

GROTON

PUBLIC WORKS

M E M O R A N D U M

TO: Town of Groton Residents

FROM: Gary Schneider, Director of Public Works 

DATE: December 8, 2015

**SUBJECT: 2015 SWMP Annual Report
Stormwater Phase II Compliance by Town of Groton**

As required by the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, the Public Works Department must submit a Stormwater Management Plan (SWMP) Annual Report, summarizing the progress of the Town in 2015 towards full compliance of the permit.

As part of our requirement, a draft copy of this year's SWMP Annual Report is being made available at the Town Hall Annex and the Groton Public Library as well as the Town's website for public review and comment for 30 days, ending on January 16, 2016. Please direct public comments to the Public Works Department at (860) 448-4083 or e-mail them to kdoundoulakis@groton-ct.gov.

When the review period is over, the final 2015 SWMP Annual Report for the Town of Groton will be submitted to the Connecticut Department of Energy & Environmental Protection.

2015 SWMP ANNUAL REPORT
Town of Groton SWMP Update for the Discharge of Stormwater from Small MS4s
December 1, 2015

The Department of Public Works (DPW) has reviewed the Town of Groton's Stormwater Management Plan (SWMP) which was developed to comply with the Connecticut Department of Energy & Environmental Protection (DEEP) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4s). A progress summary towards implementing the best management practices (BMPs) identified in the Town's Part B registration for the General Permit submitted to the DEEP follows below. The BMPs are grouped by the six minimum control measures. BMPs which have an asterisk (*) before them have different numbers in the Stormwater Management Plan and the Part B registration. This is because the SWMP was mostly completed prior to the availability of the Part B registration form. The numbering scheme in the SWMP was not adjusted to match the Part B registration. Both numbering schemes are identified below where different.

Control Measure 1: Public Education and Outreach

The Town has implemented a public education program to distribute educational materials to the community to achieve the goals of this control measure. A public outreach strategy was developed using suggestions from the EPA's MS4 Program Evaluation Guidance. In order to streamline the public education program, the following message was developed: Small preventative measures incorporated into regular everyday activities like lawn and auto care and pet waste disposal can help prevent contaminated pollutants from reaching the waterbodies we use for swimming, fishing and drinking water.

BMP #1-1 Article/brochure about stormwater in an annual mailing

In compliance for 2015

For 2015, the Town continued to use social media to periodically post information concerning Stormwater issues on the Department of Public Works Facebook Page.

BMP #1-2 Stormwater information provided on local cable access

In compliance for 2015

The Non-point Education for Municipal Officials (NEMO) video, "Luck Isn't Enough, the Fight for Clean Water", that covers stormwater management topics pertinent to coastal towns along Long Island Sound was aired fourteen times in 2015. The DEEP's public service announcement '*Clean Water Starts With You*' part of the Think Blue Connecticut initiative, was also aired ten times. These programs ran on GMTV Channel 2 on Comcast Cable of Groton and Thames Valley Communications that cablecast to approximately 40,000 homes in Groton, Stonington, North Stonington, Ledyard and Voluntown. GMTV is also available through streaming video on the State's website.

BMP #1-3 Stormwater information provided on the Town's website

In compliance for 2015

In accord with Control Measure 3, the DPW developed a stormwater webpage hosted on the Town's website to inform the public about the hazards associated with improper waste disposal and illegal discharges to the MS4. The stormwater webpage went live on October 23, 2006, and included discussion of the Town's stormwater management issues. In 2007, the webpage was updated to include information about catch basin cleaning, the Town's Illicit Discharge Detection and Elimination (IDDE) Program, and how the average resident can prevent stormwater pollution. Information on the IDDE Program was updated in 2010. The webpage is updated annually to inform citizens of the availability of the annual report and correct any outdated information.

BMP #1-4 Educate dog owners about picking up dog waste

In compliance for 2015

The DPW selected a brochure supported by the Long Island Sound Study (LISS) entitled "Step by Step, A citizen's guide to curbing polluted runoff". One of its primary topics is the proper disposal of dog waste. The Town Clerk's Office distributes this brochure with every dog license.

BMP #1-5: Install and maintain no dumping signs at coastal access areas

In compliance for 2015

In accordance with the SWMP, the Town DPW inspects "coastal access point" and "no dumping" signs on a semi-annual basis. Signs were inspected on July 2nd and November 4th. Ten signs are scheduled to be replaced over the winter.

BMP #1-6 Annual update of the Stormwater Management Plan to the Town Council

In compliance for 2015

The annual report for 2015 will be forwarded to the Town Council in the month of December.

Control Measure 2: Public Participation and Involvement

The public needs to be involved in developing and implementing the SWMP.

***BMP #2-1: Stormwater Committee meetings (BMP 2-3 in Part B registration to DEEP)**

In compliance for 2015

Stormwater Committee Meetings were held on June 15th and November 24th. At the meeting members discussed the revised DEEP General Permit, the status of BMP implementation and the annual report.

BMP #2-2: Comply with state public notification guidelines

In compliance for 2015

The notice for public review of this year's SWMP annual report was posted in the newspaper on December 7th. Copies of the report were made available to the public at the Town Hall Annex located at 134 Groton Long Point Road, Groton, the Groton Public Library located at 52 Newtown Road, Groton, and on-line on the Town's webpage.

***BMP #2-3: Involve the public in developing and implementing the draft SWMP and in reviewing the annual report (BMP 2-1 in Part B registration to DEEP)**

In compliance for 2015

The original SWMP stated that public notices should be posted and a public workshop held during which the number of people in attendance is recorded. A public workshop where five people attended was held on May 17, 2004 to present the draft SWMP and receive comments. Subsequently, since 2005, we now notify the public by public notice, that copies of the SWMP Annual Report are available at the Town Hall Annex, the Groton Public Library, and on-line for public review and comment. The public is given a 30-day review period. The notice of review is also posted on the Town's Stormwater Webpage and the Town's Facebook page.

BMP #2-4: Sponsor community participation event

In compliance for 2015

Save the Sound hosted a coastal cleanup at Bluff Point State Park in Groton on September 19th as part of the 30th annual International Coastal Cleanup Day.

Groton Parks and Recreation with the Mystic Aquarium hosted Exploring Birch Plain Creek Estuary at Sparkle Lake Conservation Area on September 27th. This was a habitat exploration program to introduce families to the unique plant and animal life in an estuary.

Control Measure 3: Illicit Discharge Detection and Elimination

This control measure requires BMPs for developing a map showing the Town's outfalls, developing an ordinance prohibiting non-stormwater discharges, and developing, implementing and enforcing a plan to detect and eliminate illicit and non-stormwater discharges.

***BMP #3-1: Conduct dry weather outfall screening (BMP 3-6 in Part B registration to DEEP)**

In compliance for 2015

The Town conducted dry weather outfall screening in 2005 and 29 outfalls were found to have dry weather flows which were sampled and prioritized based upon their chemical composition. These 29 outfalls were revisited and sampled as part of the Town's Illicit Discharge Detection and Elimination (IDDE) Program (discussed under BMP #3-3).

***BMP #3-2: Map stormwater collection system, outfalls, and receiving waters (BMPs 3-1, 3-2, and 3-3 in Part B registration to DEEP)**

In compliance for 2015

The Town's catch basins, drain manholes, stormwater pipes, and outfalls (with a diameter 12" or greater) have been identified, inspected and placed into the Town's Geographic Information System (GIS). The name and Surface Water Quality Classification of the immediate surface waterbody or wetland to which an outfall discharges and the corresponding watershed was also defined in GIS. If the outfall does not discharge directly to a named waterbody, the name of the nearest named waterbody to which the outfall eventually discharges was used.

BMP #3-3: Develop, implement, and enforce a plan to identify and remove existing illicit discharges to the MS4 (BMP 3-4 in Part B registration to DEEP)

In compliance for 2015

In 2005, the Town located 29 outfalls with dry weather flow that were then sampled and prioritized based upon their chemical composition (BMP #3-1). The DPW contracted with Camp Dresser & McKee Inc. (CDM) to conduct field investigations of the prioritized outfalls and their associated watershed areas, with the purpose of locating and commencing the process of removing illicit connections if there are any as part of the Town's IDDE Program.

Phase I (Determine if Dry Weather Flow is from an Illicit Source) was conducted during periods of dry weather (no rain for 72 hours) during the summer months of 2007. CDM identified 7 outfalls of concern for the Town of Groton. All of these outfalls had dry weather flow that was not easily attributed to a source of no concern.

CDM completed further tracking of these 7 outfalls in the upstream reaches of the drainage system as part of Phase 2 (Track Sources of Illicit Discharges) in September 2008. Phase 2 of the project included the following tasks:

- Field inspections within each drainage system to determine where the dry weather flow enters the system and what parts of the drainage system do not have dry weather flows;
- Sampling and laboratory testing within the drainage systems to better characterize the extents of the constituent of concern and try to isolate where along the drainage system the pollutants enter the system; and
- Television inspection of specific sections of pipes within the drainage systems to identify possible illicit connections or locate where natural sources are entering the drainage system.

The results of the field inspections, dry weather sampling and television inspection showed no illicit connections within the drainage systems analyzed under Phase 2. However, a series of cracks, holes, joint separations, and root penetrations were identified and are the reason for dry weather flows within various drainage systems. In all cases, the elevated constituent concentrations can be attributed to groundwater inflow from pipe and structure defects. One of the pipe segments was determined to be privately owned and not part of the Town system. Replacement of two of the pipe segments was completed in 2014. The remaining pipe segments will be replaced as part of upcoming drainage improvement projects as time and budget allow.

BMP #3-4: Evaluate and change procedures if necessary for inspecting new construction for correct connection to the sanitary sewer

In compliance for 2015

The procedures for inspecting the connection to the sanitary sewer to avoid connections to the stormwater collection system have been reviewed by the Town of Groton Building Official. Under Chapter 15 section 15-123 of the Town of Groton ordinance, the Town Building Official must approve any building's plumbing prior to connection to the public sewer. This office performs inspections of all new connections to the Town's public sewer system. Plumbing connections to the stormwater drainage system are not allowed and a certificate of occupancy will be issued only if the plumbing is correctly connected to the Town's sewer system.

BMP #3-5: Develop an ordinance to prohibit non-stormwater discharges

Partially in compliance for 2015

Public Works is working with the Town Attorney to draft the ordinance.

BMP #3-6: Monitor six representative outfalls. (BMP S-1 in Part B registration to DEEP)

In compliance for 2015

6 samples were collected for sample year 2015 on June 15th. A copy of the Stormwater Monitoring Report is attached as Appendix A.

Control Measure 4: Construction Site Runoff Control

The Town has developed the following BMPs to reduce pollutants in stormwater runoff from construction activities.

BMP #4-1: Review land use regulations to meet requirements of MS4 permit and E&S Guidelines. Require erosion control plan for construction sites 1 acre in area.

In compliance for 2015

Amendments to the Town of Groton Zoning Regulations proposed by the Zoning Commission were approved on April 24, 2011. The amendments include refinements to current erosion control requirements, updated stormwater quality and stormwater management standards, and changes to landscaping provisions.

BMP #4-2: Require a waste management plan at construction sites larger than one acre. Add requirement to zoning regulations

In compliance for 2015

This BMP is addressed in the aforementioned amendments to the Town of Groton Zoning Regulations in Section 6.14-2(K).

BMP #4-3: Notify construction site operators of the requirements for registration under "General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities"

In compliance for 2015

The Office of Planning and Development Services (OPDS) holds staff review meetings for all large or complicated projects (new roads, physical constraints, or subdivisions with more than two or three lots). During these pre-construction meetings, the status of state permits and findings are reviewed. If five acres or more are disturbed, the OPDS notifies the developer to register for this DEEP general permit. Two pre-construction meetings were held in 2015. OPDS has also added the following notice to the post approval subdivision, site plan and contractor's checklists as well as to the special permit application checklist:

If this project disturbs more than one acre of land, regardless of phasing, the developer or builder must submit a registration for the Connecticut Department of Energy & Environmental Protection (DEEP) *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from*

Construction Activities (“Construction General Permit”). This registration must be submitted at least 60 to 90 days prior to the planned commencement of the construction activity, depending on the type of project. More information can be obtained by calling the DEEP at 860-424-3000 or visiting their Construction Stormwater webpage at:

http://www.ct.gov/deep/cwp/view.asp?a=2721&q=558612&DEEPNav_GID=1654

BMP #4-4: Consideration of public input for projects 1 acre or greater

In compliance for 2015

Currently any project requiring approval by the Planning Commission or Inland Wetlands Agency is presented at a public meeting. Projects not presented at a public meeting will be posted to the Town’s website. The OPDS has not had any projects that fall into this category in 2015.

BMP #4-5: Inspect erosion and sediment controls

In compliance for 2015

The OPDS staff has been inspecting erosion and sediment controls at construction sites with a wetlands permit or a land use permit. The OPDS developed a formal inspection checklist to address the degree of compliance to the Soil Erosion and Sediment Control Plan for construction sites of one acre or greater and completed forms are filed with the project folder.

Control Measure 5: Post-construction Stormwater Management in New Development and Redevelopment

The Town has amended zoning regulations to require developers to use specific standards in designing and constructing stormwater controls and for developers to address long-term maintenance of structural stormwater controls. This may include a long-term bonding component to ensure compliance.

***BMP #5-1: Develop regulations to apply requirements of the Connecticut Stormwater Quality Manual to the entire Town. Present the regulations to the appropriate land use commission (BMPs 5-2 and 5-3 in Part B registration to DEEP)**

Partially in compliance for 2015

This BMP is addressed in the aforementioned amendments to the Town of Groton Zoning Regulations in Section 6.14-1. Noank (a political subdivision of the Town which has its own Zoning Commission) was provided a draft of the Town’s language as well as a letter advising them of this requirement. To date, the Noank Zoning Commission has not adopted these amendments into their zoning regulations. The Town OPDS will be proposing this amendment to the Noank Zoning Commission.

***BMP #5-2: Specify a stormwater BMP manual to be used for consistent design and performance standards (BMP 5-1 in Part B registration to DEEP)**

In compliance for 2015

This BMP is addressed in the aforementioned amendments to the Town of Groton Zoning Regulations in Section 6.14.

***BMP #5-3: Ensure long-term maintenance of private structural BMPs (BMP 5-4 in Part B registration to DEEP)**

In compliance for 2015

This BMP is addressed in the aforementioned amendments to the Town of Groton Zoning Regulations in Section 6.14-2(K)(5).

Control Measure 6: Pollution Prevention/Good Housekeeping for Municipal Operations

The Town has developed and implemented BMPs for good housekeeping practices and pollution prevention at its municipal facilities and for maintenance of its drainage system.

BMP #6-1: Develop training session within the Town

In compliance for 2015

A 30-minute training session was developed to present to DPW staff during their annual Stormwater Pollution Prevention Plan (SWPPP) training about the location of sensitive receptors and why special protection is needed. Included is a 19 minute video titled *Storm Check: Stormwater Pollution Prevention for MS4s* by Excal Visual which discusses Phase I and Phase II regulations, BMPs, Good Housekeeping and Preventive Maintenance, and spill response. Stormwater training is conducted annually in December.

Golf Course personnel are included with the Fleet Division/Facilities Maintenance training session which includes Spill Prevention Control and Countermeasures (SPCC) and SWPPP training as well as the SWMP training. Parks Maintenance are included with the Roads and Streets Division which mainly focuses on the SWMP BMPs as they work more around the Town than at the facility.

***BMP #6-2: Street sweeping (BMPs 6-2 and 6-3 in Part B registration to DEEP)**

In partial compliance for 2015

In 2015, 95% of Town owned streets were swept once and 63% have been swept twice. The Town has had mechanical problems with both sweepers.

The Roads and Streets Division spent 1,127 hours sweeping streets and approximately 974 cubic yards of residuals were collected between January and

November. Records of sweeping schedules and daily volume of residuals collected are maintained in a Daily Street Sweeping Report Log Book and on an Excel spreadsheet.

In winter 2008-2009, the Town switched to using treated salt for road de-icing instead of the sand/salt mixture that was used in the past. The Town has seen a huge reduction in spring cleanup activities.

***BMP #6-3: Minimize impacts from municipal vehicle washing (BMP 6-6 in Part B registration to DEEP)**

In compliance for 2015

All vehicles are washed inside wash bays where wash water is collected and drained to an oil/water separator and is discharged to the sanitary sewer. Oil/water separators are inspected semi-annually. Oil/water separators at the Town Hall Annex Complex (20-Bay Garage, the Fuel Island, the VMF and the Parks Maintenance Building) were pumped by a licensed hauler on May 28, 2015. The Oil/water separator at the WPCF has been removed as no washing of vehicles takes place at this facility.

***BMP #6-4: Minimize impacts from municipal vehicle maintenance (BMP 6-7 in Part B registration to DEEP)**

In compliance for 2015

As in previous years, all hazardous and/or universal wastes in 2015 were properly managed and removed for disposal and/or recycling. In addition, storage and containment areas at the Town Hall Annex Vehicle Maintenance Facility and Parks Maintenance Facility were inspected quarterly and spill kits inspected monthly.

***BMP #6-5; Catch basin cleaning and storm drain maintenance (BMP 6-4 in Part B registration to DEEP)**

In compliance for 2015

From January to November 2015 (latest data available), the Town spent 138 hours cleaning and inspecting catch basins and 358 hours cleaning and inspecting waterways. Due to capacity limitations of the storage area, the Town selectively cleaned catch basins to ensure the function of the storm drain system. The Town is currently researching a new storage area for catch basin cleanings. Additionally, the Town's switch to using treated salt for road de-icing instead of the sand/salt mixture that was used in the past reduced the amount of sediment that needs to be removed from catch basins.

The Town is continuing to track the catch basins which have been cleaned and the amount of sediment removed and the information is recorded on an Excel spreadsheet.

***BMP #6-6: Storm drain maintenance (BMP 6-5 in Part B registration to DEEP)**

In compliance for 2015

From January to November 2015, the Town logged 761 hours for maintenance, repairs, and upgrades to the drainage system.

***BMP #6-7: Public grounds maintenance (BMP 6-8 in Part B registration to DEEP)**

In compliance for 2015

At the Flanders Road Transfer Station the Town does maintenance on the 56 acres of closed landfill. The Town sends soil samples to the State and the results are used to determine the necessary degree of fertilization. This year, as there was sufficient groundcover, no soil samples were collected and no fertilizer was used. If necessary, soil samples will be collected in the spring of 2016 to determine if fertilizer is necessary. Records will be kept of any applications and no herbicides or pesticides are used. The Transfer Station lawns, however, are the responsibility of the Department of Parks and Recreation who likewise only fertilize the grounds. As yet, the closed landfill at Welles Road has not been fertilized since its closure as the organic content has been sufficient to support the grass.

For roadside spraying, the Town uses a contractor and records are kept of the applications of herbicides. Areas located within the watershed are sprayed with an environmental sensitive chemical. There has been no spraying on the roadside areas which have been identified as having sensitive wetland adjacent.

Parks Maintenance from the Department of Parks & Recreation is responsible for public grounds maintenance. The Parks Maintenance Foreman maintains a Connecticut Custom Grounds License that requires him to keep a very regimented parks maintenance program that includes maintaining Ornamental & Turf Pesticide Application Records and submitting a Commercial Applicator Pesticide Use Summary Report to the DEEP. Soils are tested in the late fall and grounds are fertilized accordingly in April. Additionally, athletic fields are fertilized every 8 – 10 weeks as necessary.

***BMP #6-8: Pooper scooper stations and signs (BMP 6-9 in Part B registration to DEEP)**

In compliance for 2015

Dog waste stations are maintained at the following locations:

- Poquonnock Plains Park (2 stations with signs)
- Farquahar Park
- Esker Point Waterfront Park with sign
- Copp Property – Dog Park (3 stations with signs)

The dog waste stations are well utilized and dumpsters are emptied once a week. The Town advertises the locations of its dog waste stations to the public on its website.

***BMP #6-9: Training other municipal operators in good housekeeping (BMP 6-10 in Part B registration to DEEP)**

In compliance for 2015

Per the Annual Report issued in January 2005, this BMP was changed from developing a newsletter which would be periodically distributed to municipal operators in other Departments to a training session. As revised, the DPW was to develop a training session for all operators in municipal Departments, conduct the training and record the number in attendance and the number of municipal Departments represented.

The Stormwater Committee determined that personnel from both Parks Maintenance and the Golf Course would attend the DPW annual SPCC and Stormwater personnel training conducted every December. OPDS and BOE do not have any personnel that require this training. During the December 2014 annual personnel training, a total of 47 employees from two municipal departments participated.

BMP #6-10: Develop procedures with the water companies for hydrant flushing

In compliance for 2015

In 2006, the Town sent letters to the three private/public water companies in Groton (Groton Utilities, Aquarion Water Company, and Noank Water Company) on the subject of hydrant flushing. Per the SWMP, the Town informed the water companies that chlorine should be dissipated and erosion control measures implemented when flushing hydrants. The Town also requested that the water companies give sufficient notification (2 weeks) to the Town so that the appropriate streets can be swept prior to hydrant flushing. The water companies and the Town now coordinate hydrant flushing with street sweeping.

Table 1: Summary of BMPs for Stormwater Management Plan

The attached Table 1 discusses the activities during Year 12 (2015) of the permit and the planned activities in Year 13 (2016).

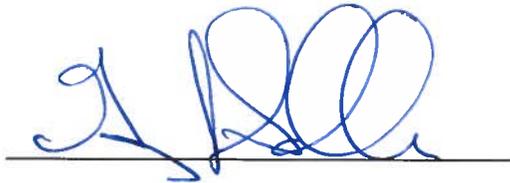
Changes to SWMP:

Table 1 shows the changes in the implementation schedule. Schedule changes have been made to the following BMPs:

- BMP 3-5: Develop an ordinance to prohibit non-stormwater discharges – Ordinance development began in Year 5 (2008) rather than Year 3 (2006) and is expected to be finalized in Year 14 (2017)
- BMP 5-1: Apply requirements of Connecticut Stormwater Quality Manual to entire Town – The Town OPDS will be proposing this amendment to the Noank Zoning Commission in Year 13 (2016).

Certification to be signed by chief elected officer or principal executive officer of the municipality:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."



Gary J. Schneider
Director of Public Works

Date: 12/15/15

**Table 1
Summary of BMPs for Stormwater Management Plan**

DEP BMP ID	BMP ID	BMP	Schedule					Measurable Goal	Progress during Year 12 (2015)	Planned Activities in Year 13 (2016)
			Year 1 2004	Year 2 2005	Year 3 2006	Year 4 2007	Year 5 2008			
Control Measure 1: Public Education										
1-1	1-1	Annual report to DEP Article/brochure about stormwater in an annual mailing	X	X	X	X	X	Submit by Jan. 1, 2016 informational article addressing the concerns of stormwater runoff were periodically placed on the Town's Facebook page.	Submit by Jan. 1, 2017 Articles will be periodically posted on Facebook.	
1-2	1-2	Stormwater information provided on local cable access	X	X	X	X	X	The video "Luck Isn't Enough, the Fight for Clean Water" was aired 14 times in 2015. The DEEP's public service announcement "Clean Water Starts With You" part of the Think Blue Connecticut initiative, was aired 10 times.	Air same or other programs in 2016.	
1-3	1-3	Stormwater information provided on town website		X	X	X	X	The Town updated the stormwater webpage to inform citizens about the availability of the Annual Report.	Review webpage and update if necessary.	
1-4	1-4	Educate dog owners about picking up dog waste		X	X	X	X	Brochure "Long Island Sound Study: Step by Step" which includes a primary section on this topic is distributed with dog licenses.	Same brochure or another will be distributed.	
1-5	1-5	Install and maintain no dumping signs of coastal access areas	--	X	X	X	X	Signs were inspected in July and November 2015. 10 signs are scheduled to be replaced.	Maintain signs.	
1-6	1-6	Annual update of SWMP to the Town Council	X	X	X	X	X	As an update on the SWMP, the annual report was forwarded to the Town Council in December 2015.	Update Town Council on SWMP programs.	
Control Measure 2: Public Participation										
2-1	2-1	Stormwater Committee Meetings	X			X	X	Stormwater Committee Meetings were held on June 15, 2015 and November 24, 2015.	Hold 2 Stormwater Committee Meetings.	
2-2	2-2	Comply with state public notification guidelines	--	--	--	--	--	A notice was posted in the newspaper on December 7 th to inform the public of this year's annual report.	Continue to follow public notification guidelines, post notices.	
2-1	2-3	Involve the public in developing and implementing the draft SWMP and Reviewing the Annual Report	X	X	X	X	X	Copies of the 2015 Annual Report were made available in December for public review and comment at the Town Hall Annex and the Groton Public Library as well as the Town's website.	Continue to have copies of the annual report available for public review prior to Town Council update in December.	
2-4	2-4	Sponsor community participation event	X	X	X	X	X	Coastal cleanup at Bluff Point State Park on September 19 th and Groton Parks and Recreation with the Mystic Aquarium hosted Exploring Birch Plain Creek Estuary at Sparkle Lake Conservation Area on September 27 th .	Hold two events, record number of participants.	

X = task completed as a one-time or finite event(s) during that year
 -- = work in progress or continuous event

**Table 1
Summary of BMPs for Stormwater Management Plan**

DEP BMP ID	BMP	Schedule					Measurable Goal	Progress during Year 12 (2015)	Planned Activities in Year 13 (2016)
		Year 1 2004	Year 2 2005	Year 3 2006	Year 4 2007	Year 5 2008			
Control Measure 3: Illicit Discharge Detection & Elimination									
3-6	3-1	Conduct dry weather outfall screening	--	X			Percent of outfalls screened.	Completed in 2007	
3-1, 3-2, 3-3	3-2	Map stormwater collection system, outfalls and receiving waters	--	--	X		Complete GIS layer and create map	Completed in 2007	
3-4	3-3	Develop, implement and enforce a plan to identify and remove existing illicit discharges to the MS4	--	--	--	--	Number of illicit connections found	Completed phase 2 investigation of 7 outfalls of concern that were identified in phase 1 in 2008. No illicit connections were detected.	Repair cracks and leaks in identified pipes.
3-7	3-4	Evaluate and change procedures if necessary for inspecting new construction for correct connection to the sanitary sewer	--	--	X		Inspection procedures reviewed and changed if necessary	Completed in 2007	
3-5	3-5	Develop an ordinance to prohibit non-stormwater discharges			--	--	Ordinance developed and presented to Town Council	Public Works is working on draft ordinance with Town attorney.	Finalize ordinance and present to Town Council
S-1	3-6	Monitor six representative outfalls	X	X	X	X	6 outfalls sampled	Outfalls sampled on June 15, 2015.	Monitor 6 outfalls
Control Measure 4: Construction Site Runoff Control									
4-1	4-1	Review land use regulations. Erosion control plan for construction sites 1 acre in area			--	--	Review existing regulations	OPDS completed review of land use regulations.	
4-2	4-2	Require a waste management plan at construction sites larger than one acre. Add requirement to zoning regulations			--	--	Draft regulations	Amendments to the Town of Groton Zoning Regulations accepted April 24, 2011	
4-3	4-3	Notify construction site operators of the requirements for registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities	--	--	--	--	Developers notified	Developers were notified of the DEEP general permit during OPDS staff review meetings; as well as on post approval subdivision, site plan and contractor's checklists and the special permit application checklist	Continue notifying developers.
4-4	4-4	Consideration of public input for projects 1 acre or greater			--	--	List of building permits made available to public	Currently any project requiring approval by the Planning Commission or Inland Wetlands Agency is presented at a public meeting. Projects not presented at a public meeting will be posted to the Town's website.	Continue to post projects not presented at a meeting on Town's website.
4-5	4-5	Inspect erosion and sediment controls			--	--	Develop inspection procedures; number of inspections conducted	E&S controls are inspected at construction sites with a wetlands permit or a land use permit and a formalized inspection checklist has been developed.	Continue to inspect construction sites and use formal inspection checklist.

X = task completed as a one-time or finite event(s) during that year
 -- = work in progress or continuous event

**Table 1
Summary of BMPs for Stormwater Management Plan**

DEP BMP ID	BMP ID	BMP	Schedule					Measurable Goal	Progress during Year 12 (2015)	Planned Activities in Year 13 (2016)
			Year 1 2004	Year 2 2005	Year 3 2006	Year 4 2007	Year 5 2008			
Control Measure 5: Post Construction Runoff Control										
5-2 & 5-3	5-1	Develop land use regulations to apply CT Guidelines and CT Stormwater Quality Manual to the entire Town. Present to commission.						--	Amendments to the Town of Groton Zoning Regulations accepted April 24, 2011	Present to Noank Zoning Commission
5-1	5-2	Specify a stormwater BMP manual to be used for consistent design and performance standards						--	This BMP is addressed in the aforementioned amendments to the Town of Groton Zoning Regulations in Section 6.14.	
5-4	5-3	Ensure long-term maintenance of private structural BMPs				--		--	This BMP is addressed in the aforementioned amendments to the Town of Groton Zoning Regulations in Section 6.14-2(K)(5).	
Control Measure 6: Good Housekeeping										
6-1	6-1	Develop training session within the Town			X		X	X	A 30-minute training session is given to DPW staff during their annual SWPPP training in December. Included is a 19-minute video by Excal Visual discussing stormwater management. Invitations are extended to other municipal employees.	Continue to conduct training session.
6-2 & 6-3	6-2	Street sweeping	--	--	--	--	--	--	63% of all streets were swept at least twice in 2015 and 974 cubic yards of residual material were collected.	Continue street sweeping program.
6-6	6-3	Minimize impacts from municipal vehicle washing	--	--	--	--	--	--	Oil/water separators are inspected semi-annually. All oil/water separators located at the Town Hall Annex Complex were pumped on May 28, 2015.	Continue inspecting and cleaning oil/water separators.
6-7	6-4	Minimize impacts from municipal vehicle maintenance	--	--	--	--	--	--	Storage and containment areas at the Town Hall Annex Vehicle Maintenance Facility were inspected quarterly and spill kits inspected monthly.	Complete waste determinations on waste streams annually or as needed; inspect storage areas quarterly and spill kits monthly.

X = task completed as a one-time or finite event(s) during that year
 -- = work in progress or continuous event

**Table 1
Summary of BMPs for Stormwater Management Plan**

DEP BMP ID	BMP ID	BMP	Schedule					Measurable Goal	Progress during Year 12 (2015)	Planned Activities in Year 13 (2016)
			Year 1 2004	Year 2 2005	Year 3 2006	Year 4 2007	Year 5 2008			
6-4	6-5	Catch basin cleaning and storm drain maintenance	--	--	--	--	--	From January to November 2014 the Town spent 360 hours cleaning and inspecting catch basins and 865 hours inspecting and cleaning waterways.	Continue cleaning catch basins; record number of structures cleaned and amount of material collected.	
6-5	6-6	Storm drain maintenance	--	--	--	--	--	From January to November 2014, the Town logged 2,186 hours for maintenance, repairs, and upgrades to the drainage system.	Continue repairing, retrofitting, or upgrading storm drain system during repaving projects or as needed.	
6-8	6-7	Public grounds maintenance	--	X	--	--	--	The Parks Maintenance Foreman maintains a Connecticut Custom Grounds License. Soils are tested in the late fall and grounds are fertilized accordingly in April. Additionally, athletic fields are fertilized every 8 – 10 weeks as necessary.	Continue to train staff to minimize application of herbicides / pesticides, test soil to determine proper amount of fertilizers, and keep maintenance records for amount of herbicides / fertilizers / pesticides used.	
6-9	6-8	Pooper scooper stations and signs	X	X	X	X	X	The remaining dog waste stations are well utilized and the dumpsters emptied weekly.	Maintain stations.	
6-10	6-9	Training other municipal operators in good housekeeping				X	X	During the 2014 annual December personnel training, a total of 47 employees from two municipal departments participated.	Conduct training for operators in municipal departments; record attendance.	
	6-10	Develop procedures with the water companies for hydrant flushing			X	--	--	The Town has informed the three water companies that chlorine should be dissipated and erosion control measures implemented when flushing hydrants. The Town has also requested that the water companies give sufficient notification (2 weeks) to the Town so that the appropriate streets can be swept prior to hydrant flushing.	Continue to sweep streets prior to hydrant flushing as per notifications.	

X = task completed as a one-time or finite event(s) during that year
 -- = work in progress or continuous event

Appendix A



TOWN OF GROTON

PUBLIC WORKS DEPARTMENT

GARY J. SCHNEIDER
DIRECTOR
FWORKS@GROTON-CT.GOV

134 GROTON LONG POINT ROAD, GROTON, CONNECTICUT 06340
TELEPHONE (860) 448-4083 FAX (860) 448-4094
WWW.GROTON-CT.GOV

July 14, 2015

Christopher O. Stone, P.E.
Stormwater Permit Coordinator
Bureau of Water Management
Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106

Re: Town of Groton
2015 MS4 SMRs

Dear Mr. Stone,

Please find enclosed the Town of Groton's Stormwater Monitoring Reports (SMR) for the annual sampling of six representative outfalls. Sampling occurred on June 15th.

If you have any questions please contact Kristin Doundoulakis at 860-448-4544.

Very truly yours,

Gary J. Schneider
Director of Public Works

GJS/kd

Enclosures: 2015 Stormwater Monitoring Report Forms (6)
Connecticut Testing Laboratories reports dated July 6, 2015



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Town of Groton</u>	
Mailing Address: <u>134 Groton Long Point Road, Groton, CT 06340</u>	
Contact Person: <u>Gary J. Schneider</u>	Title: <u>Director of Public Works</u> Phone: <u>(860) 448-4083</u>
Permit Registration # <u>GSM000055</u>	

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Behind Big Y on Route 1, two large diameter pipes at headwall, pipe to the east sampled (Outfall 3854C)</u>	
Please circle the appropriate area description: Industrial, Commercial , or Residential	
Receiving Water (name, basin): <u>Long Island Sound, Baker Cove</u>	
Time of Start of Discharge: <u>6:30 AM</u>	
Date/Time Collected: <u>June 15, 2015, 11:01 AM</u>	Water Temperature: <u>64.1° F</u>
Person Collecting Sample: <u>Kristin Doundoulakis, Town of Groton DPW</u>	
Storm Magnitude (inches): <u>1.22 in</u>	Storm Duration (hours): <u>10 Hours</u>
Date of Previous Storm Event: <u>June 1, 2015</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	pH meter – SM 4500H*B	7.01 (6.6 in lab)	Field reading – CTL, Inc.
Rain pH	pH meter	5.79	Field reading
Hardness	2340B	38 mg/L	Connecticut Testing Laboratories, Inc.
Conductivity	SM 2510B	376 umhos/cm	Connecticut Testing Laboratories, Inc.
Oil & Grease	1664 Rev. A	<5 mg/L	Connecticut Testing Laboratories, Inc.
COD	410.4	25 mg/L	Connecticut Testing Laboratories, Inc.
Turbidity	180.1	8.5 NTU	Connecticut Testing Laboratories, Inc.
TSS	SM 2540D	20 mg/L	Connecticut Testing Laboratories, Inc.
TP	365.3	0.08 mg/L	Connecticut Testing Laboratories, Inc.
Ammonia	350.1	0.16 mg/L	Connecticut Testing Laboratories, Inc.
TKN	351.2	0.69 mg/L	Connecticut Testing Laboratories, Inc.
NO ₃ +NO ₂	SM 4500-NO ₃ F	0.2 mg/L	Connecticut Testing Laboratories, Inc.
E. coli	SM9222B/SM9222G	7,500/100 ml	Connecticut Testing Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Gary J. Schneider, Director of Public Works</u>	
Signature:	Date: <u>July 13, 2015</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Town of Groton</u>	
Mailing Address: <u>134 Groton Long Point Road, Groton, CT 06340</u>	
Contact Person: <u>Gary J. Schneider</u>	Title: <u>Director of Public Works</u> Phone: <u>(860) 448-4083</u>
Permit Registration # <u>GSM000055</u>	

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>At the end of Talewinds Lane (Outfall 3699R)</u>	
Please circle the appropriate area description: Industrial, Commercial, or <u>Residential</u>	
Receiving Water (name, basin): <u>Stream to Palmer Cove</u>	
Time of Start of Discharge: <u>6:30 AM</u>	
Date/Time Collected: <u>June 15, 2014 11:33 AM</u>	Water Temperature: <u>66.5° F</u>
Person Collecting Sample: <u>Kristin Doundoulakis, Town of Groton DPW</u>	
Storm Magnitude (inches): <u>1.22 in</u>	Storm Duration (hours): <u>10 Hours</u>
Date of Previous Storm Event: <u>June 1, 2015</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	pH meter – SM 4500H ⁺ B	7.37 (6.2 in lab)	Field reading – CTL, Inc.
Rain pH	pH meter	5.79	Field reading
Hardness	2340B	2 mg/L	Connecticut Testing Laboratories, Inc.
Conductivity	SM 2510B	19 umhos/cm	Connecticut Testing Laboratories, Inc.
Oil & Grease	1664 Rev. A	<5 mg/L	Connecticut Testing Laboratories, Inc.
COD	410.4	26 mg/L	Connecticut Testing Laboratories, Inc.
Turbidity	180.1	7.2 NTU	Connecticut Testing Laboratories, Inc.
TSS	SM 2540D	33 mg/L	Connecticut Testing Laboratories, Inc.
TP	365.3	0.11 mg/L	Connecticut Testing Laboratories, Inc.
Ammonia	350.1	0.16 mg/L	Connecticut Testing Laboratories, Inc.
TKN	351.2	0.43 mg/L	Connecticut Testing Laboratories, Inc.
NO ₃ +NO ₂	SM 4500-NO ₃ F	<0.1 mg/L	Connecticut Testing Laboratories, Inc.
E. coli	SM9222B/SM9222G	3,600/100 ml	Connecticut Testing Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Gary J. Schneider, Director of Public Works</u>	
Signature:	Date: <u>July 13, 2015</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Groton

Mailing Address: 134 Groton Long Point Road, Groton, CT 06340

Contact Person: Gary J. Schneider Title: Director of Public Works Phone: (860) 448-4083

Permit Registration #GSM000055

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): Between Route 12 and Pleasant Valley Road behind the vacant "Good Times" Restaurant (Outfall 3568C)

Please circle the appropriate area description: Industrial, Commercial, or Residential

Receiving Water (name, basin): Long Island Sound, Poquonnock River

Time of Start of Discharge: 6:30 AM

Date/Time Collected: June 15, 2015, 10:26 AM Water Temperature: 65.3° F

Person Collecting Sample: Kristin Doundoulakis, Town of Groton DPW

Storm Magnitude (inches): 1.22 in Storm Duration (hours): 10 Hours

Date of Previous Storm Event: June 1, 2015

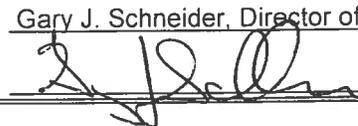
MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	pH meter – SM 4500H*B	8.2 (6.1 in lab)	Field reading - CTL, Inc.
Rain pH	pH meter	5.79	Field reading
Hardness	2340B	8 mg/L	Connecticut Testing Laboratories, Inc.
Conductivity	SM 2510B	83 umhos/cm	Connecticut Testing Laboratories, Inc.
Oil & Grease	1664 Rev. A	<5 mg/L	Connecticut Testing Laboratories, Inc.
COD	410.4	49 mg/L	Connecticut Testing Laboratories, Inc.
Turbidity	180.1	8 NTU	Connecticut Testing Laboratories, Inc.
TSS	SM 2540D	16 mg/L	Connecticut Testing Laboratories, Inc.
TP	365.3	0.27 mg/L	Connecticut Testing Laboratories, Inc.
Ammonia	350.1	0.22 mg/L	Connecticut Testing Laboratories, Inc.
TKN	351.2	1.08 mg/L	Connecticut Testing Laboratories, Inc.
NO ₃ +NO ₂	SM 4500-NO ₃ F	<0.1 mg/L	Connecticut Testing Laboratories, Inc.
E. coli	SM9222B/SM9222G	>12,000/100 ml	Connecticut Testing Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Gary J. Schneider, Director of Public Works

Signature:  Date: July 13, 2015



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Town of Groton</u>	
Mailing Address: <u>134 Groton Long Point Road, Groton, CT 06340</u>	
Contact Person: <u>Gary J. Schneider</u>	Title: <u>Director of Public Works</u> Phone: <u>(860) 448-4083</u>
Permit Registration # <u>GSM000055</u>	

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Military Highway at the intersection of Lestertown Road (Outfall 3630R)</u>	
Please circle the appropriate area description: Industrial, Commercial, or <u>Residential</u>	
Receiving Water (name, basin): <u>Thames River</u>	
Time of Start of Discharge: <u>6:30 AM</u>	
Date/Time Collected: <u>June 1, 2015, 10:44 AM</u>	Water Temperature: <u>65.1° F</u>
Person Collecting Sample: <u>Kristin Doundoulakis, Town of Groton DPW</u>	
Storm Magnitude (inches): <u>1.22 in</u>	Storm Duration (hours): <u>10 Hours</u>
Date of Previous Storm Event: <u>June 1, 2015</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	pH meter – SM 4500H ⁺ B	7.69 (6.7 in lab)	Field reading – CTL, Inc.
Rain pH	pH meter	5.79	Field reading
Hardness	2340B	3 mg/L	Connecticut Testing Laboratories, Inc.
Conductivity	SM 2510B	24 umhos/cm	Connecticut Testing Laboratories, Inc.
Oil & Grease	1664 Rev. A	<5 mg/L	Connecticut Testing Laboratories, Inc.
COD	410.4	19 mg/L	Connecticut Testing Laboratories, Inc.
Turbidity	180.1	4.7 NTU	Connecticut Testing Laboratories, Inc.
TSS	SM 2540D	7 mg/L	Connecticut Testing Laboratories, Inc.
TP	365.3	0.12 mg/L	Connecticut Testing Laboratories, Inc.
Ammonia	350.1	0.22 mg/L	Connecticut Testing Laboratories, Inc.
TKN	351.2	0.62 mg/L	Connecticut Testing Laboratories, Inc.
NO ₃ +NO ₂	SM 4500-NO ₃ F	0.2 mg/L	Connecticut Testing Laboratories, Inc.
E. coli	SM9222B/SM9222G	>12,000/100 ml	Connecticut Testing Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Gary J. Schneider</u>	<u>Director of Public Works</u>
Signature:	Date: <u>July 13, 2015</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Town of Groton</u>
Mailing Address: <u>134 Groton Long Point Road, Groton, CT 06340</u>
Contact Person: <u>Gary J. Schneider</u> Title: <u>Director of Public Works</u> Phone: <u>(860) 448-4083</u>
Permit Registration # <u>GSM000055</u>

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Leonard Drive at Groton Airport Business Park</u> <u>(Outfall 3682I)</u>
Please circle the appropriate area description: Industrial , Commercial, or Residential
Receiving Water (name, basin): <u>Long Island Sound, Baker Cove</u>
Time of Start of Discharge: <u>6:30 AM</u>
Date/Time Collected: <u>June 15, 2015, 11:14 AM</u> Water Temperature: <u>65.6° F</u>
Person Collecting Sample: <u>Kristin Doundoulakis, Town of Groton DPW</u>
Storm Magnitude (inches): <u>1.22 in</u> Storm Duration (hours): <u>10 Hours</u>
Date of Previous Storm Event: <u>June 1, 2015</u>

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	pH meter – SM 4500H*B	7.46 (6.5 in lab)	Field reading – CTL, Inc.
Rain pH	pH meter	5.79	Field reading
Hardness	2340B	2 mg/L	Connecticut Testing Laboratories, Inc.
Conductivity	SM 2510B	19 umhos/cm	Connecticut Testing Laboratories, Inc.
Oil & Grease	1664 Rev. A	<5 mg/L	Connecticut Testing Laboratories, Inc.
COD	410.4	18 mg/L	Connecticut Testing Laboratories, Inc.
Turbidity	180.1	3.1 NTU	Connecticut Testing Laboratories, Inc.
TSS	SM 2540D	1 mg/L	Connecticut Testing Laboratories, Inc.
TP	365.3	0.07 mg/L	Connecticut Testing Laboratories, Inc.
Ammonia	350.1	0.16 mg/L	Connecticut Testing Laboratories, Inc.
TKN	351.2	1.36 mg/L	Connecticut Testing Laboratories, Inc.
NO ₃ +NO ₂	SM 4500-NO ₃ F	0.2 mg/L	Connecticut Testing Laboratories, Inc.
E. coli	SM9222B/SM9222G	1,900/100 ml	Connecticut Testing Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Gary J. Schneider, Director of Public Works</u>	Date: <u>July 13, 2015</u>
Signature:	Date: <u>July 13, 2015</u>



General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: <u>Town of Groton</u>	
Mailing Address: <u>134 Groton Long Point Road, Groton, CT 06340</u>	
Contact Person: <u>Gary J. Schneider</u>	Title: <u>Director of Public Works</u> Phone: <u>(860) 448-4083</u>
Permit Registration # <u>GSM000055</u>	

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>Flanders Road south of Noank-Ledyard Road.</u> <u>Across from self storage facility (Outfall 2004I – 3452 in GIS)</u>	
Please circle the appropriate area description: <u>Industrial</u> , Commercial, or Residential	
Receiving Water (name, basin): <u>wetlands associated with Eccleston Brook, Mumford Cove</u>	
Time of Start of Discharge: <u>6:30 AM</u>	
Date/Time Collected: <u>June 15, 2015 11:48 AM</u>	Water Temperature: <u>66.2° F</u>
Person Collecting Sample: <u>Kristin Doundoulakis, Town of Groton DPW</u>	
Storm Magnitude (inches): <u>1.22 in</u>	Storm Duration (hours): <u>10 Hours</u>
Date of Previous Storm Event: <u>June 1, 2015</u>	

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	pH meter – SM 4500H ⁺ B	7.44 (7.1 in lab)	Field reading – CTL, Inc.
Rain pH	pH meter	5.79	Field reading
Hardness	2340B	4 mg/L	Connecticut Testing Laboratories, Inc.
Conductivity	SM 2510B	62 umhos/cm	Connecticut Testing Laboratories, Inc.
Oil & Grease	1664 Rev. A	<5 mg/L	Connecticut Testing Laboratories, Inc.
COD	410.4	24 mg/L	Connecticut Testing Laboratories, Inc.
Turbidity	180.1	3.7 NTU	Connecticut Testing Laboratories, Inc.
TSS	SM 2540D	6 mg/L	Connecticut Testing Laboratories, Inc.
TP	365.3	0.10 mg/L	Connecticut Testing Laboratories, Inc.
Ammonia	350.1	0.22 mg/L	Connecticut Testing Laboratories, Inc.
TKN	351.2	0.71 mg/L	Connecticut Testing Laboratories, Inc.
NO ₃ +NO ₂	SM 4500-NO ₃ F	0.3 mg/L	Connecticut Testing Laboratories, Inc.
E. coli	SM9222B/SM9222G	4,000/100 ml	Connecticut Testing Laboratories, Inc.

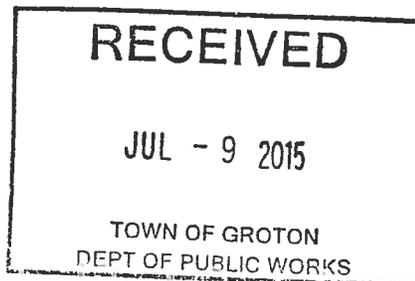
STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>Gary J. Schneider, Director of Public Works</u>	
Signature:	Date: <u>July 13, 2015</u>

July 06, 2015

Town of Groton
C/O Public Works
134 Groton Long Point Rd.
Groton, CT 06340

Attn: Mrs. Kristin Doundoulakis



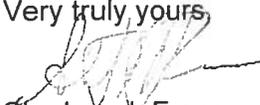
Please find attached laboratory report(s) for the samples submitted on:
June 15, 2015.

All pertinent information for this analysis is located on the report. Should it be necessary to contact us regarding billing or the test results, please have the following information readily available:

Lab No. : 0615302
PO/Job No. : 16000188
Invoice No. : 193243
Customer No. : 666

Please contact us if you have any questions.

Very truly yours,


Stephen J. Franco
Laboratory Director
PH-0547



STEPHEN J. FRANCO
Laboratory Director
PHONE ■ 203/634-3731

www.ctl-web.com / ctestlab@erols.com
165 GRACEY AVENUE ■ MERIDEN, CT ■ 06451

Date Samples Received: 06/15/15

Client Name : Town of Groton	CTL Lab No. : 0615302
Report Date : 07/02/15	PO/ Job No. : NA

RESULTS OF ANALYSIS

Matrix Type :	W	W	W
CTL Sample No.	8710	8711	8712
Field ID :	3682	3699	2004

Parameters	RL				Method No.
pH	0.1	6.5	6.2	7.1	4500-H ⁺ B
Hardness-mg/L	2	2	2	4	2340B
Spec. Cond.-umhos/cm	1	19	19	62	2510B
Total Oil & Grease-mg/L	5	ND	ND	ND	1664A
COD-mg/L	4	18	26	24	410.4
Turbidity-NTU	0.5	3.1	7.2	3.7	180.1
Total Susp. Solids-mg/L	1	1	33	6	2540D
Total Phosphorus-P-mg/L	0.01	0.07	0.11	0.10	365.3
Ammonia-N-mg/L	0.05	0.16	0.16	0.22	350.1
TKN-mg/L	0.05	0.36	0.43	0.71	351.2
Nitrate + Nitrite-N-mg/L	0.1	0.2	ND	0.3	4500-NO ₃ F
E.Coli / 100ml	100	1,900	3,600	4,000	9222B/9222G

Matrix Type: W= Water/Aqueous S= Soil/Solid O= Oil/Hydrocarbon

RL= Reporting Limit ND= Not Detected

Method Numbers Referenced From:

EPA-600/4-79-020. Methods for Chemical Analysis of Water and Wastes. March 1983.
Standard Methods for the Examination of Water and Wastes, 19th Edition. APHA, AWWA, WPCF. 1995
N-Hexane Extractable Material (HEM) by Extraction and Gravimetry (Oil and Grease). April 1995. USEPA

Connecticut Testing Laboratories, Inc.
 165 Gracey Avenue / Meriden, CT 06451
 (203) 634-3731 (Fax) 630-1336
 Certification CT-PH0547/ MA-CT035

Date Samples Received: 06/15/15

Client Name : **Town of Groton**

CTL Lab No. : 0615302

Report Date : 07/02/15

PO/ Job No. : NA

RESULTS OF ANALYSIS

Matrix Type :	W	W	W
CTL Sample No.	8707	8708	8709
Field ID :	3568	3630	3854

Parameters	RL				Method No.
pH	0.1	6.1	6.7	6.6	4500-H ⁺ B
Hardness-mg/L	2	8	3	38	2340B
Spec. Cond.-umhos/cm	1	83	24	376	2510B
Total Oil & Grease-mg/L	5	ND	ND	ND	1664A
COD-mg/L	4	49	19	25	410.4
Turbidity-NTU	0.5	8.0	4.7	8.5	180.1
Total Susp. Solids-mg/L	1	16	7	20	2540D
Total Phosphorus-P-mg/L	0.01	0.27	0.12	0.08	365.3
Ammonia-N-mg/L	0.05	0.22	0.22	0.16	350.1
TKN-mg/L	0.05	1.08	0.62	0.69	351.2
Nitrate + Nitrite-N-mg/L	0.1	ND	0.2	0.2	4500-NO ₃ F
E.Coli / 100ml	100	>12,000	>12,000	7,500	9222B/9222G

Matrix Type: W= Water/Aqueous S= Soil/Solid O= Oil/Hydrocarbon

RL= Reporting Limit ND= Not Detected

Method Numbers Referenced From:

EPA-600/4-79-020. Methods for Chemical Analysis of Water and Wastes. March 1983.
Standard Methods for the Examination of Water and Wastes, 19th Edition. APHA, AWWA, WPCF. 1995
N-Hexane Extractable Material (HEM) by Extraction and Gravimetry (Oil and Grease). April 1995. USEPA

Connecticut Testing Laboratories, Inc.
165 Gracey Avenue / Meriden, CT 06451
(203) 634-3731 (Fax) 630-1336
Certification CT-PH0547/ MA-CT035



Requested Analyses

Lab Tracking #: 0615302

CTL Client: Town of Groton
 Client PO #: _____
 Sampler(s): Kristin Dourdoulakis (signature)
Kristin Dourdoulakis (print)

Lab Use	Field ID (please print)	Date	Time	Matrix	Preserv Code	Container Type Code	Total Number of Containers
8707	3568	6-15-15	10:26	W	✓		
08	3630	6-15-15	10:44	W	✓		
09	3854	6-15-15	11:01	W	✓		
10	3682	6-15-15	11:14	W	✓		
11	3699	6-15-15	11:33	W	✓		
12	2004	6-15-15	11:48	W	✓		

REPORT INFORMATION

Send Report To: _____
 Email Report To: _____
 Quote ID: _____

Invoice To: _____
 Fax Report To: _____

RSR Criteria (Check One) GWP _____ GA _____ SWP _____

Relinquished By: (Signature) _____ Date / Time 6/15/15 1420
 Relinquished By: (Signature) _____ Date / Time 6/15/15 1510

Container Types : P = Plastic C = Cube AG = Amber Glass V = EPA Vial S = Sterile T = Tedlar Bag
 Matrix : A = Air W = Water DW = Drinking Water S = Soil Wp = Wipe SM = Summa Canister _____ L
 5035 Preservation : M = Methanol SB = Sodium Bisulfate Ev = Empty Vial W = Water En = Encore Type

DATA REPORT TYPE
 RCP State EDI
 Excel Other *
 PDF Email
 *Specify _____

Received By Laboratory: (Signature) _____ Date / Time 6/15/15 1510
 Sampled / Iced? _____ Date Encores Frozen: _____
 Trip C: _____

Turn Around Time
 24 HR* 3 Day* 5 Day
 48 HR* 4 Day* 10 Day

CTL will not be field liable for incorrectly filled out Chain of Custody Records.
 Samples held for 45 days from receipt.

*Turnaround times less than " 5 Days" may be subject to priority fee charges.

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Connecticut Testing Laboratories, Inc.
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