintenance activities and document any other actions taken on these inventory items.

Start Date: 1/1/2004

End Date: 12/30/2004

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Roadway Management System

Al Chapman

S.E.T.A.

1/1/2004

The City of Groton has in place a software system (Roadway Management System) which will meet all the requirements of the MS4. This system tracks all public complaints regarding roadway systems and records corrective actions taken to address these complaints.

3. Maintenance Schedule

Finalize the maintenance plan and schedule that will be put in place for management of BMPs. Integrate this into the information management system identified in the year one goal 'Information Management System'.

Start Date: 1/1/2004

End Date: 12/30/2005

City of Groton Small MS4 Permit 2004 - 2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: **X** Year 2: **X** Year 3: **X** Year 4: **X** Year 5: **X** **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Schedule

Al Chapman

S.E.T.A.

1/1/2004

The City of Groton has the following maintenance schedule:

Streets are swept in the Spring and Fall of each year and also after a snowmelt.

Stormwater structures are cleaned annually or when necessary. Oil/grit separators are pumped annually.

Drainage structures are inspected annually and repaired or upgraded in a timely manner.

11/14/2006-Pumped oil/grit separators 1,2,3 at Highway Garage. Contracted United Industrial Services.

4. Train Employees

Train staff on pollution prevention and good housekeeping using the materials collected and developed in the year one goal 'Employee Training Materials'.

Start Date: 1/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: **X** Year 2: **X** Year 3: **X** Year 4: **X** Year 5: **X** **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Public Works Employee Training

Al Chapman

S.E.T.A.

1/1/2004

Public Works Employees receive training on an annual basis. The training includes emergency spill equipment locations and usage, outfall locations, illicit discharges, etc.

5. Develop Stormwater Management Plan

Develop a comprehensive Stormwater Management Plan that identifies items such as:

1. BMPs
2. Management Practices and Maintenance Schedules
3. Recycling Efforts
4. Waste Disposal Guidelines
5. Areas of Concern

Specifically, this plan shall be prepared pursuant to Section 6 of the MS4 General Permit and shall be completed, including implementation of all minimum control measures by January 8th, 2009.

Start Date: 4/2/2004

End Date: 1/8/2009

Bill Lewis

P.W.P.E.

Permit Years: Year 1: **X** Year 2: **X** Year 3: **X** Year 4: **X** Year 5: **X** **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

City of Groton Small MS4 Permit 2004 - 2009

Actions performed for this goal:

Develop Draft Plan

Bill Lewis
1/1/2007
Engineering

The City of Groton has developed a draft plan, which is posted on its web page. In addition copies have been provided to the Mayors office, Planning & Zoning, and the Conservation Commission for review.

Update Draft Plan

Bill Lewis
1/1/2007
Engineering

The City of Groton has updated its draft plans originally prepared in 2004. This updated plan is posted on its web page.

6. Incorporation of BMPs in Master Plan

Identify, from the list of BMPs outlined in the year one goal 'Develop Pollution Prevention Plan', the BMPs that have been incorporated into the local Master Plan.

Start Date: 7/1/2004 **End Date:** 1/8/2009

Al Chapman S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

7. Maintenance Program Effectiveness

Identify the number of facilities and controls that have received maintenance as a result of the year three goal 'Maintenance Schedule'. Document the overall compliance with the schedule and explain any discrepancies.

Start Date: 7/1/2004 **End Date:** 1/8/2009

Al Chapman S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Roads and Catch Basins

Bill Lewis
1/3/2007
P.W.P.E.

All catch basins have been cleaned and roads are being swept as determined by the Highway Supervisor.

8. Pollution Reduction

Identify and estimate the percentage reduction attained in the pollutants discharged into local waterways.

Start Date: 7/1/2004 **End Date:** 1/8/2009

Al Chapman S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

City of Groton Small MS4 Permit 2004 - 2009

Name of Third Party implementing this BMP: Not Applicable

Actions performed for this goal:

Review storm water monitoring data to evaluate any trends

Al Chapman

S.E.T.A.

12/20/2006

The City of Groton will summarize all monitoring data in tables to determine any trends or indications of pollution problems based on the monitoring completed.

City of Groton Small MS4 Permit 2004 - 2009

Construction Site Runoff Control

What is Required?:

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in storm water runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

The small MS4 operator is required to:

1. Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
2. Have procedures for site plan review of construction plans that consider potential water quality impacts;
3. Have procedures for site inspection and enforcement of control measures;
4. Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism);
5. Establish procedures for the receipt and consideration of information submitted by the public; and
6. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in Table 1, sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Table 1
Pollutants Commonly Discharged From Construction Sites

Sediment
Solid and sanitary wastes
Phosphorous (fertilizer)
Nitrogen (fertilizer)
Pesticides
Oil and grease
Concrete truck washout

City of Groton Small MS4 Permit 2004 - 2009

Goals performed for this Control Measure:

1. Information Management System in Place

An information management system designed to track information submitted by the public and record staff inspections of construction sites will be put in place.

Develop site inspection procedures that will be used by staff in the performance of construction site inspections.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Roadway Management System

Al Chapman

S.E.T.A.

1/1/2004

An existing system is in place which meets all requirements of the MS4 permit. This system tracks all public complaints regarding roadway systems, and records corrective actions taken to address complaints.

2. Begin Inspection Program

Random inspections of construction sites will be performed to determine the overall compliance rate that is being achieved by construction operators.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** Yes

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Existing Inspections under Zoning and Subdivision Regulations

Al Chapman

S.E.T.A.

12/29/2004

Zoning and Subdivision Regulations for construction are reviewed by the Highway Department. If city specifications are not met (including highway specifications for drainage) Certificate of Occupancy are not given. Inspections are made during all construction phases.

3. Maximum Compliance

Building on year 2 efforts the inspection program will continue until the maximum compliance possible is achieved. Compliance and non-compliance will be documented through the Information Management System.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

City of Groton Small MS4 Permit 2004 - 2009

4. Ordinance / Regulatory Mechanism

Under the extent allowable by law an ordinance or other regulatory mechanism will be put in place that will provide the ability to regulate polluted runoff that emanates from construction sites.

Start Date: 7/1/2004

End Date: 6/30/2006

Al Chapman

S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Land use regulations

Al Chapman

S.E.T.A.

10/4/2004

City of Groton Planning and Zoning regulations are in place to meet the requirements of the MS4 permit. These regulations require that an Erosion and Sediment control plan be prepared for all site disturbances greater than 1/2 acre. This plan must be approved by Planning and Zoning. P&Z staff shall inspect all sites during construction for conformance to the approved E&S control plan. If city specifications are not met (including highway specifications for drainage) a certificate of Occupancy shall not be granted. Inspection are made during all construction phases.

City of Groton Small MS4 Permit 2004 - 2009

Post-Construction Runoff Control

What is Required?:

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

1. Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs);
2. Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law,
3. Ensure adequate long-term operation and maintenance of controls;
4. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Why is it Necessary?:

Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

City of Groton Small MS4 Permit 2004 - 2009

Goals performed for this Control Measure:

1. Identification of BMPs

Identify and develop a mix of Structural and Non-Structural BMPs that are appropriate for this geographic area. This BMP list will include BMPs suited for both redevelopment and new development. These BMPs will also be used in the 'Construction Site Runoff Control' minimum measure.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: X Year 2: X Year 3: X Year 4: X Year 5: X **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Compiled Available BMP's

Bill Lewis

P.W.P.E.

12/21/2006

Copies of the DEP's "The 2004 Connecticut Storm Water Quality Manual" Were obtained and are on file at the City's Highway Department. In addition descriptions of BMPs that have been used in CT. were obtained from the NEMO low impact development database and are also on file at the Highway Dept.

2. Publication of BMPs

Codify the BMPs identified in the year one goal 'Identification of BMPs' through regulatory or other appropriate mechanism. Publish the list of BMPs and make them available to developers, citizens and staff.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: X Year 2: X Year 3: X Year 4: X Year 5: X **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Evaluate BMPs

Bill Lewis

P.W.P.E.

12/20/2006

Work with the Conservation Commission and Planning & Zoning to determine if what, if any, BMPs need to be codified or published.

3. Measure Reduction in Impervious Areas

Perform the same analysis of construction projects identified in the year one goal, 'Identification of BMPs', this time using year three construction permit data. Identify the percent of new impervious areas that are attributable to new development projects and compare it with the baseline data developed in year one.

Start Date: 7/1/2004

End Date: 1/8/2009

Al Chapman

S.E.T.A.

Permit Years: Year 1: X Year 2: X Year 3: X Year 4: X Year 5: X **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

City of Groton Small MS4 Permit 2004 - 2009

Actions performed for this goal:

Measure Reductions based on 2008 vs. 2004 approved site plans

Bill Lewis P.W.P.E.
12/21/2006

Work with the Conservation Commission and Planning & Zoning to determine responsibilities and duties to insure long term operation of BMPs.

4. Ensuer Long Term Operation and Maintenance of BMPs

Establish a program of site conditions, inspection and monitoring of BMPs implemented to ensure adequate long-term operation and maintenance of BMPs.

Start Date: 12/21/2006 **End Date:** 1/8/2009

Al Chapman S.E.T.A.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

Assign Responsibilities

Bill Lewis P.W.P.E.
12/20/2006

Work with the Conservation Commission and Planning & Zoning to determine responsibilities and duties to ensure long term operation of BMPs.

5. Ordinance / Regulatory Mechanism

As required develop City Ordinances to address and insure that the City has an enforceable program to address storm water runoff from new development and redevelopment projects that disturb greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4 or directly to waters of the State. This program shall ensure that controls are implemented to require appropriate infiltration practices, reduction of impervious surface, creation of or conversion to sheet flow, measures and/or structures to reduce sediment discharge and any other innovative measures that will prevent or minimize water quality impacts.

Start Date: 1/1/2007 **End Date:** 1/8/2008

Bill Lewis P.W.P.E.

Permit Years: Year 1: Year 2: Year 3: Year 4: Year 5: **Accomplished?:** No

Name of Third Party implementing this BMP:Not Applicable

Actions performed for this goal:

City of Groton Regulations

Bill Lewis P.W.P.E.
1/1/2007

Review City Ordinances in consultation with the Conservation Commission and Planning & Zoning to determine what new or modified Ordinances may be required.