



Electronic Annual Report Certification Form

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

Please submit this form in accordance with Section 7(e) of the general permit (DEP-PERD-GP-021) in order to certify your Annual Report *only after the report has been submitted electronically*. This form should *not* be used for any Annual Report not submitted electronically. If your Annual Report was not submitted electronically, the certification should be included with the report mailed to the DEP.

Part I: Registrant Information

Name of town/city: Stonington

Chief Elected Official or Principal Executive Officer: George A. Crouse

Title: First Selectman

Address: 152 Elm Street

City/Town: Stonington, CT Zip Code: 06378

Phone: (860) 535-5050 ext: _____ Fax: (860) 535-1046

Permit Number: **GSM** 000056

Part II: Fee Information

A review fee of \$187.50 must be submitted with the Annual Report. Please check one box below.

- ☐ The Annual Report review fee is attached
- ☒ I Submitted the Annual Report review fee on (date) December 18, 2014

Part III: Sampling Data

Stormwater sampling must be conducted annually. The results must be recorded on the Stormwater Monitoring Report forms and included in the Annual Report. Please check one box below.

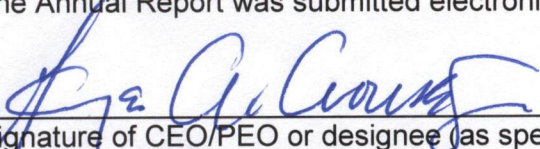
- ☐ The Stormwater Monitoring Report forms were submitted with our Annual Report.
- ☒ The Stormwater Monitoring Report forms are attached to this form.
- ☐ I submitted the Stormwater Monitoring Report forms on _____.

Part IV: Annual Report Certification

The Chief Elected Official or Principal Executive Officer *and* the individual(s) responsible for actually preparing the Annual Report must sign this part.

"I have personally examined and am familiar with the information submitted in the Annual Report 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 the submitted information 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.

The Annual Report was submitted electronically on 12/23/2014.



Signature of CEO/PEO or designee (as specified in
RCSA Section 22a-430-3(b)(2)(B))

12/23/2014

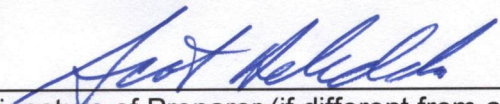
Date

George A. Crouse

Name of CEO/PEO or designee (print or type)

First Selctman

Title



Signature of Preparer (if different from above)

12/23/14

Date

Scot Deledda, PE

Name of Preparer (print or type)

Town Engineer

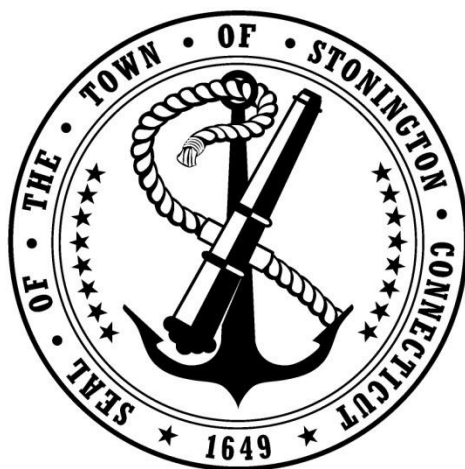
Title (if applicable)

- ☐ Please enter a check mark if additional signatures are necessary.
If so, please reproduce this sheet and attach signed copies to this sheet.

Note: Please submit this Certification Form and Fee (if not already paid) to:

STORMWATER PERMIT COORDINATOR
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

TOWN OF STONINGTON 2014 PHASE 2 STORM WATER ANNUAL REPORT



**Prepared by
Scot Deledda, P.E.
Stonington Town Engineer**

December 2014

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Section A

Stormwater Program Permit Information

Permitting Authority:	CT DEP
Permit Number:	000056
Permit Type:	General
Permit Name:	Stonington Small MS4 Permit
Date Issue:	07/09/2004
Date Expire:	01/08/2015

General Information for MS4 Operator

Operator Name:	Mr. George A. Crouse
Operator Title:	First Selectman
Represented Entity:	Town of Stonington
Mailing Address:	152 Elm St
Mail City, State, Zip:	Stonington, CT 06378
Phone Number	(860) 535-5050
Population:	Approx. 18,000
Households:	Approx. 7,000
Area:	Approx 39 sq miles
Official Website:	www.townofstonington.com

General Information for Primary Contact Person

Name:	Scot Deledda, P.E.
Title:	Town Engineer
Phone Number:	(860) 535-5055
E-Mail Address:	sdeledda@stonington-ct.gov

General Information for Secondary Contact Person

Name:	Barbara McKrell, P.E.
Title:	Director of Public Works
Phone Number:	(860) 535-5055
E-Mail Address:	bmckrell@stonington-ct.gov

General Information for Receiving Waters

Receiving Water Lists: Listed below are all the identified receiving waterbodies to which identified outfalls discharge.

Receiving Streams

(Creek, stream, river, etc.)

Whitford Brook
Pequotsepos Brook
Copps Brook
Anguilla Brook
Stony Brook
Donahue Brook
Wheeler Brook

Receiving Waterbodies

(Lake, wetland, ocean, etc.)

Mystic River
Whitford Pond
Mystic Harbor
Stonington Harbor
Mystic Reservoir
Little Narragansett Bay
Fishers Island Sound
Wequetequock Pond
Wequetequock River
Pawcatuck River

Receiving Watersheds

Whitford Brook
Mystic River
Pequotsepos Brook
Copps Brook
Stonington Harbor
Wequetequock River
Little Narragansett Bay
Pawcatuck River

Section B

Plan Contents Summary

The Stormwater Management Plan consists of the following Minimum Control Measures (MCM's) and Best Management Practices (BMP's):

<u>MCM's and BMP's</u>	<u>Target Start Date</u>	<u>Target End Date</u>
<i>MCM #1 - Public Participation/Involvement</i>		
1.1 Establishing a Stormwater Mgt Study Group	07/01/2004	06/30/2005
1.2 Public Info Meeting	07/01/2004	06/30/2005
1.3 Finalize SMSG Recommendations	07/01/2004	06/30/2005
1.4 Continue to meet with Stormwater Group	07/01/2005	01/09/2009
1.5 Organize a Storm Drain Marking Program	07/01/2005	06/29/2006
1.6 Storm Drain Marking (Year 3)	07/01/2006	06/29/2007
1.7 Storm Drain Marking (Year 4)	07/01/2007	06/29/2008
1.8 Storm Drain Marking (Year 5)	07/01/2008	01/08/2009
1.9 Storm Drain Marking (Year 6)	07/01/2009	01/08/2010
1.10 Storm Drain Marking (Year 7)	07/01/2010	01/01/2011
1.11 Storm Drain Marking (Year 8)	07/01/2011	01/01/2012
1.12 Storm Drain Marking (Year 9)	07/01/2012	01/01/2013
1.13 Storm Drain Marking (Year 10)	07/01/2013	01/01/2014
<i>MCM #2 - Public Education and Outreach</i>		
2.1 Creating & Procuring Stormwater Literature (Year1)	07/01/2004	06/29/2005
2.2 Develop Info for Website (Year 1)	07/01/2004	06/29/2005
2.3 Teach Stormwater Issues to Schools (Year 1)	07/01/2004	06/29/2005
2.4 Inform the public on the hazards of Illicit Discharges	07/01/2005	06/29/2006
2.5 Distribute Literature (Year 2)	07/01/2005	06/29/2006
2.6 Update Info for Website (Year 2)	07/01/2005	06/30/2006
2.7 Distribute Literature (Year 3)	07/01/2006	06/29/2007
2.8 Storm Drain Marking (Year 3)	07/01/2006	06/29/2007
2.9 Update Info for Website (Year 3)	07/01/2006	06/29/2007
2.10 Distribute Literature (Year 4)	07/01/2007	06/29/2008
2.11 Storm Drain Marking (Year 4)	07/01/2007	06/29/2008
2.12 Update Info on Website (Year 4)	07/01/2007	06/29/2008
2.13 Distribute Literature (Year 5)	07/01/2008	01/08/2009
2.14 Storm Drain Marking (Year 5)	07/01/2008	01/07/2009
2.15 Update Info for Website (Year 5)	07/01/2008	01/08/2009
2.16 Storm Drain Marking (Year 6)	07/01/2009	01/08/2010
2.17 Update Info for Website (Year 6)	07/01/2009	01/08/2010
2.18 Storm Drain Marking (Year 7)	07/01/2010	01/01/2011
2.19 Update Info for Website (Year 7)	07/01/2010	01/01/2011
2.20 Storm Drain Marking (Year 8)	07/01/2011	01/01/2012
2.21 Update Info for Website (Year 8)	07/01/2011	01/01/2012
2.22 Storm Drain Marking (Year 9)	07/01/2012	01/01/2013

2.23 Update Info for Website (Year 9)	07/01/2012	01/01/2013
2.24 Storm Drain Marking (Year 10)	07/01/2013	01/01/2014
2.25 Update Info for Website (Year 10)	07/01/2013	01/01/2014
2.26 Update Info on new website (Year 11)	12/29/2014	07/31/2015

MCM #3 - Illicit Discharge Detection and Elimination

3.1 Initial Identification of Illicit Discharge Sources	07/01/2004	06/29/2005
3.2 Inform the public on non-stormwater discharges	07/01/2005	06/30/2006
3.3 Stormwater Ordinance	07/01/2004	06/29/2005
3.4 Develop and Implement an IDD&E Program	07/01/2005	06/30/2006
3.5 Drainage System Map - Year 2	07/01/2005	06/29/2006
3.6 Drainage System Map - Year 3	07/01/2006	06/29/2007
3.7 Drainage System Map - Year 4	07/01/2007	06/29/2008
3.8 Outlet Sampling - Year 1	07/01/2004	06/29/2005
3.9 Outlet Sampling - Year 2	07/01/2005	06/29/2008
3.10 Outlet Sampling - Year 3	07/01/2006	06/30/2007
3.11 Outlet Sampling - Year 4	07/01/2007	06/29/2008
3.12 Outlet Sampling - Year 5	07/01/2008	01/09/2009
3.13 Outlet Sampling - Year 6	07/01/2009	01/09/2010
3.14 Outlet Sampling - Year 7	07/01/2010	01/01/2011
3.15 Outlet Sampling - Year 8	07/01/2011	01/01/2012
3.16 Outlet Sampling - Year 9	07/01/2012	01/01/2013
3.17 Outlet Sampling - Year 10	07/01/2013	01/01/2014
3.18 Outlet Sampling - Year 11	07/01/2014	01/01/2015

MCM #4 - Construction Site Runoff Control

4.1 Modify & Enforce Town's Ex. E&S Control Program	07/01/2004	06/29/2005
4.2 Ordinance / Regulatory Mechanism	07/01/2004	06/29/2005
4.3 Implement Reg. Req. - projects exc. 1 ac. threshold	07/01/2004	06/30/2005
4.4 Continue to Improve on E&S Program	07/01/2005	01/09/2015
4.5 Continue Compliance with Reg. Requirements	07/01/2005	01/09/2015
4.6 Continue Req. for E&S Controls on all projects	07/01/2004	01/09/2015
4.7 Develop an IMS to Track E&S compliance	07/01/2004	06/29/2005
4.8 Perform Construction Site Inspections	07/01/2005	01/09/2014
4.9 Requirements for Controlling Waste	07/01/2004	06/29/2005

MCM #5 - Post-Construction Runoff Control

5.1 Develop a Town-Wide Tech Standards Document	07/01/2004	01/01/2015
5.2 Require BMP's	07/01/2005	01/01/2015
5.3 Continue to Improve Water Quality Standards	07/01/2005	01/01/2015
5.4 Drainage Maintenance Agreements	07/01/2005	01/01/2015

MCM #6 - Pollution Prevention/Good Housekeeping

6.1 Develop an O&M Program for Municipal Operations	07/01/2004	06/29/2005
6.2 Employee Training Materials	07/01/2004	06/29/2005
6.3 Train Employees	07/01/2005	01/08/2015

6.4	Develop and Implement Street Sweeping Program	07/01/2004	06/29/2005
6.5	Continue Street Sweeping Program	07/01/2005	01/08/2015
6.6	Develop & Impl. Catch Basin Cleaning Program	07/01/2004	06/29/2005
6.7	Continue Catch Basin Cleaning Program	07/01/2005	01/08/2015
6.8	Develop a Drainage System Improvement Program	07/01/2006	06/30/2007

Section C

Minimum Control Measure #1 - Public Participation/Involvement

EPA Requirements:

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 (BMP's) and measurable goals for this minimum control measure.

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 provides 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.

Activities Performed in 2014

Continue Meeting with STF

Due to the change of two town employees (Director of Public Works & Town Engineer), and outstanding public improvement projects we were unable to bring members of the task force together for a meeting in 2014.

Every effort will be made to form a new task force and reconvene meetings in 2015.

Storm Drain Marker Project

Unfortunately due to the multitude of on-going public improvement projects the final remaining catch basins were not able to be marked. The Town plans on installing the remaining markers (approximately 160) in the summer of 2015.

Minimum Control Measure #2 – Public Education and Outreach

EPA Requirements:

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 (BMP's) and measurable goals for this minimum control measure.

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.

Activities Performed in 2014

Provide Information on the Town's Website

The Town has completed a new website in November 2014 under which we continue to provide information on the Phase 2 subject. New contact information for the Town Engineer and Director of Public Works has been added to the website to reflect new town employees. Additionally, we have been talking with a local group (CUSH) that has been very active in stormwater education. They have their own website that provides a tremendous amount of information on this subject. The website can be viewed at <http://www.cushinc.org/>

Minimum Control Measure #3 - Illicit Discharge Detection and Elimination

EPA Requirements:

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 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 Town 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.
5. The determination of appropriate best management practices (BMP's) and measurable goals for this minimum control measure.

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.

Activities Performed in 2014

Identification of Illicit Discharges

No additional outfalls were detected in 2014. Previously 35 different outlets were earmarked in which to begin our illicit discharge and illegal connection investigations. We anticipate reviewing & screening these outlets in the summer of 2015 as part of our dry sampling program.

2013 Wet Sampling

The town continued to perform wet sampling in 8 different locations. These are the same locations that were sampled in 2004-2013. All of the sampling was performed on September 25, 2014 and results are included as an attachment to this report.

The Town also provided the sampling results from 2 additional locations inside the Stonington Borough and forwarded the data to the Borough Warden.

Minimum Control Measure #4 - Construction Site Runoff Control

EPA Requirements:

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.
6. Determine the appropriate best management practices (BMP's) and measurable goals for this minimum control measure.

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.

Pollutants Commonly Discharged from Construction Sites include the following; Sediment, Solid and sanitary wastes, Phosphorous (fertilizer), Nitrogen (fertilizer), Pesticides, Oil and grease, Concrete truck washout

Activities Performed in 2014

Continue to Inspect for E&S Controls

The town is continuing to inspect all development projects over 5 acres and smaller selected projects which are in sensitive locations for compliance with their approved stormwater pollution prevention plan (SWPPP). The town continues to request E&S bonds for all of these types of projects to help pay for these efforts.

Continue Compliance with Registration Requirements

We continue to make sure in our plan review process that development applications which propose over 5 acres of disturbance submit General Permit for Construction Activities to the CTDEP.

Minimum Control Measure # 5 - Post-Construction Runoff Control

EPA Requirements:

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 (BMP's).
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 (BMP's) and measurable goals for this minimum control measure.

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 stream bank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property?

Activities Performed in 2014

Requiring BMP's

During our plan review process we require that all projects are designed to be in strict conformance with the 2002 CT E&S Guidelines as well as the 2004 Connecticut Stormwater Quality Manual.

Maintenance Agreements

We continue to require where necessary drainage maintenance agreements for homeowner's associations and/or commercial sites to insure that the owners fulfill their maintenance obligations.

If a developer proposes to install a new drainage system in which the Town will take ownership of upon completion, we have been requiring the developer to post a cash bond for future maintenance and outlet sampling as required by our MS4 permit.

Minimum Control Measure #6-Pollution Prevention/Good Housekeeping

EPA Requirements:

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 (BMP's) and measurable goals for this minimum control measure.

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.

Activities Performed in 2014

Operations and Maintenance Programs

The Town has in place Stormwater Pollution Prevention Plans for the Highway Garage and the Town Dock facilities. On top of these plans, the Town has Spill Prevention, Control and Countermeasure plans for these facilities as well as the Police Station. We will continue to inspect these sites and abide by these plans

Employee Training

On April 23, 2014, the Town hired an outside consultant to train town employees from the Highway Department, Solid Waste/Transfer Station, Town Dock and the Water Pollution Control Authority on Oil Pollution Prevention (SPCC) and Stormwater Pollution Prevention (SWPP).

Street Sweeping Program

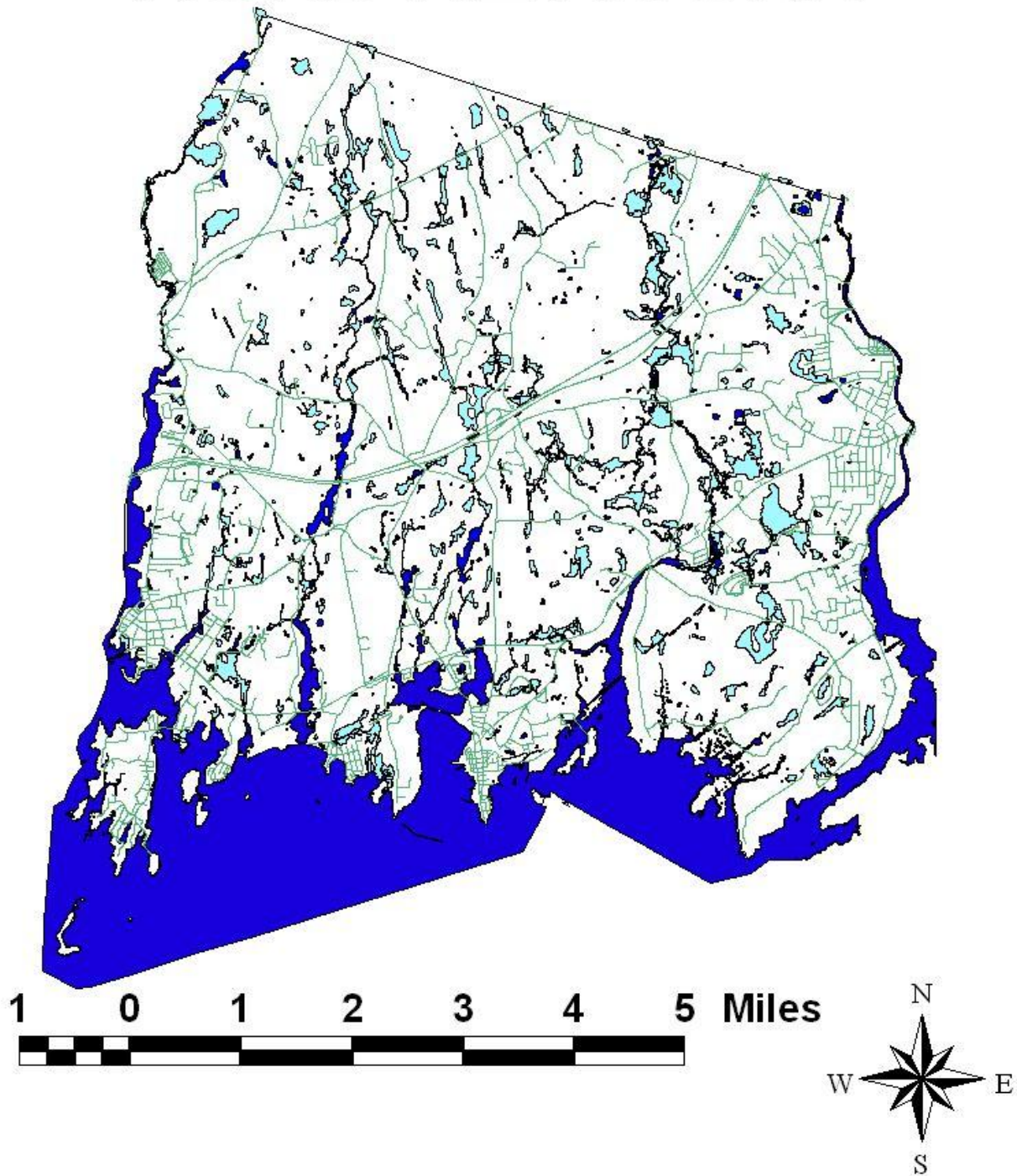
The Town's Public Works Department swept approximately 40 miles of roadway (80 lane miles) of road throughout the downtown areas (Mystic & Pawcatuck). The town has an older street sweeper which is in need of upgrading or replacement. Replacement of the street sweeper has been requested in the budget for the 2015 calendar year. Approximately \$ 22k was spent on removal of street sweeping byproduct from the town by August 2014.

Catch Basin Cleaning Program

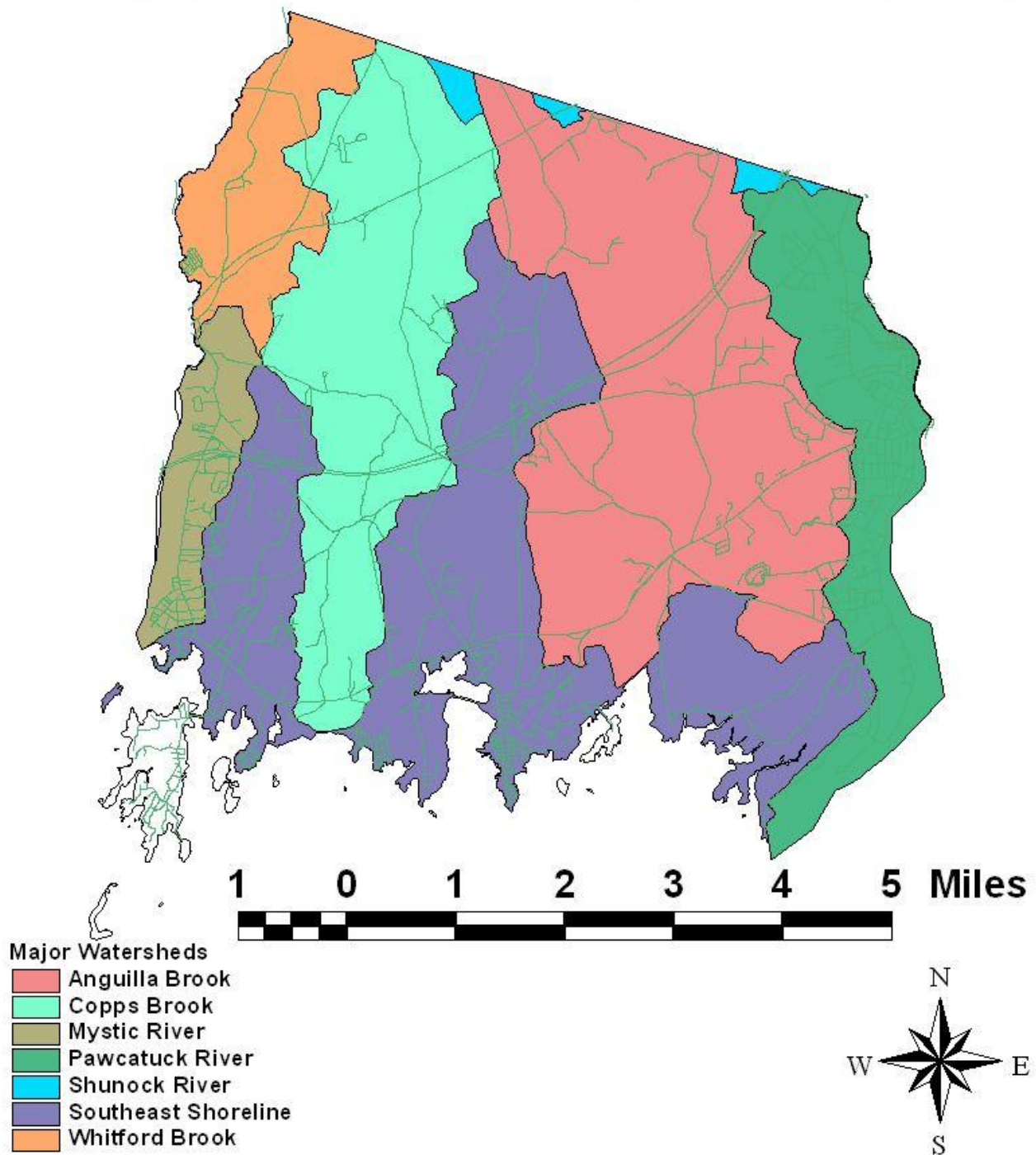
The Town hired a contractor in September of 2014 to vacuum out 997 of our nearly 1,600 catch basins throughout Town. Due to budget constraints the remaining catch basins are scheduled to be cleaned out in 2015. The cost of the 2014 cleaning work totaled approximately \$18k. The Town will continue to budget money to have this type of work done on an annual basis.

APPENDICES

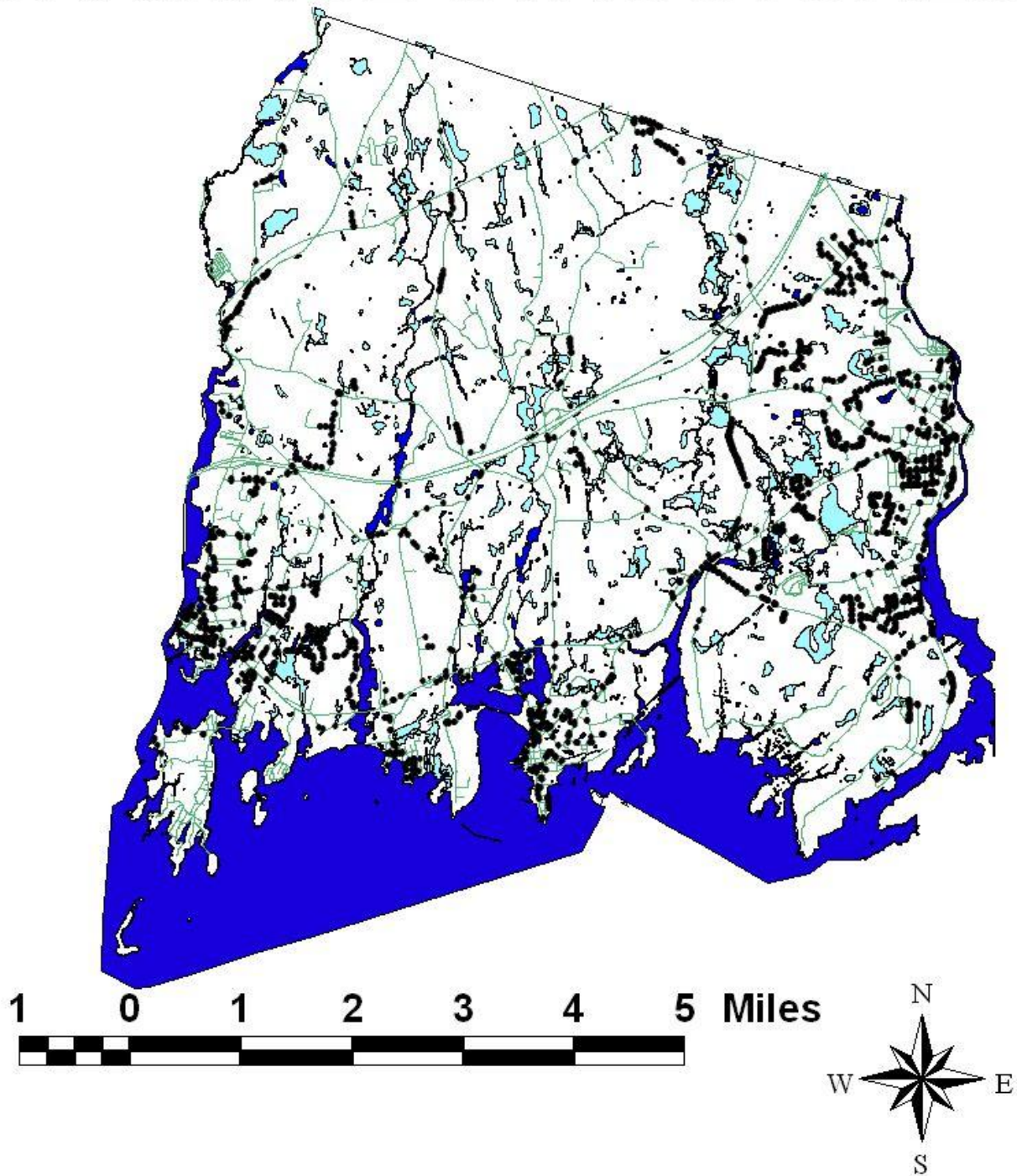
TOWN OF STONINGTON ROAD NETWORK



TOWN OF STONINGTON MAJOR DRAINAGE BASINS



TOWN OF STONINGTON DRAINAGE STRUCTURES





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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town:	Stonington		
Mailing Address:	152 Elm Street, Stonington, CT 06378		
Contact Person:	Barbara McKrell, P.E.	Title:	DPW Director
		Phone:	860-535-5055
Permit Registration #	GSM000056		

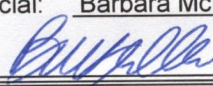
SAMPLING INFORMATION

Discharge Location (Lat/Long or other description):	C1 - Catch basin on east side of road just south of C.C. O'Brien's at 8 Mechanic Street in Pawcatuck		
Please circle the appropriate area description:	Industrial, <u>Commercial</u> or Residential		
Receiving Water (name, basin):	Pawcatuck River, Pawcatuck River Drainage Basin		
Time of Start of Discharge:	unknown		
Date/Time Collected:	9-25-14 at 1:25 pm	Water Temperature:	
Person Collecting Sample:	Josh Messina of ECS, Inc.		
Storm Magnitude (inches):	approx. 0.35	Storm Duration (hours):	approx. 12.5
Date of Previous Storm Event:	9-13-14		

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	7.08 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	29.0 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	164 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	<1.5 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	170 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	75.8 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	69 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.43 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	1.22 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	3.33 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	0.52 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	3,650 col/100 mL	Phoenix Environmental 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:	Barbara McKrell, P.E.
Signature:	
Date:	12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): C2 - Outfall through retention wall of river across street from Old Mystic General Store at 47 Main Street in Mystic
Please circle the appropriate area description: Industrial, Commercial or Residential
Receiving Water (name, basin): Mystic River, Mystic River Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 2:15 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14

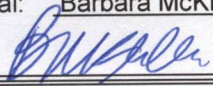
MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	6.85 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	49.4 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	273 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	2.8 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	212 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	105 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	120 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.58 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	1.40 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	4.94 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	1.00 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	>24,200 col/100 mL	Phoenix Environmental Laboratories, Inc.

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Authorized Official: Barbara McKrell, P.E.

Signature:  Date: 12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): I1 - Outfall on east side of road at intersection of Clark Street, River Road and Mechanic Street in Pawcatuck
Please circle the appropriate area description: Industrial Commercial or Residential
Receiving Water (name, basin): Pawcatuck River, Pawcatuck River Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 1:15 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-HB/9040	5.91 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	10.7 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	67 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	<1.4 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	78 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	15.6 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	18 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.18 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	0.99 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	2.43 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	0.45 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	100 col/100 mL	Phoenix Environmental Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Barbara McKrell, P.E.

Signature: *Barbara McKrell* Date: 12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): I2 - Catch basin on north side of road across from
5 Edgemont Street in Mystic
Please circle the appropriate area description: Industrial Commercial or Residential
Receiving Water (name, basin): Mystic Harbor, Southeast Shoreline Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 2:35 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	7.18 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	991 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	11,400 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	3.4 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	477 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	46.1 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	610 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	21.4 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	1.29 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	8.53 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	0.64 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	6,870 col/100 mL	Phoenix Environmental Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Barbara McKrell, P.E.

Signature: *Barbara McKrell* Date: 12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): R1 - Outfall at northeast end of Walnut Street in Pawcatuck
Please circle the appropriate area description: Industrial, Commercial or Residential
Receiving Water (name, basin): Pawcatuck River, Pawcatuck River Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 1:35 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	6.87 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	23.5 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	216 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	2.1 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	157 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	17.2 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	130 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.55 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	2.55 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	5.73 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	0.75 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	1,790 col/100 mL	Phoenix Environmental Laboratories, Inc.

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Authorized Official: Barbara McKrell, P.E.

Signature: [Signature] Date: 12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): R2 - Catch basin on northeast side of road
between 19 and 21 Church Street in Mystic
Please circle the appropriate area description: Industrial, Commercial or Residential
Receiving Water (name, basin): Mystic River, Mystic River Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 2:25 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	7.25 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	1,490 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	16,200 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	<1.4 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	268 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	16.5 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	18 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.29 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	1.36 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	3.40 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	0.42 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	17,330 col/100 mL	Phoenix Environmental Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Barbara McKrell, P.E.

Signature: _____

Date: 12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): R3 - Catch basin on east side of road across from 9 Cove Road in Stonington
Please circle the appropriate area description: Industrial, Commercial or Residential
Receiving Water (name, basin): Quiambog Cove, Copps Brook Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 2:00 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14


MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	7.86 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	5,450 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	57,400 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	4.9 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	849 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	6.17 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	310 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.50 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	0.55 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	3.37 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	<0.01 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	200 col/100 mL	Phoenix Environmental Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Barbara McKrell, P.E.

Signature:  Date: 12/22/14



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

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Stonington
Mailing Address: 152 Elm Street, Stonington, CT 06378
Contact Person: Barbara McKrell, P.E. Title: DPW Director Phone: 860-535-5055
Permit Registration # GSM000056

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): R4 - Catch basin at southeast corner of
Quanaduck Road in Stonington
Please circle the appropriate area description: Industrial, Commercial or Residential
Receiving Water (name, basin): Quanaduck Cove, Southeast Shoreline Drainage Basin
Time of Start of Discharge: unknown
Date/Time Collected: 9-25-14 at 1:50 pm Water Temperature: _____
Person Collecting Sample: Josh Messina of ECS, Inc.
Storm Magnitude (inches): approx. 0.35 Storm Duration (hours): approx. 12.5
Date of Previous Storm Event: 9-13-14

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	4500-H B/9040	7.45 SU	Phoenix Environmental Laboratories, Inc.
Rain pH	Litmus Paper	6.0 SU	ECS, Inc.
Hardness	E200.7	13.1 mg/L	Phoenix Environmental Laboratories, Inc.
Conductivity	SM2510B	234 umhos/cm	Phoenix Environmental Laboratories, Inc.
Oil & Grease	EPA 1664A	<1.4 mg/L	Phoenix Environmental Laboratories, Inc.
COD	SM5220D	87 mg/L	Phoenix Environmental Laboratories, Inc.
Turbidity	SM2130B	3.42 NTU	Phoenix Environmental Laboratories, Inc.
TSS	SM2540D	60 mg/L	Phoenix Environmental Laboratories, Inc.
TP	SM4500PE	0.36 mg/L	Phoenix Environmental Laboratories, Inc.
Ammonia	E350.1	3.92 mg/L	Phoenix Environmental Laboratories, Inc.
TKN	E351.1	5.85 mg/L	Phoenix Environmental Laboratories, Inc.
NO ₃ +NO ₂	E353.2	0.28 mg/L	Phoenix Environmental Laboratories, Inc.
E. coli	SM9223B	890 col/100 mL	Phoenix Environmental Laboratories, Inc.

STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: Barbara McKrell, P.E.

Signature: *Barbara McKrell* Date: 12/22/14