

# Stormwater Management Plan

Town and Borough of Stonington  
Stonington, Connecticut

March 2017



Prepared by:



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Manchester, CT 06040

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# 1 Introduction

This Stormwater Management Plan (SWMP or Plan) was developed by Fuss & O'Neill, Inc. in conjunction with the Town and Borough of Stonington for the purpose of implementing and enforcing a stormwater management program to reduce the discharge of pollutants from the municipal storm sewer systems, to protect water quality, and to address the requirements of the Connecticut Department of Energy and Environmental Protection (DEEP) *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems*, effective July 1, 2017, hereafter referred to as the “MS4 General Permit” or “MS4 Permit.” A copy of the permit is provided in **Appendix A**. The Town and Borough have decided to work collaboratively to address the requirements of the permit including the preparation of a joint SWMP and filing of a joint permit registration. A copy of the permit registration is provided in **Appendix B**.

The Plan outlines a program of Best Management Practices (BMPs), the responsible party to implement the BMP, the schedule for implementation, and measurable goals for the following six Minimum Control Measures:

1. Public Education and Outreach
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development or Redevelopment
6. Pollution Prevention/Good Housekeeping

Fuss & O'Neill led the Plan development process, working with a project steering committee consisting of staff from various Town and Borough departments including Engineering, Public Works, Planning, Finance, and the Water Pollution Control Authority. The BMPs described in this Plan (and summarized in the tables in **Appendix C**) reflect the Town's and Borough's existing stormwater management program activities and policies, water quality and land use characteristics that are unique to Stonington, and the requirements of the new MS4 General Permit. Stonington will strive to exceed the implementation standards established by the MS4 program, to improve water quality town- and borough-wide.

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## 1.1 NPDES Phase II Program – MS4 General Permit

The DEEP stormwater general permit program was developed pursuant to EPA's Stormwater Rule, and Connecticut's stormwater permits are issued under the authority of the National Pollutant Discharge Elimination System (NPDES) and Connecticut General Statutes Section 22a-430 and 22a-430b. Phase I of the EPA Stormwater Rule was published in 1990 and addressed runoff from medium and large municipal separate storm sewer systems (MS4s) with populations greater than 100,000 as well as runoff from industrial and construction activities. Phase II of the Stormwater Rule was published in 1999 and addressed runoff from small MS4s with populations less than 100,000.

The DEEP first issued the MS4 General Permit on January 9, 2004 under the Phase II rule. The general permit has been reissued, without modifications, since 2004. The purpose of the MS4 General Permit is to protect waters of the state from urban stormwater runoff through municipal separate storm sewer systems. Urban stormwater runoff is a leading cause of water quality impacts to surface waters in Connecticut and nationally.

EPA defines a regulated small MS4 as a municipality that owns and operates a storm sewer system in an Urbanized Area (UA). Urbanized Areas are defined by the federal Census Bureau and consist of densely populated areas surrounding urban centers. The criteria for designating UAs are developed by the Census Bureau and maps of UAs are published after each decennial census. The most recent UA maps reflect the results of the 2010 Census. EPA does not require coverage of municipalities outside of Urbanized Areas but allows the permitting authority (DEEP) to designate additional MS4s outside of Urbanized Areas. The Town and Borough of Stonington are two of 113 MS4s, regulated by virtue of having Urbanized Areas, authorized under the MS4 General Permit.

The MS4 General Permit requires registration to obtain permit coverage and development and implementation of a Stormwater Management Plan. The Town and Borough of Stonington originally developed Stormwater Management Plans in 2004 and submitted permit registrations to obtain individual coverage under the 2004 MS4 Permit. The Town and Borough have been implementing a stormwater management program separately in accordance with their 2004 SWMP and the 2004 MS4 General Permit.

The new MS4 General Permit provides significantly more detail on the requirements and implementation of the six Minimum Control Measures, including storm system mapping, illicit discharges, impaired waters, stormwater retrofits, pollution prevention and good housekeeping for municipal operations, and changes in geographic coverage for certain permit requirements. The Town and Borough of Stonington (to be referred to as “Stonington” unless identified specifically as the “Town” or “Borough”) plan to work jointly to comply with the new MS4 General Permit.

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## 1.2 Town and Borough of Stonington

The Town of Stonington (the “Town”) is a coastal community located in New London County in southeastern Connecticut. The Town is bounded by Ledyard, Groton and the Mystic River to the west, Westerly, Rhode Island and the Pawcatuck River to the east, Fishers Island Sound and Little Narragansett Bay to the south, and North Stonington to the north. The Town is approximately 50 square miles in size with a population of 18,545 (2010 Census). The Borough of Stonington (the “Borough”), which is approximately 0.35 square miles (205 acres) in size with a population of 929 (2010 Census), is a separate governing entity within the Town borders.

Land use is primarily residential, with commercial, industrial, and other uses concentrated in areas along portions of the coast, specifically within the Borough, as well as in the villages of Mystic and Pawcatuck, which Stonington shares with its neighboring towns of Groton and Westerly, respectively. The Town’s storm sewer system is concentrated in developed areas, with significant drainage infrastructure in Mystic and Pawcatuck. The drainage system consists of approximately 1,600 catch basins, storm drainage piping, and 340 outfalls (approx.). The Borough’s storm sewer system is located throughout the Borough and is concentrated primarily in the western portion, consisting of approximately 110 catch

basins, storm drains, and 12 outfalls (approx.). The major surface waterbodies to which identified outfalls discharge in Stonington are listed in **Table 1**.

**Table 1. Receiving Waterbodies – Stonington, Connecticut**

Receiving Waterbodies	
Mystic River	Whitford Brook
Whitford Pond	Pequotsepos Brook
Mystic Harbor	Copps Brook
Stonington Harbor	Anguilla Brook
Mystic Reservoir	Stony Brook
Little Narragansett Bay	Donahue Brook
Fishers Island Sound	Wheeler Brook
Wequetequock Pond	East Branch Copps Brook
Wequetequock River	Haleys Brook
Wequetequock Cove	Wilcox Cove
Pawcatuck River	Lampheres Brook
Quanaduck Cove	Quiambog Cove
Williams Cove	Chesebro Ice Pond
Collins Road Pond	Copps Brook Pond No. 1
Hyde Pond	Manor Inn Pond
Palmer Reservoir	Silvias Pond
Silvias Pond Lower	Vagus Pond
Copps Brook Pond No. 2	Copps Brook Pond No. 3
Silvias Brook Pond	Stony Pond

### 1.3 MS4 Regulated Area

The MS4 General Permit applies to all portions of the municipality within the Urbanized Area (UA) and certain portions of the municipality outside of the UA. Many of the six Minimum Control Measures are required only within the UA and those areas outside the UA that discharge to impaired waters or from areas with Directly Connected Impervious Area<sup>1</sup> (DCIA) exceeding eleven percent (11%). The General Permit refers to these areas – UA, areas with DCIA exceeding 11%, and areas discharging to impaired waters – as “priority areas.”

Urbanized Areas defined by the 2010 U.S. Census are shown on the map in **Figure 1**. The map also shows areas having Total Impervious Area (TIA) greater than 11% based on 30-meter resolution

<sup>1</sup> “Directly Connected Impervious Area (DCIA)” means that impervious area from which stormwater runoff discharges directly to waters of the state or directly to a storm sewer system that discharges to waters of the state. Impervious areas that discharge through a system designed to retain the appropriate portion of the Water Quality Volume (pursuant to Section 6(a)(5)(b)(i) or (ii) of the General Permit) are not considered DCIA.

Landsat imagery (National Land Cover Database 2011), which provides an initial approximation of areas with DCIA exceeding 11%. Impaired waters are also shown in **Figure 1**. Areas that discharge to impaired waters, either directly or through an MS4, are considered “priority areas” and part of the MS4 regulated area.



## 1.4 Discharges to Sensitive Resources

The MS4 General Permit requires specific measures or controls for stormwater discharges to sensitive water resources including impaired waters, high quality waters, coastal resources, and aquifer protection areas.

### Impaired Waters

Impaired waters are waterbodies that do not meet water quality standards for one or more designated use(s) such as recreation or aquatic habitat. The new MS4 General Permit expands significantly on the requirements of the 2004 General Permit regarding how an MS4 must address impaired waters within its boundaries. **Table 2** lists the “impaired waters” within the boundaries of Stonington based on the 2014 State of Connecticut Integrated Water Quality Report, a report produced by DEEP every two years. **Figure 2** shows the impaired waters in Stonington. Stormwater discharges to impaired waters will be managed for the “Stormwater Pollutants of Concern” consistent with the requirements in the General Permit.

**Table 2. Impaired Waters – Stonington, Connecticut**

Waterbody Name	Segment ID	Category	Impairment and Stormwater Pollutant of Concern	Approved TMDL
<b>Borough</b>				
Stonington Point	CT-E2_002	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
<b>Town</b>				
Copsps Brook	CT2102-00_01	5	Aquatic Life – cause unknown	N/A
		4c	Aquatic Life – other flow regime alterations	N/A
Unnamed tributary to Copsps Brook	CT2102-00-trib_01	4c	Aquatic Life – cause unknown	N/A
Midshore	CT-E3_001	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Wequetequock Cove	CT-E2_001	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Inner Wequetequock Cove	CT-E1_003	5	Recreation – enterococcus <b>(bacteria)</b>	N/A
		4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Inner Stonington Harbor	CT-E1_005	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Outer Quiambaug Cove	CT-E2_003	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL

Waterbody Name	Segment ID	Category	Impairment and Stormwater Pollutant of Concern	Approved TMDL
Inner Quiambug Cove	CT-E1_006	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Wilcox Cove (Mason Is.)	CT-E2_004	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Mouth Mystic River	CT-E2_005	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Midshore (Groton, Mystic River)	CT-E3_003	4a	Shellfish Consumption – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL
Pawcatuck River and Unnamed Tributaries	CT1000-00_01 CT1000-00_trib_01 CT1000-01_01 CT1000-03_01 CT1000-04_01 CT1000-05_01	4a	Recreation – E.coli <b>(bacteria)</b>	Pawcatuck River TMDL
Pawcatuck River Estuary	CT-E1_001-SB CT-E1_002-SB	5	Aquatic Life – dissolved oxygen saturation, nutrient/eutrophication, biological indicators <b>(phosphorus/nitrogen)</b>	N/A
		4a	Recreation – Enterococcus; Commercial Shellfish Harvesting – fecal coliform <b>(bacteria)</b>	Statewide Bacteria TMDL

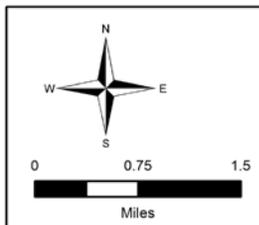
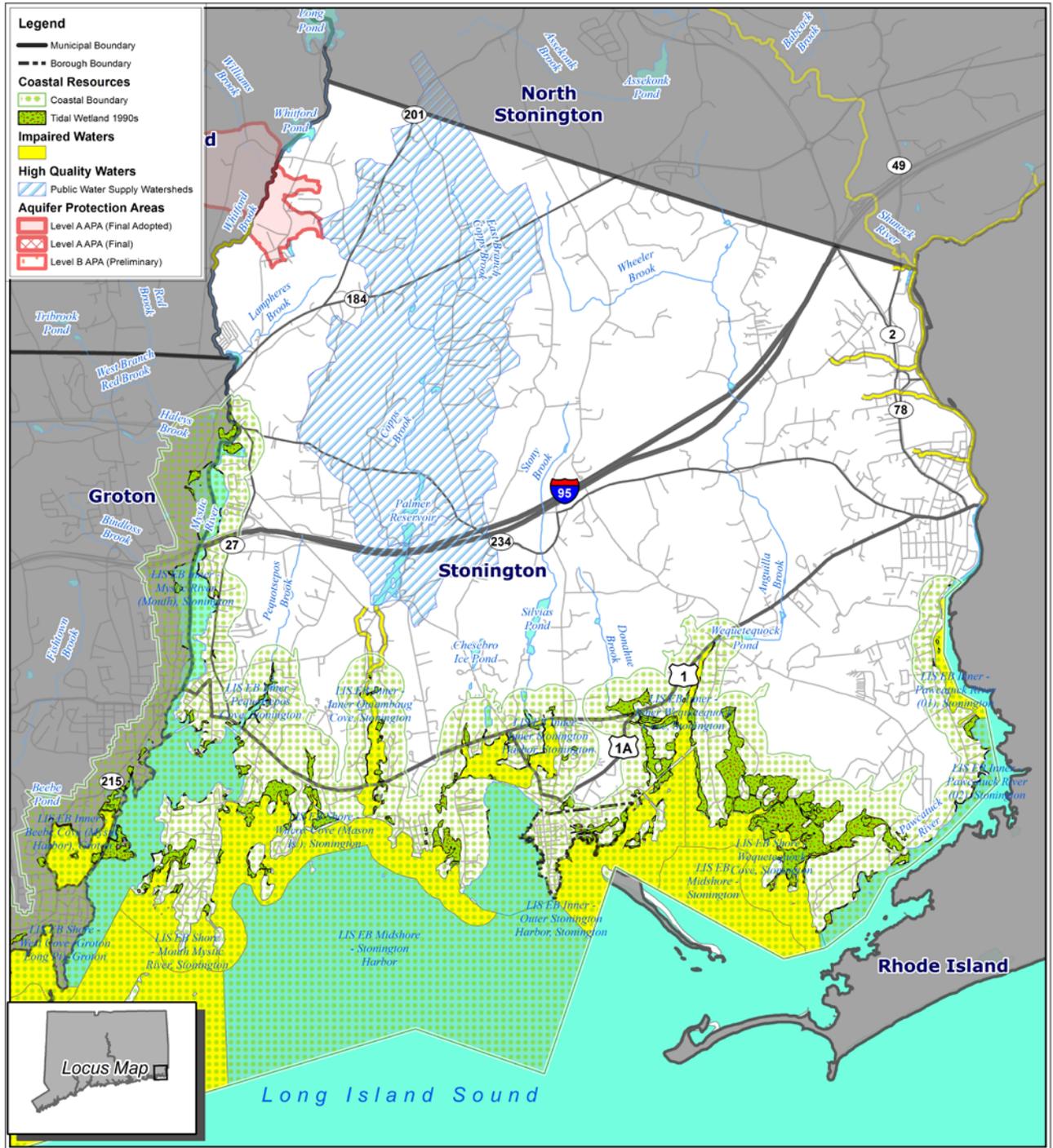
Source: 2014 State of Connecticut Integrated Water Quality Report (CTDEEP) and Statewide Bacteria TMDL (2014). 2016 State of Connecticut Integrated Water Quality Report was in draft form as of the development of this plan.

Category 4a Waters – Waterbodies impaired for one or more designated uses that have an established TMDL and where a pollutant has been identified as the cause of the impairment.

Category 4c Waters – Waterbodies impaired for one or more designated uses which is the result of pollution but is not caused by a pollutant.

Category 5 Waters – Available data and/or information indicate that one or more designated uses are not being supported and a TMDL is needed.

No new or increased discharges from the MS4 to impaired waters are allowed under the General Permit unless the permittee demonstrates that there is no net increase in loading by the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired.



- Data Source(s):**
1. Town Boundaries - UCONN MAGIC
  2. Urbanized Areas 2010 - US Census Bureau
  3. Impervious Surface - National Land Cover Database 2011
  4. Major Roads - UCONN MAGIC
  5. Assesed Lake/River/Estuary 2014 - CT DEEP
  6. Tidal Wetlands 1990s - CT DEEP
  7. Aquifer Protection Areas - CT DEEP
  8. Subregional Drainage Basins - CT DEEP
  9. Public Water Supply Watersheds - CTDPH
  10. Coastal Boundary - CT DEEP

SENSITIVE RESOURCES	
STONINGTON	CONNECTICUT
<b>FUSS &amp; O'NEILL</b> 146 Hartford Road Manchester, CT 06040 860.646.2469   www.fando.com	PROJ. No. DATE: MARCH 2017
	<b>FIGURE 2</b>

Path: K:\MS4\_2016DAC\Stonington\_MS4\_Fig2\_MultiTown-Temp.mxd

**Figure 2. Water Resources**

## High Quality Waters

“High Quality Waters,” as defined in the Connecticut Water Quality Standards pursuant to Section 22a-426-1(36) of the Regulations of Connecticut State Agencies, mean surface waters where the water quality is better than necessary to meet the minimum criteria established in the Connecticut Water Quality Standards for the applicable classification and related designated uses. High Quality Waters in the Town of Stonington include Palmer Reservoir and the unimpaired segments of Copps Brook, as well as various streams and creeks, including Anguilla Brook and Wheeler Brook, and ponds including Silvias Pond and Chesebro Ice Pond (**Figure 2**). There are no High Quality Waters within the Borough of Stonington.

For new or increased discharge from the MS4 to High Quality Waters, the Town must identify the control measures it will implement to ensure compliance with anti-degradation provisions in the Connecticut Water Quality Standards. At a minimum, the Town will evaluate and implement to the Maximum Extent Practicable practices which will prevent the discharge of the Water Quality Volume to a surface water body or other practices necessary to protect and maintain designated uses and meet standards and criteria contained in the Water Quality Standards.

## Coastal Resources

Stormwater discharges within the Coastal Boundary must be consistent with all applicable goals and policies of the Connecticut Coastal Management Act (Section 22a-92 of the Connecticut General Statutes), and must not cause adverse impacts to coastal resources as defined in Section 22a-93(15) of the Connecticut General Statutes.

Any new discharges of stormwater located less than 500 feet from a tidal wetland that is not a fresh-tidal wetland shall flow through a system designed to retain the Water Quality Volume (i.e., runoff generated by one inch of rainfall on a site as defined in the Connecticut Stormwater Quality Manual). Appropriate state permits are required for new discharges of stormwater below the coastal jurisdiction line into coastal, tidal, or navigable waters or new discharges into tidal wetlands.

## Aquifer Protection Areas

Aquifer Protection Areas, as defined in the Connecticut General Statutes, are areas designated around the state’s active public drinking water well fields in sand and gravel aquifers that serve more than 1,000 people. The implementation of this SWMP for any part of the MS4 located within an aquifer protection area as mapped under section 22a-354b of the Connecticut General Statutes will comply with regulations adopted pursuant to section 22a-354i of the Connecticut General Statutes. For any activity regulated pursuant to sections 8(c) and 9(b) of the Aquifer Protection Regulations (section 22a-354i(1)-(10) of the Regulations of Connecticut State Agencies), stormwater runoff generated from the MS4 will be managed in a manner so as to prevent pollution of groundwater (see Appendix C of the General Permit). Only one mapped Level A Aquifer Protection Area exists within the Town of Stonington, located in the northwest portion of the Town (**Figure 2**). There are no Aquifer Protection Areas located within the Borough of Stonington.

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## 1.5 Revisions to Stormwater Management Plan

The Plan will be updated whenever:

- There is a change which has the potential to cause pollution of the waters of the state, or
- The actions required by the Plan fail to prevent pollution of the waters of the state or fail to otherwise comply with any other provision of the General Permit, or
- The Commissioner requests modification of the Plan.

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## 1.6 Annual Reporting

By April 1, 2019 and annually thereafter by April 1, the Town and Borough will submit a joint Annual Report electronically (in a format prescribed by DEEP) to DEEP summarizing activities undertaken to implement this Plan for the preceding calendar year. The Annual Report will also be made available for public review and comment on the Town and Borough websites, and paper copies will be made available in the municipal offices. The Town and Borough will publish a public notice on the website(s) or in a local newspaper to inform the public of the Annual Report and to solicit comments on the Annual Report. The notice will provide a contact name, phone number, address, and email to whom the public can send comments. The public notice will allow for a 45-day comment period, at a minimum.

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## 1.7 Recordkeeping

Stonington will keep records required by the MS4 General Permit for at least 5 years following its expiration or longer if requested by the Commissioner in writing. Such records, including the SWMP, will be made available to the public at reasonable times during regular business hours.

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## 1.8 Stormwater Management Plan Signature

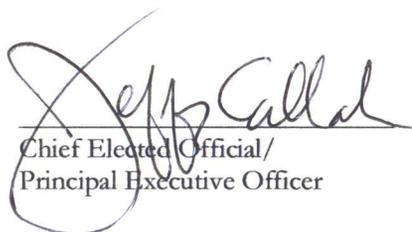
**Town:**

  
Chief Elected Official/  
Principal Executive Officer

IST SEWETMAN  
Title

MAR 30 2017  
Date

**Borough:**

  
Chief Elected Official/  
Principal Executive Officer

WARDEN  
Title

3.30.17  
Date

The Plan review certification made by a qualified professional engineer in accordance with Section 3(b)(9) of the MS4 General Permit is included with the completed permit registration in **Appendix B** of this Plan.

## 2 Minimum Control Measure #1 – Public Education and Outreach

### Goal:

- To raise awareness that polluted stormwater runoff is the most significant source of water quality problems
- To motivate residents to use Best Management Practices (BMPs) which reduce polluted stormwater runoff
- To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs

### Minimum Requirements:

- Implement public education program
- Develop/acquire and disseminate educational materials
- Incorporate measures for Stormwater Pollutants of Concern associated with impaired waters

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### 2.1 Existing Program

Stonington uses various forms of public education and outreach to residents, businesses and commerce, students, staff, contractors, etc. including a stormwater website, storm drain markers (“Don’t Pollute”), brochures, employee training, stormwater information in the annual Flood Awareness Newsletter (send out to all property owners in flood hazard zones), and related curriculum and activities in the Stonington public schools. These programs are led and conducted by the Town or by other organizations within the community. Organizations participating in Stonington’s stormwater educational programs include CUSH (Clean Up Sound and Harbors), local scouting groups, and Avalonia Land Conservancy.

The Town has re-designed and updated its municipal stormwater webpage with a description of the new MS4 General Permit and associated requirements. Links have been added to: CTDEEP & EPA websites, recent stormwater Annual Reports, educational flyers, and other useful links related to stormwater (<http://www.stonington-ct.gov/engineering/pages/phase-2-stormwater-permitting>). CUSH also maintains educational information on stormwater and related water quality issues on its website: <http://cushinc.org/>.

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### 2.2 Proposed BMPs

- **Public Education Program and Educational Materials** – Stonington will use existing educational materials and programs to augment their public education efforts to meet the new permit requirements for public education and outreach. Stonington will continue to provide links to or disseminate materials from the following websites for the water quality topics listed in **Table 3**:
  - UConn Center for Land Use Education and Research (CLEAR) and CT NEMO Connecticut MS4 Guide (<http://nemo.uconn.edu/ms4/index.htm>)

- Connecticut Nonpoint Source Management Program Plan ([http://www.ct.gov/deep/lib/deep/water/nps/planupdate/ct\\_nps\\_plan\\_final.pdf](http://www.ct.gov/deep/lib/deep/water/nps/planupdate/ct_nps_plan_final.pdf))
  - Clean Up Sound and Harbors - CUSH (<http://cushinc.org/>).
- **Impaired Waters and Pollutants of Concern** – Stonington contains surface water impairments associated with phosphorus, nitrogen, and bacteria. The Town’s educational programs and materials will address the topics and stormwater pollutants of concern listed in **Table 2**.

**Table 3. Public Education and Outreach Targets and Resources**

<b>Topic</b>	<b>Resources<sup>1</sup></b>
Pet waste management <sup>2</sup>	EPA's <i>After the Storm: A Citizens Guide to Understanding Stormwater</i> – linked to Town website and hardcopies available in municipal offices
Application of fertilizers	
Herbicides and pesticides	
Impervious cover	
Impacts of illicit discharges and improper disposal of wastes into the MS4	EPA's <i>After the Storm: A Citizens Guide to Understanding Stormwater</i> – linked to Town website and hardcopies available in municipal offices and web link to Town’s illicit discharge detection and elimination (IDDE) regulation
<b><i>Additional Measures for Areas Discharging to Impaired Waters</i></b>	
<i>Phosphorus &amp; Nitrogen</i>	
Septic systems <sup>3</sup>	EPA's <i>After the Storm: A Citizens Guide to Understanding Stormwater</i> – linked to Town website and hardcopies available in municipal offices
Grass clippings and leaves management <sup>4</sup>	
Detergent use	
Discharge of sediment from construction sites <sup>5</sup>	
<i>Bacteria</i>	
Sanitary cross connections	Web link to Town’s Illicit Discharge and Illegal Connection Ordinance and DPW Public Storm Drainage Connection Policy
Waterfowl	CLEAR and CT NEMO MS4 Guide website
Manure piles associated with livestock and horses	EPA's <i>After the Storm: A Citizens Guide to Understanding Stormwater</i> – linked to Town website and hardcopies available in municipal offices

<sup>1</sup>Stonington will add to or replace educational materials as needed throughout the permit term

<sup>2</sup>Required by a Borough ordinance

<sup>3</sup>Not applicable to the Borough of Stonington – all parcels are serviced by municipal wastewater treatment

<sup>4</sup>Monthly brush and leaf pick up in the Borough. Leaf pick-up in the Town occurs twice each fall. Leaves and brush accepted year-round at the Town’s Transfer Station composting area.

<sup>5</sup>Controlled by Town and Borough regulations

Specific BMPs, measurable goals, timeframes, and entities responsible for implementing the BMPs associated with the Public Education and Outreach minimum control measure are provided in the Plan Summary in **Appendix C**.

## 3 Minimum Control Measure #2 – Public Involvement/Participation

### Goal:

- Involve the community in both the planning and implementation process of improving water quality
- Provide opportunities to engage the community to participate in the review and implementation of this Plan

### Minimum Requirements:

- Provide public notice for the Plan and annual reports
- Enlist local organizations to help implement elements of the Plan

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### 3.1 Existing Program

The Town of Stonington and the Borough of Stonington publish a notice of availability of their annual reports on their respective municipal websites ([www.stonington-ct.gov/engineering/pages/phase-2-stormwater-permitting](http://www.stonington-ct.gov/engineering/pages/phase-2-stormwater-permitting) and [www.borough.stonington.ct.us/stormwater-management](http://www.borough.stonington.ct.us/stormwater-management)). Stonington collaborates with CUSH, the Avalonia Conservancy, and other local organizations including the Stonington public schools on environmental-related projects and educational programs. Storm drain markers were added to Stonington catch basins as part of their public participation program.

The Solid Waste Department sponsors cleanups, providing safety vests, refuse collection containers and dumpsters for neighborhood associations during the Pawcatuck and Mystic River cleanups and other town festivals. The Town also sponsors and publicizes hazardous waste collection events.

The Town and Borough staff participates in the Stonington Stormwater Task Force. This group was originally formed as the Stormwater Management Study Group in 2003 by the Stonington Plan of Conservation and Development Steering Committee to evaluate the impacts related to stormwater runoff. The group changed its name since its inception but the focus of the group has remained on water quality issues, public education, and regulations and standards. The task force also includes members from the Board of Selectman, CUSH, and the Shellfish, Mystic Harbor Management, and Stonington Harbor Management Commissions.

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### 3.2 Proposed BMPs

- **Public Notice of Plan and Annual Report** – The Town and Borough of Stonington will make this Plan and Annual Reports available electronically on their municipal website(s) and paper copies available in Town Hall and Borough Hall. The Town and Borough will also publish a public notice on the website(s) or in a local newspaper to inform the public of and solicit comments on the Plan and Annual Reports. The notice will provide a contact name, phone number, address, and email to whom the public can send comments. The Plan and Annual Reports will be publicly accessible on the municipal websites and in Town and Borough offices.

- **Work with Local Organizations** – Stonington will reinstate its Stormwater Task Force comprised of Town and Borough staff and members of the public to address the goals of this plan, increase compliance with the MS4 General Permit, and assist in improving overall stormwater quality. Stonington will continue to collaborate with area organizations, such as CUSH, to provide additional public involvement opportunities and to assist in the implementation of this plan.

Specific BMPs, measurable goals, timeframes, and persons responsible for implementing the BMPs associated with the Public Involvement/Participation minimum control measure are provided in the Plan Summary in **Appendix C**.

## 4 Minimum Control Measure #3 – Illicit Discharge Detection and Elimination

### Goal:

- Provide the legal authority to prohibit and eliminate illicit discharges to the MS4, find the source of any illicit discharges, eliminate those illicit discharges, and ensure ongoing screening and tracking to prevent and/or eliminate future illicit discharges

### Minimum Requirements:

- Develop a citizen reporting program for suspected illicit discharges
- Develop written Illicit Discharge Detection and Elimination (IDDE) Program
- Establish legal authority necessary to prohibit, investigate and eliminate illicit discharges
- Inventory Sanitary Sewer Overflows (SSOs)
- Report failing septic systems for impaired waters for which phosphorus, nitrogen, or bacteria is a pollutant of concern
- Develop a list and map of all stormwater discharges
- IDDE Program Implementation
- Inventory and rank outfalls
- Conduct ongoing screening and sampling of MS4 outfalls for illicit discharges
- Catchment investigations
- Track illicit discharge abatement activities

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### 4.1 Existing Program

Stonington has implemented an illicit discharge detection and elimination (IDDE) program consistent with the 2004 MS4 General Permit requirements. Stonington's municipal storm system mapping meets or exceeds the mapping requirements of the 2004 General Permit. For example, in addition to outfalls, the mapping includes the sanitary sewer system and catch basins throughout the Borough. The Town and Borough have performed outfall sampling and inspections under the 2004 MS4 General Permit. Approximately 35 outfalls have been identified as warranting further investigation under the new MS4 General Permit.

The Town of Stonington also has an Illicit Discharge and Illegal Connection Ordinance that was adopted in 2011. The ordinance provides the Town with the authority to regulate illicit discharges, designates who shall administer and enforce the provisions of the ordinance, and establishes enforcement actions for those persons or entities found to be in noncompliance or that refuse to allow access to their facilities. The ordinance applies to both the Town and the Borough.

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## 4.2 Proposed BMPs

Activities associated with this minimum control measure will be focused on Stonington's priority areas – urbanized area, catchment areas with directly connected impervious area (DCIA) greater than 11%, and outfalls that discharge directly to impaired waters.

- **Written IDDE Program** – The Town and Borough of Stonington will develop and implement a joint written IDDE plan to detect, locate and eliminate illicit discharges (to the maximum extent practicable) from the MS4 within Stonington's priority areas. The IDDE plan will provide enforceable legal authority to eliminate illicit discharges, assign responsibilities, and develop a citizen reporting program. The plan will also outline the outfall screening and IDDE protocols consistent with Appendix B of the MS4 General Permit to identify, prioritize, and investigate MS4 catchments for suspected illicit discharges. Also, the IDDE plan will outline follow-up screening and illicit discharge prevention procedures.
- **Illicit Discharge Ordinance** – Stonington's existing Illicit Discharge and Illegal Connection Ordinance will be reviewed for compliance with the 2016 MS4 General Permit and revised, as necessary.
- **Storm System Mapping and Database** – The Town and Borough storm system mapping will be updated to include the additional elements described in Appendix B(A)(6) of the General Permit. Stonington will also develop a database of all stormwater discharges from a pipe or conduit located within and owned or operated by the municipality and all interconnections with other MS4s. Stonington will update the map and database as new information becomes available and will report on the progress of the development of the map and database in the annual report.
- **Recordkeeping for IDDE Tracking** – Stonington will keep a record of illicit discharge abatement activities including location (including latitude and longitude or address), description, date(s) of inspection, sampling data (if applicable), action(s) taken, date of removal or repair and responsible party.
- **SSO Inventory** – Based on available records, no sanitary sewer overflows (SSOs) resulting in discharge to the MS4 are known to have occurred in Stonington in the 5 years prior to the effective date of the MS4 Permit (July 1, 2012 – June 30, 2017). Information on any future SSOs will be maintained in an inventory and included in the annual report. The inventory will include the location, date and time of occurrence, estimated volume of discharge, a description of known or suspected cause, and details about mitigating measures including dates of implementation.

- **Citizen Reporting** – Stonington has established a system to allow for citizen reporting of suspected illicit discharges into the stormwater system (as well as public comment on proposed and ongoing land disturbance and development activities). The system includes phone number for submitting a report. Notices of this “hotline” are posted on the Town and Borough websites and in municipal offices. Stonington will investigate and eliminate any illicit discharges identified as a result of citizen reporting, in accordance with the procedures outlined in the written IDDE program. All citizen reports and responses will be included in the annual report.
- **Impaired Waters and Pollutants of Concern** – Stonington will identify areas that are most likely to contribute nitrogen, phosphorus, or bacteria (stormwater pollutants of concern) to the MS4. This assessment will consider: historic septic system failures, proximity to bacterial impaired waters, low infiltrative soils, and shallow groundwater. Any areas determined to have a high potential for septic system failure will be reported to the Health District for corrective action.

Specific BMPs, measurable goals, timeframes, and persons responsible for implementing the BMPs associated with the Illicit Discharge Detection and Elimination minimum control measure are provided in the Plan Summary in **Appendix C**.

## 5 Minimum Control Measure #4 – Construction Site Stormwater Runoff Control

### Goal:

- To control stormwater discharges (to its MS4) associated with land disturbance or development (including redevelopment) activities from sites (as defined in the Department’s General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities) with one or more acres of soil disturbance, whether considered individually or collectively as part of a larger common plan.

### Minimum Requirements:

- Establish legal authority to implement construction site stormwater runoff control
- Develop and implement interdepartmental coordination plan
- Perform site reviews and inspections
- Incorporate public involvement into development activities
- Notify developers of DEEP’s construction general permit

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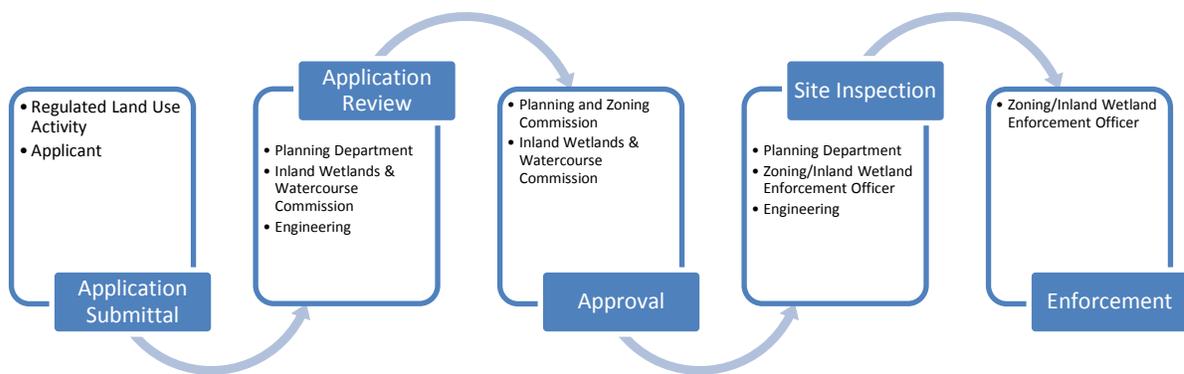
### 5.1 Existing Program

The Town and Borough have land use regulations that meet the Construction Site Runoff Control requirements of the 2004 General Permit. Stonington reviews site plans for development projects disturbing one or more acres of land, performs inspections, and takes enforcement actions as necessary to ensure the projects meet the requirements of the municipal land use regulations. Stonington notifies developers and contractors working in or for the MS4 of their potential obligation to obtain

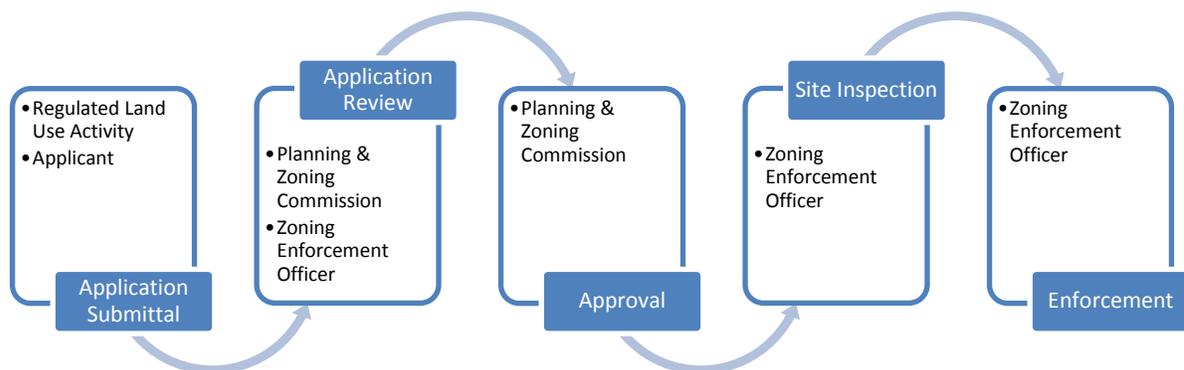
authorization under DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities* ("Construction General Permit").

## 5.2 Proposed BMPs

- Update Land Use Regulations/Legal Authority** – The Town and Borough of Stonington will review and update, as necessary, their existing land use regulations and implementation policies for compliance with the 2016 MS4 General Permit construction site runoff control requirements.
- Interdepartmental Coordination** – The Town and Borough of Stonington will coordinate the functions of all departments and boards involved in the review, permitting, or approval of land disturbance projects. The following flow charts (**Figure 3 and 4**) schematically illustrates the internal coordination process for Town and Borough Departments involved in the review, approval, inspection, and enforcement of construction/redevelopment plans with disturbances  $\geq 1$  acre:



**Figure 3. Interdepartmental Coordination - Town**



**Figure 4. Interdepartmental Coordination - Borough**

- **Site Reviews and Inspections** – Stonington will continue to conduct site plan reviews that incorporate consideration of stormwater controls or management practices to prevent or minimize impacts to water quality on sites with soil disturbance of one acre or more. Stonington will also continue to conduct site inspections to assess the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures and take enforcement action when necessary.
- **Procedures for Public Comment** – Stonington has established a system to allow the public to comment on proposed and ongoing land disturbance and development activities (as well as allow for citizen reporting of suspected illicit discharges into the stormwater system). The system includes a phone number for submitting comments. Notices of this “hotline” are posted on the Town and Borough websites and in municipal offices. Stonington will acknowledge receipt of submitted comments and respond to comments as warranted.
- **Developer Notification of DEEP Permit Requirements** – Stonington will continue to notify developers and contractors working in or for the MS4 of their potential obligation to obtain authorization under DEEP’s Construction General Permit. The notification will be included with site plan application instructions and provided at the time of issuance of local permit approval or a building permit. The notification will include the following:
  - Authorization under DEEP’s Construction General Permit is required if the development or redevelopment project disturbs five (5) or more acres of land, either individually or collectively, as part of a common plan, and results in a point source discharge to the surface waters of the state directly or through Stonington’s MS4.
  - A copy of the Storm Water Pollution Control Plan (required by the Construction General Permit) shall be provided by the developer/contractor to the Town or Borough of Stonington upon request.
  - The contractor shall at all times conduct operations in conformity with all federal and state permit requirements concerning water, air, noise pollution and the disposal of contaminated or hazardous materials.

Specific BMPs, measurable goals, timeframes, and persons responsible for implementing the BMPs associated with the Construction Site Stormwater Runoff Control minimum control measure are provided in the Plan Summary in **Appendix C**.

## 6 Minimum Control Measure #5 – Post-Construction Stormwater Management in New Development or Redevelopment

### Goal:

- Promote the use of Low Impact Development (LID) and runoff reduction site planning and development practices in new development and redevelopment

### Minimum Requirements:

- Establish legal authority requiring that applicants for development/redevelopment within the Town consider the use of LID and runoff reduction site planning
- Require runoff reduction and LID measures in new development and redevelopment
- Measure, track, and reduce Directly Connected Impervious Area (DCIA)
- Develop and implement a maintenance plan for ensuring the long-term effectiveness of stormwater basins and other treatment structures located in the “priority area”
- Additional measures for discharges to impaired waters

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### 6.1 Existing Program

The Town of Stonington currently promotes the use of LID and runoff reduction site planning through the Town’s Technical Standards and land use regulations, which establish administrative and technical requirements for the implementation of land use regulations and provide the basis by which developments are evaluated to ensure compliance with Town regulations. The Town requires, where necessary, drainage maintenance agreements for homeowner's associations and/or commercial sites to ensure that owners fulfill their maintenance obligations overtime.

The Town has also implemented a program to request property owners with stormwater infrastructure to keep maintenance records available for review upon the Town’s request. The Town has begun developing a list of all structural stormwater BMPs (e.g., retention/detention ponds, swirl concentrators, oil/grit separators, water quality wetlands or swales) approved on private and municipal property. The Borough currently does not have any stormwater treatment BMPs on private or Borough property.

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### 6.2 Proposed BMPs

- **Update Land Use Regulations/Legal Authority** – Both the Town and Borough will review and update, as necessary, their existing land use regulations and implementation policies (including Technical Standards) for compliance with the 2016 MS4 General Permit post-construction stormwater management requirements. The review and any necessary revisions will ensure that developers and contractors seeking Town or Borough approval to consider the use LID and runoff reduction site planning and development practices that meet or exceed those LID and runoff reduction practices in the Connecticut Stormwater Quality Manual prior to

other stormwater management practices. The legal authority will meet the standards described in Section 6(a)(5) of the General Permit.

In addition, Stonington will review its current regulations – site planning requirements, zoning regulations, street design regulations, and infrastructure specifications with minimum size criteria for impervious cover (e.g., roads, parking lots) – to identify and, where appropriate, reduce or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices to the maximum extent practicable.

- **Estimate Directly Connected Impervious Area** – Stonington will follow guidance provided by DEEP and UConn CLEAR to calculate the Directly Connected Impervious Area (DCIA) that contributes stormwater runoff to each of its MS4 outfalls. Stonington will revise its DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA to its MS4 (see DCIA Tracking task under the Good Housekeeping/Pollution Prevention minimum control measure).
- **Maintenance Plan for Stormwater Basins and Treatment Structures** – Stonington will develop a maintenance plan for retention/detention ponds and stormwater treatment structures that it owns or over which it holds an easement or other authority and that are located in the town's priority areas to ensure their long-term effectiveness. This plan will require annual inspections and removal of accumulated sediment and pollutants in excess of 50% design capacity.
- **Impaired Waters and Pollutants of Concern** – for areas contributing to waters where Nitrogen, Phosphorus or Bacteria is a Stormwater Pollutant of Concern and erosion or sedimentation problems are found during the annual inspections conducted under the long-term maintenance plan described above, Stonington will prioritize those areas for the DCIA retrofit program under Minimum Control Measure 6 – Pollution Prevention/Good Housekeeping.

Specific BMPs, measurable goals, timeframes, and persons responsible for implementing the BMPs associated with the Post-construction Stormwater Management minimum control measure are provided in the Plan Summary in **Appendix C**.

## 7 Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping

**Goal:**

- Prevent or reduce pollutant runoff, and protect water quality, from all municipally-owned or operated MS4s

**Minimum Requirements:**

- Employee training
- Infrastructure repair, rehabilitation, and retrofit
- MS4 property and operations maintenance
- Street, parking & MS4 maintenance
- Snow management practices
- Coordination with interconnected MS4s
- Develop and implement a program to control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities, not otherwise authorized by DEEP general permits
- Additional measures for discharges to impaired waters

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### 7.1 Existing Program

The Town of Stonington has Stormwater Pollution Prevention Plans (SWPPPs) for the Highway Garage, Town Dock, Water Pollution Control Facility (Pawcatuck) and the Solid Waste Facility. In addition, the Town has Spill Prevention, Control and Countermeasure (SPCC) Plans for these facilities as well as the Police Station. The Town works with a consultant to inspect these facilities and help ensure compliance with these regulatory programs. The Town implements an annual employee training program to increase awareness of water quality related issues in management of its MS4 and regulated municipal facilities.

The Town washes municipal vehicles in the garage facility in a contained setting such that wash waters do not enter the storm sewer system.

The Stonington maintains waste receptacles throughout the business district and in public parks. The Borough's Street Department empties the outdoor receptacles weekly year-round and collects more often in the summer months. The staff empties the receptacles quickly after holidays or when needed. Extra waste containers are deployed for special events (e.g., July 4<sup>th</sup>, Blessing of the Fleet, etc.). The Town also collects year-round with increased collection in the summer months.

The Stonington DPW recently updated its town-wide leaf collection program to improve on past practices. The Town utilized GIS maps to strategically identify leaf collection routes with a focus on urbanized areas and areas with poor drainage. The Town picks up leaves twice during each fall season. Residents may also dispose of leaves and brush year-round at the Town's Transfer Station composting area. Educational materials about the pick-up program, the schedule, and the "do's" and "don'ts" of leaf pile preparation (ex., do not put piles in the road or in catch basin) are available on the Town's

website. The website also includes information about home composting, grasscycling, and leaf composting. The Borough has monthly pick-up of leaves.

Stonington currently sweeps all municipally-owned or -operated streets and parking lots at least annually in the spring. Some areas are swept multiple times in preparation for special events. All Borough streets are swept every spring.

The Town hires a contractor annually to clean catch basins throughout the town. Town staff also accompanies the contractor to inspect the basins at the time of cleaning. All catch basins in the Town are cleaned at least once every 2 years. The Borough cleans all catch basins annually.

The Town Highway implements procedure for snow removal and deicing. In the future, GPS will be installed in the trucks so that additional data can be collected and used to optimize the municipal program. The Town already has automated application equipment on Town trucks.

The Borough has a pet waste ordinance (SBO-09) that requires that dogs be on a leash in public areas and that owners pick-up after their pet. The Borough enforces this ordinance as needed. The Borough also has installed 'Mutt-Mitt' stations and associated waste receptacles at three locations (Cannon Square, open area near Town-owned Sewage Treatment Plant, and Wadawanuck Square [west side]). The Borough is responsible for restocking the bags and emptying the waste receptacles (part of their waste management activities, see detail above). Stonington does not contain any dog parks that discharge stormwater to the municipal storm sewer system.

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## 7.2 Proposed BMPs

- **Employee Training** – The Town and Borough will implement a joint employee training program for municipal employees, expanding upon the Town's current program, to increase awareness of water quality issues. Training will include:
  - Standard operating procedures consistent with the MS4 General Permit
  - General goals and objectives of this Stormwater Management Plan
  - Identification and reporting of illicit discharges and improper disposal
  - Spill response protocols and responsibilities.

The training program may also include regional or statewide training opportunities offered by UConn CLEAR or others.

- **Infrastructure Repair, Rehabilitation and Retrofit** – Stonington will continue a program to identify MS4 structures to repair, rehabilitate, or upgrade to reduce or eliminate the discharge of pollutants into waterbodies. This program will be responsive to new information on outfalls discharging pollutants, impaired waters, inspections, or observations made under the IDDE section of this Plan.
- **Retrofit Program** – Stonington will develop a Retrofit Plan to identify and prioritize potential DCIA disconnection projects. Prioritization will be based on several factors, including whether the project lies within a Priority Area. The Plan will include a process to identify and prioritize

retrofit projects, a rationale for the selection of projects to be implemented, and the total acres of DCIA to be disconnected upon implementation.

- **Track DCIA Disconnection** – Stonington will annually track the total acreage of DCIA that is disconnected from the MS4 as a result of redevelopment or retrofit projects within the town. For each retrofit/redevelopment project, Stonington will document the amount of existing DCIA that is disconnected. Stonington’s goal is to reduce 1% of its total DCIA acreage per year to the maximum extent possible. Stonington may take credit for DCIA disconnections that occurred since July 1, 2012 towards meeting this goal. Stonington will revise its DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA to its MS4. Progress on this task will be documented in each annual report until completion.
- **Implement MS4 Property and Operations Maintenance** – Municipally owned or -operated properties, parks, and other facilities will be maintained so as to minimize the discharge of pollutants to the MS4. Such maintenance will include, but not be limited to:
  - Parks and Open Space - Stonington will optimize the application of fertilizers by municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance. Optimization practices may include:
    - Conducting soil testing and analysis to determine soil phosphorus levels
    - Reduction or elimination of fertilizers
    - Reduction of fertilizer usage by adhering to the manufacturers’ instructions
    - Use of alternative fertilizers forms (i.e., products with reduced, slow-releasing, or insoluble phosphorus compositions)
    - Proper storage and application practices (i.e., avoid impervious surfaces),
    - Application schedule (i.e., appropriate season or month) and timing (i.e., coordinated with climatic conditions to minimize runoff potential)
    - Standard operating practices for the handling, storage, application, and disposal of pesticides and herbicides in compliance with applicable state and federal laws
    - Evaluating reduced mowing frequencies and use of alternative landscaping materials like drought resistant and native plantings
    - Establishing procedures for management of trash containers at parks (scheduled cleanings; sufficient number).

Stonington will continue to dispose of grass clippings and leaves at municipally-owned lands properly. Clippings shall be composted or otherwise appropriately disposed. Clippings and leaves will not be intentionally deposited into the MS4 system or waters of the state.

- Pet Waste Management – Pet walking is most common in Stonington’s villages and Borough. Stonington will implement a targeted public education program by installing additional signage (as needed), pet waste baggies (as needed), and disposal receptacles (or require carry-out)(as needed) in these areas and continue to enforce the Borough’s existing pet waste ordinance. Stonington will also address pet waste management

through educational efforts described in the Public Education and Outreach minimum control measure.

- Waterfowl Management – There are no known areas within the Borough or Town where waterfowl congregate or are fed by the public. If a problem develops in the future, Stonington will install signage or use other targeted techniques to educate the public about the detrimental impacts of feeding waterfowl (including the resulting feces deposition) and discourage such feeding practices. If congregation becomes a problem in the future, Stonington will also implement practices that discourage the undesirable congregation of waterfowl in these known areas, or otherwise isolate the direct drainage from these areas away from its storm system and waters.
- Municipal Buildings and Facilities (schools under municipal jurisdiction, town offices, police and fire stations, parking garages and other municipally-owned or operated buildings or utilities) – Stonington will:
  - Evaluate the use, storage, and disposal of both petroleum and non-petroleum products and ensure, through employee training, that those responsible for handling these products know proper procedures
  - Ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the fire department as necessary
  - Address dumpster management procedures in the employee education program – dumps should be closed when not in use and the dumpster plug should be maintained at all times
  - Sweep parking lots annually and keep areas surrounding the facilities clean to minimize runoff of pollutants;
  - Ensure that all interior building floor drains are not connected to the MS4 and are appropriately permitted.
- Vehicles and Equipment – Stonington will:
  - Establish procedures for the storage of municipally owned or -operated vehicles
  - Require vehicles or equipment with fluid leaks to be stored indoors or in contained areas until repaired
  - Evaluate fueling areas owned by Stonington and used by municipally-owned or -operated vehicles and if possible, place fueling areas under cover in order to minimize exposure
  - Establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters
  - Ensure any interior floor drains are appropriately permitted.
- Leaf Management – Stonington will continue the current public and municipal property leaf pick-up program including public outreach on proper leaf pick-up pile preparation (not on paved surfaces).
- **Pavement Sweeping** – Stonington will continue to sweep all municipally-owned or -operated streets and parking lots annually in the spring following the cessation of winter maintenance

activities (i.e., sanding, deicing, etc.). More frequent sweeping may be conducted in areas targeted by the Town or Borough based on the presence of active construction activity or other potential pollutant sources. Sweepings will be disposed of in accordance with CTDEEP's *Guidelines for Municipal Management Practices for Street Sweepings & Catch Basin Cleanings* (August 2007, as amended), located at [http://www.ct.gov/deep/lib/deep/waste\\_management\\_and\\_disposal/solid\\_waste/street\\_sweepings.pdf](http://www.ct.gov/deep/lib/deep/waste_management_and_disposal/solid_waste/street_sweepings.pdf).

For new and redeveloped municipal parking lots, Stonington will evaluate options for reducing stormwater runoff to surface waters and/or the storm sewer system by installing permeable pavement and/or other measures to promote infiltration of stormwater.

- **Catch Basin Cleaning** – Stonington will continue to inspect and clean (as necessary) regularly. Stonington will optimize routine cleaning frequencies for particular structures or catchment areas as follows to maintain acceptable sediment removal efficiencies:
  - Inspections will be documented through the use of a catch basin inspection form.
  - Prioritize inspection and maintenance for municipally-owned catch basins located near impaired waters and construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Stonington will clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.
  - Establish a schedule such that the frequency of routine cleaning will ensure that no catch basin at any time will be more than 50 percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.
  - If a catch basin sump is more than 50 percent full during two consecutive routine inspections/cleaning events, Stonington will document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources.
  
- **Snow Management Practices** – Stonington will implement the following procedures to reduce the discharge of pollutants from the MS4:
  - Deicing Material Management
    - Stonington will implement standard operating practices for the use, handling, storage, application, and disposal of deicing products such as salt and sand to minimize exposure to stormwater; consider means to minimize the use and optimize the application of chloride-based or other salts or deicing product (while maintaining public safety) and consider opportunities for use of alternative materials.
    - For any exterior containers of liquid deicing materials installed after July 1, 2017, Stonington will provide secondary containment of at least 110% of the largest container or ten (10) percent of the total volume of all containers, whichever is larger, without overflow from the containment area.

- Snow and Ice Control Practices
  - Stonington will implement standard operating practices regarding snow and ice control to minimize the discharge of sand, anti-icing or de-icing chemicals and other pollutants (while maintaining public safety).
  - Stonington will establish goals for the optimization of sand and/or chemical application rates through the use, where practicable, of automated application equipment (e.g., zero-velocity spreaders), anti-icing and pre-wetting techniques, implementation of pavement management systems, and alternate chemicals.
  - Stonington will maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals.
  - Stonington will ensure the proper training for deicing applications for municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance.
  - Stonington will manage and dispose of snow accumulations in accordance with CTDEEP's *Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots* (revised 02/04/11, as amended) located at [http://www.ct.gov/deep/cwp/view.asp?a=2721&q=325692&deepNav\\_GID=1654%20](http://www.ct.gov/deep/cwp/view.asp?a=2721&q=325692&deepNav_GID=1654%20).
  - Provide training for municipal employees on winter roadway maintenance procedures.
  
- **Interconnected MS4s** – Stonington will continue to coordinate with operators of interconnected MS4s (such as neighboring municipalities, institutions and DOT) regarding the contribution of potential pollutants from the storm sewer systems, contributing land use areas and stormwater control measures in the respective MS4s. This same coordination shall be conducted regarding operation and maintenance procedures utilized in the respective systems.
  
- **Sources of Pollutants to the MS4** – Stonington will control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities, not otherwise authorized by a CTDEEP stormwater permit, through its IDDE and water quality monitoring programs and regulatory mechanisms. Illicit discharges or other significant contributions of pollutants from these otherwise unregulated facilities that are identified through IDDE and monitoring activities will be addressed through the Town's Illicit Discharge and Illegal Connection Ordinance.
  
- **Additional Measures for Discharges to Impaired Waters**
  - For waters for which Nitrogen or Phosphorus is a Pollutant of Concern – On municipally-owned or -operated lands, Stonington will implement a turf management practices and procedures policy which includes, but is not limited to, procedures for proper fertilizer application and the planting of native plant materials to lessen the amount of turf area requiring mowing and the application of chemicals (also see “Parks and Open Space” section above).

- Refer to fertilizer management practices in Section 5.4.2 of the *2004 Connecticut Stormwater Quality Manual* (as amended), located at [http://www.ct.gov/deep/lib/deep/water\\_regulating\\_and\\_discharges/stormwater/manual/Chapter\\_5.pdf](http://www.ct.gov/deep/lib/deep/water_regulating_and_discharges/stormwater/manual/Chapter_5.pdf)
- For waters for which Bacteria is a Pollutant of Concern – On municipally-owned or -operated lands with a high potential to contribute bacteria (such as dog parks, parks with open water, sites with failing septic systems), Stonington will develop, fund, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. On municipally-owned or -operated lands, Stonington will prohibit the feeding of geese or waterfowl and implement a program to manage geese and waterfowl populations (also see “Waterfowl Management” section above).

Specific BMPs, measurable goals, timeframes, and persons responsible for implementing the BMPs associated with the Pollution Prevention/Good Housekeeping minimum control measure are provided in the Plan Summary in **Appendix C**.

## 8 Water Quality Monitoring Program

### Goal:

- Outfall screening for discharges to impaired waters, followed by representative outfall sampling
- Outfalls that exceed certain thresholds will be targeted for follow-up investigation and increased or alternate BMPs within the outfall's drainage area to address existing water quality problems

### Minimum Requirements:

- Impaired waters outfall inventory and screening
- Impaired waters outfall follow-up investigations
- Prioritized monitoring
- Results reporting

### 8.1 Existing Program Activities

Stonington has collected wet weather stormwater samples annually from ten (10) outfalls throughout the Town and Borough and has provided the laboratory results with each year's annual report. CUSH also implements a harbor monitoring program – sampling for dissolved oxygen, chlorophyll-a (algae), temperature, salinity, nutrients (nitrogen and phosphorus), pH, and fecal bacteria within Stonington and Mystic Harbors, the Mystic River, Pequotsepos and Wequetequock Coves, and the major freshwater streams that feed them. Samples have been collected by CUSH since 2008.

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## 8.2 Proposed BMPs

Stonington will implement an outfall investigation and monitoring program for all outfalls discharging to impaired waters. The program will include:

- Preparing an inventory and mapping of all outfalls discharging to impaired waters
- Screening outfalls by collecting wet weather samples for the pollutant of concern in accordance with the requirements outlined on pages 41-43 of the MS4 General Permit
- Conducting follow-up investigations
- Implementing a BMP program focusing on impaired waters.

After 50 percent of the outfalls discharging to impaired waters are screened, Stonington will select six (6) of the outfalls with the highest contributions of the pollutants of concern for further monitoring<sup>2</sup>. These outfalls will be sampled annually during wet weather for the appropriate pollutants of concern and reported on in the annual report. All wet weather sampling shall follow the “Stormwater Monitoring Procedures” described on pages 44-45 of the MS4 General Permit.

Specific BMPs, measurable goals, timeframes, and persons responsible for implementing the Water Quality Monitoring Program requirements are provided in the Plan Summary in **Appendix C**.

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<sup>2</sup> If fewer than six outfalls are identified for follow-up investigation, all of these outfalls shall be monitored, but no more than six.

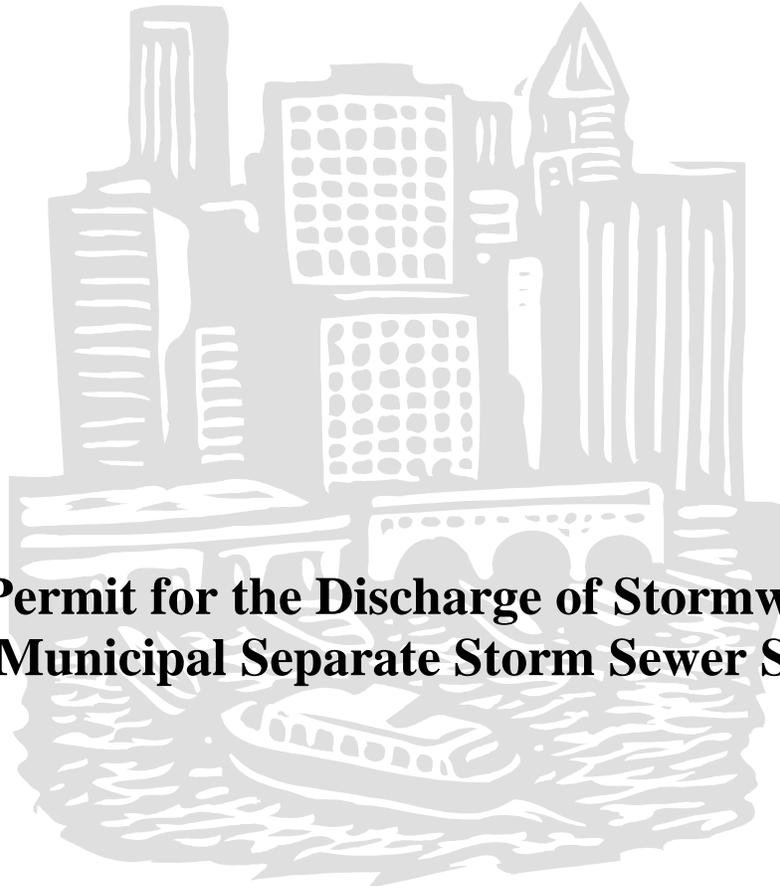
## Appendix A

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### MS4 General Permit



**Connecticut Department of  
Energy & Environmental Protection**  
Bureau of Materials Management & Compliance Assurance  
Water Permitting & Enforcement Division



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

**Issued: January 20, 2016**

**Effective: July 1, 2017**

**Expires: June 30, 2022**

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

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## **Section 1. Authority**

This general permit is issued under the authority of Section 22a-430b of the Connecticut General Statutes.

## **Section 2. Definitions**

The definitions of terms used in this general permit shall be the same as the definitions contained in Sections 22a-423 of the Connecticut General Statutes and Section 22a-430-3(a) of the Regulations of Connecticut State Agencies. As used in this general permit, the following definitions shall apply:

*“x-year, 24-hour rainfall event”* means the maximum 24-hour precipitation event with a probable recurrence interval of once in the given number of years (i.e. x=2, 25 or 100), as defined by the National Weather Service in Technical Paper Number 40, “Rainfall Frequency Atlas of the United States,” May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom.

*“Aquifer protection area”* means aquifer protection area as defined in section 22a-354h of the Connecticut General Statutes.

*“Best engineering practices”* means the design of engineered control measures to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable.

*“Best Management Practices (BMP)”* means schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state consistent with state, federal or other equivalent and technically supported guidance. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from material storage.

*“Catchment area”* means the land area from which stormwater runoff is collected by a permittee’s MS4 and discharges through a single outfall to surface water.

*“Coastal Jurisdiction Line”* means the location of the topographical elevation of the highest predicted tide as defined in Section 22a-359(c) of the Connecticut General Statutes.

*“Coastal waters”* means coastal waters as defined in Section 22a-93(5) of the Connecticut General Statutes.

*“Commissioner”* means Commissioner as defined in section 22a-423 of the Connecticut General Statutes.

*“Control Measures”* means any BMPs or other methods (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the state.

*“Department”* means the Department of Energy & Environmental Protection.

*“Directly Connected Impervious Area (DCIA)”* means that impervious area from which stormwater runoff discharges *directly* to waters of the state or *directly* to a storm sewer system that discharges to waters of the state. Impervious areas that discharge through a system designed to retain the

appropriate portion of the Water Quality Volume (pursuant to Section 6(a)(5)(b)(i) or (ii) of this general permit) are not considered DCIA.

*“Fresh-tidal wetland”* means a tidal wetland located outside of coastal waters.

*“Grab sample”* means an individual sample collected in less than fifteen minutes.

*“Guidelines”* means the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, established pursuant to Section 22a-328 of the Connecticut General Statutes.

*“High Quality Waters”* means those waters defined as high quality waters in the Connecticut Water Quality Standards pursuant to Section 22a-426-1(36) of the Regulations of Connecticut State Agencies.

*“Illicit Discharge”* means any unpermitted discharge to waters of the state that does not consist entirely of stormwater or uncontaminated ground water except those discharges identified in Section 3(a)(2) of this general permit when such non-stormwater discharges are not significant contributors of pollution to a discharge from an identified MS4.

*“Impaired water(s)”* means those surface waters of the state designated by the Commissioner as impaired pursuant to Section 303(d) of the federal Clean Water Act and as identified in the most recent State of Connecticut Integrated Water Quality Report within Categories 4 or 5, including any subdivisions of these categories.

*“Individual permit”* means a permit issued to a named permittee under Section 22a-430 of the Connecticut General Statutes.

*“Inland wetland”* means wetlands as that term is defined in Section 22a-38 of the Connecticut General Statutes.

*“Low Impact Development”* or *“LID”* means a site design strategy that maintains, mimics or replicates pre-development hydrology through the use of numerous site design principles and small-scale treatment practices distributed throughout a site to manage runoff volume and water quality at the source.

*“Minimize”*, for purposes of implementing the minimum control measures in Section 6 of this general permit, means to reduce and/or eliminate to the Maximum Extent Practicable (MEP) as described in Section 5(b).

*“Municipal separate storm sewer system”* or *“MS4”* means conveyances for stormwater (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) owned or operated by any municipality or by any state or federal institution and discharging to surface waters of the state.

*“Municipality”* means a city, town or borough of the state as defined in section 22a-423 of the Connecticut General Statutes.

*“New or Increased Discharge”* means new discharge or activity as defined in section 22a-426-8(b)(3) and increased discharge or activity as defined in section 22a-426-8(b)(2), as referenced to the Regulations of Connecticut State Agencies.

*“Permittee”* means any municipality or any state or federal institution that initiates, creates, originates or maintains a discharge authorized by this general permit and that has filed a registration pursuant to Section 4 of this permit.

*“Point Source”* means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

*“Qualified professional engineer”* means a professional engineer who: (1) has, for a minimum of eight (8) years, engaged in the planning and designing of engineered stormwater management systems for (i) municipal separate storm sewer systems and (ii) residential and commercial construction projects in accordance with the Guidelines and the Stormwater Quality Manual including, but not limited to, a minimum of four (4) years in responsible charge of the planning and designing of engineered stormwater management systems for such projects; or (2) is currently certified as a Professional in MS4 Stormwater Compliance as designated by EnviroCert International, Incorporated, or other certifying organization acceptable to the Commissioner, and for a minimum of six (6) years, has engaged in the planning and designing of engineered stormwater management systems for (i) municipal separate storm sewer systems and (ii) residential and commercial construction projects in accordance with the Guidelines and the Stormwater Quality Manual including, but not limited to, a minimum of two (2) years in responsible charge of the planning and designing of engineered stormwater management systems for such projects; or (3) currently provides engineering services for the Permittee by employ (e.g. Town Engineer) or by contract.

*“Registrant”* means a municipality or institution which files a registration pursuant to Section 4 of this general permit.

*“Redevelopment”* means any construction activity (including, but not limited to, clearing and grubbing, grading, excavation, and dewatering) within existing drainage infrastructure or at an existing site to modify or expand or add onto existing buildings or structures, grounds, or infrastructure.

*“Registration”* means a registration form filed with the Commissioner pursuant to Section 4 of this general permit.

*“Retain”* means to hold runoff on-site to promote vegetative uptake and groundwater recharge through the use of runoff reduction or LID practices or other measures. In addition, it means there shall be no subsequent point source release to surface waters from a storm event defined in this general permit or as approved by the Commissioner.

*“Runoff reduction practices”* means those post-construction stormwater management practices used to reduce post-development runoff volume delivered to the receiving water, as defined by retaining the volume of runoff from a storm up to the first half inch or one inch of rainfall in accordance with Sections 6(a)(5)(B)(i) or (ii), respectively. Runoff reduction is quantified as the total annual post-development runoff volume reduced through canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration or evapotranspiration.

*“Sanitary Sewer Overflow”* or *“SSO”* means a discharge of untreated sanitary wastewater from a municipal sanitary sewer.

“*Small MS4*” means any municipally-owned or -operated MS4 (as defined above) including all those located partially or entirely within an Urbanized Area that have at least 1,000 residents in the Urbanized Area (as determined by the 2000 or 2010 census) and all state- and federally-operated MS4s (except DOT) and any other MS4s located outside an Urbanized Area as may be designated by the Commissioner. (Note: A list of Small MS4 municipalities is included in Appendix A of this general permit. DOT will be authorized under a separate permit.)

“*Standard of care*”, as used in Section 3(b)(9), means to endeavor to perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

“*State or Federal Institution*” or “*institution*” means any facility (including, but not limited to, state and federal prisons, office complexes, hospitals; university campuses, public housing authorities, schools, or other special districts) consisting of more than one building that is owned by an agency or department of the State of Connecticut (except the Department of Transportation) or a federal agency and has an average daily population of 1,000 people or more.

“*Stormwater*” means waters consisting of rainfall runoff, including snow or ice melt during a rain event.

“*Stormwater Quality Manual*” means the Connecticut Stormwater Quality Manual published by the Connecticut Department of Energy & Environmental Protection in 2004, as amended and maintained at <http://www.ct.gov/deep/stormwaterqualitymanual>.

“*Surface water*” means those waters as defined in Section 22a-426-1(60) of the Regulations of Connecticut State Agencies.

“*Tidal wetland*” means a wetland as that term is defined in Section 22a-29(2) of the Connecticut General Statutes.

“*Total Maximum Daily Load (TMDL)*” means a water quality implementation plan established pursuant to Section 303 of the federal Clean Water Act.

“*Urbanized Area (UA)*” means the areas of the State of Connecticut so defined by the U.S. Census Bureau for the 2000 or 2010 census.

“*Water Quality Standards or Classifications*” means those water quality standards or classifications contained in Sections 22a-426 -1 through 22a-426-9, inclusive, of the Regulations of Connecticut State Agencies and the Classification Maps adopted pursuant to Section 22a-426 of the Connecticut General Statutes, which together constitute the Connecticut Water Quality Standards., as may be amended.

“*Water Quality Volume*” or “*WQV*” means the volume of runoff generated by one inch of rainfall on a site as defined in the Connecticut Stormwater Quality Manual.

### **Section 3. Authorization Under This General Permit**

#### ***(a) Eligible Activities***

- (1) This general permit authorizes the discharge of stormwater from or associated with a Small MS4, provided the requirements of subsection (b) of this section are satisfied and the activity is conducted in accordance with the conditions listed in Section 5 of this general permit to the Maximum Extent Practicable (as defined in Section 5(b)).
- (2) This permit authorizes the following non-stormwater discharges provided: the permittee controls such non-stormwater discharges to the Maximum Extent Practicable (MEP), as required by this general permit; such non-stormwater discharges do not contribute to a violation of water quality standards; and such non-stormwater discharges are documented in the Stormwater Management Plan and are not significant contributors of pollutants to any identified MS4:
  - uncontaminated ground water discharges including, but not limited to, pumped ground water, foundation drains, water from crawl space pumps and footing drains;
  - irrigation water including, but not limited to, landscape irrigation and lawn watering runoff;
  - residual street wash water associated with sweeping;
  - discharges or flows from firefighting activities (except training); and
  - naturally occurring discharges such as rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), springs, diverted stream flows and flows from riparian habitats and wetlands.
- (3) Any non-stormwater discharge to the MS4 authorized by a permit issued pursuant to Section 22a-430 or 22a-430b of the Connecticut General Statutes is also authorized under this general permit.

#### ***(b) Requirements for Authorization***

This general permit authorizes the activity listed in the “Eligible Activities” section (Section 3(a)) of this general permit provided:

##### **(1) Coastal Management Act**

Such activity is consistent with all applicable goals and policies in Section 22a-92 of the Connecticut General Statutes, and must not cause adverse impacts to coastal resources as defined in Section 22a-93(15) of the Connecticut General Statutes.

##### **(2) Endangered and Threatened Species**

Implementation of the permittee’s Stormwater Management Plan shall not threaten the continued existence of any species listed pursuant to section 26-306 of the Connecticut General Statutes as endangered or threatened and must not result in the destruction or adverse modification of habitat designated as essential to such species unless otherwise exempted by Federal statute.

(3) Aquifer Protection Areas

Such activity, if it is located within an aquifer protection area as mapped under section 22a-354b of the Connecticut General Statutes, must comply with regulations adopted pursuant to section 22a-354i of the Connecticut General Statutes.

(4) Discharge to POTW

The stormwater is *not* discharged to a Publicly Owned Treatment Works (POTW).

(5) Discharge to Groundwater

The stormwater is *not* discharged entirely to groundwater, meaning a stormwater discharge to a surface water will not occur up to a 100-year, 24-hour rainfall event.

(6) New or Increased Discharges to High Quality Waters

On or before thirty (30) days prior to the commencement of a new or increased discharge to a High Quality Waters from its MS4, the permittee must document compliance with the Connecticut Anti-Degradation Implementation Policy in the Water Quality Standards, as amended. Before commencing any new or increased discharge, the permittee shall identify in its Stormwater Management Plan (“Plan”), the control measures it will implement to ensure compliance with anti-degradation provisions and the terms of this Permit. At a minimum, the permittee shall evaluate and implement to the Maximum Extent Practicable practices which will prevent the discharge of the Water Quality Volume to a surface water body or other practices necessary to protect and maintain designated uses and meet standards and criteria contained in the Water Quality Standards.

(7) New or Increased Discharges to Impaired Waters

There shall be no increased discharges from the MS4 to impaired waters listed in categories 5 or 4b of the most recent Connecticut Integrated Water Quality Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b) unless the permittee demonstrates that there is no net increase in loading by the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired. The permittee may demonstrate no net increase by either:

- (A) Documenting that the pollutant(s) for which the waterbody is impaired is not present in the MS4’s discharge and retain documentation of this finding with the Plan; or
- (B) Documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retain documentation of this finding in the Plan. Compliance with the requirements for Runoff Reduction and Low Impact Development measures for new development and redevelopment in Sections 6(a)(5)(A) and (B) shall be considered as demonstrating no net increase. Requirements for discharges to impaired waters are included in Section 6(k) of this general permit.

(8) Certification Requirements for Registrants and other Individuals

As part of the registration for this general permit, the registrant and any other individual or individuals principally responsible for preparing the registration submits to the Commissioner a written certification which, at a minimum, complies with the following requirements:

- (A) The registrant and any other individual or individuals responsible for preparing the registration and signing the certification has completely and thoroughly reviewed, at a minimum, this general permit and the following regarding the activities to be authorized under such general permit: (i) all registration information provided in accordance with Section 4(c)(2) of such general permit, (ii) the Stormwater Management Plan, and (iii) any plans and specifications and any Department approvals regarding such Stormwater Management Plan;
- (B) The registrant and any other individual or individuals responsible for preparing the registration and signing the certification pursuant to this general permit has, based on the review described in section 3(b)(8)(A) of this general permit, made an affirmative determination to: (i) comply with the terms and conditions of this general permit; (ii) maintain compliance with all plans and documents prepared pursuant to this general permit including, but not limited to, the Stormwater Management Plan; (iii) properly implement and maintain the elements of the Stormwater Management Plan; and (iv) properly operate and maintain all stormwater management measures and systems in compliance with the terms and conditions of this general permit to protect the waters of the state from pollution;
- (C) Such registrant and any other individual or individuals responsible for preparing the registration certifies to the following statement:

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, submitted to the Commissioner by [INSERT NAME OF REGISTRANT] for an activity located at or within [NAME OF MUNICIPALITY OR ADDRESS OF THE REGISTERED ACTIVITY] and that all terms and conditions of the general permit are being met for all discharges which have been created, initiated or maintained and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b)(8)(B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including

the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

(9) Stormwater Management Plan Certification

As part of the registration for this general permit, the registrant submits to the Commissioner a written certification by a qualified professional engineer who has reviewed the Stormwater Management Plan (Plan) in accordance with the following requirements:

(A) The qualified professional engineer has, at a minimum, completely and thoroughly reviewed this general permit and the following regarding the discharges to be authorized under such general permit: (i) all registration information provided in accordance with Section 4(c)(2) of such general permit, (ii) the Stormwater Management Plan, and (iii) all non-engineered and engineered stormwater management measures and systems, including any plans and specifications and any Department approvals regarding such stormwater management measures and systems.

(B) Affirmative Determination

A qualified professional engineer signing the certification must have made an affirmative determination, based on the review described in section 3(b)(9)(A) of this general permit and on best engineering practices, that the Plan and control measures therein are adequate to assure that the activity authorized under this general permit will comply with the terms and conditions of such general permit and all non-engineered and engineered stormwater management measures and systems: (i) have been designed in accordance with best engineering practices; (ii) will function properly as designed; (iii) are adequate to ensure compliance with the terms and conditions of this general permit; and (iv) will protect the waters of the state from pollution.

(C) The qualified professional engineer, as specified in section 3(b)(9)(A), above, shall certify to the following statement:

"I hereby certify that I am a qualified professional engineer, as defined in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems. I am making this certification in connection with a registration under such general permit, submitted to the Commissioner by [INSERT NAME OF REGISTRANT] for an activity located at or within [NAME OF MUNICIPALITY OR ADDRESS OF THE REGISTERED ACTIVITY]. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(9)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3(b)(9)(A) of such general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Section 3(b)(9)(B) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment,

under section 53a-157b of the Connecticut General Statutes and any other applicable law."

- (D) Nothing in this subsection shall be construed to authorize or require a qualified professional engineer to engage in any profession or occupation requiring a license under any other provision of the Connecticut General Statutes without such license.

**(c) *Registration***

Pursuant to the "Registration Requirements" section (Section 4) of this permit, a Small MS4 shall submit a Registration Form (accessible from the DEEP website) to the Commissioner at least ninety (90) days prior to the effective date of this general permit. The form will guide the registrant to submit the appropriate information.

Include any additional forms and information regarding compliance and/or consistency with the Coastal Management Act, High Quality Waters, Impaired Waters (including TMDL requirements), Endangered and Threatened Species, and Aquifer Protection Areas that may be required pursuant to the "Requirements of Authorization" section (Section 3(b)).

**(d) *Geographic Area***

This general permit applies throughout the State of Connecticut.

**(e) *Effective Date and Expiration Date of this General Permit***

This general permit is effective July 1, 2017 and expires on June 30, 2022.

**(f) *Effective Date of Authorization***

An activity is authorized by this general permit: on the date the general permit becomes effective; on the date a complete registration meeting the requirements of Section 4(c) is submitted; for registrants that did not register as required by Section 3(c), on the date the authorized activity is initiated; or on another date approved by the Commissioner, whichever is latest.

**Section 4. Registration Requirements**

**(a) *Who Must File a Registration***

Any municipality or state or federal institution that initiates, creates, originates or maintains a discharge of stormwater from or associated with a Small MS4 shall file with the Commissioner a registration form that meets the requirements of this section of this general permit. Such form shall be submitted along with the applicable fee within the timeframes and in the amounts specified in Sections 3(c) and 4(c)(1)(A), respectively.

**(b) *Scope of Registration***

A registrant must register on one registration form by the date indicated in Section 3(c) for all discharges that are operated by the registering municipality or institution. A registrant may not submit more than one registration under this general permit.

**(c) Contents of Registration**

(1) Fees

- (A) The registration fee for a Small MS4 shall be \$625 to be submitted with the registration form.
- (B) The fees for municipalities shall be half of those indicated in subsection (A) above pursuant to section 22a-6(b) of the Connecticut General Statutes. State and Federal agencies shall pay the full fees specified in this subsection.
- (C) The registration fee shall be paid electronically or by check or money order payable to the **Department of Energy & Environmental Protection**.
- (D) No activity shall be authorized by this general permit until the registration fee has been paid in full.
- (E) The registration fee is non-refundable.

(2) Registration Form

The registration shall be filed in a form prescribed and provided by the Commissioner (available on the DEEP website) and shall include the following:

- (A) Name of the permittee and the name, title, address, telephone number, permit number (for existing 2004 MS4 permittees) and email address of the chief elected official or principal executive officer.
- (B) Name, address, telephone number, and email address of the primary contact person for the permittee.
- (C) Name, primary contact, address, telephone number, and email address of any consultant(s) or engineer(s) retained by the permittee to prepare the registration,
- (D) Name of receiving stream(s), watershed(s) or waterbody(s) (including waterbody ID number which can be identified at [www.cteco.uconn.edu](http://www.cteco.uconn.edu)) to which the MS4 discharges and indication of whether or not a receiving stream is listed as an impaired water, with or without a TMDL, and including identification of the impairment in the most recent State of Connecticut Integrated Water Quality Report or identification of the receiving stream as a high quality water by the Commissioner as defined in the Connecticut Water Quality Standards.
- (E) An electronic map or a paper copy of the relevant portion or a full-sized original of a United States Geological Survey (USGS) quadrangle map with a scale of 1:24,000, showing the permittee's boundaries and limits of its separate storm sewer system. If a paper copy of a map is submitted, identify the quadrangle name on the map and be sure to include the name of the permittee.
- (F) Assurance that the Stormwater Management Plan for the MS4 is consistent with the following provisions of state statutes and regulations, as appropriate:

- (i) For sites within the Coastal Boundary, the permittee must address all applicable goals and policies in Section 22a-92 of the Connecticut General Statutes, and must not cause adverse impacts to coastal resources as defined in Section 22a-93(15) of the Connecticut General Statutes.
  - (ii) The permittee's Stormwater Management Plan will not threaten the continued existence of any species listed pursuant to section 26-306 of the Connecticut General Statutes as endangered or threatened and will not result in the destruction or adverse modification of habitat designated as essential to such species.
  - (iii) The implementation of the permittee's Stormwater Management Plan for any part of the MS4 located within an aquifer protection area (see Appendix C) as mapped under section 22a-354b of the Connecticut General Statutes will comply with regulations adopted pursuant to section 22a-354i of the Connecticut General Statutes. For any activity regulated pursuant to sections 8(c) and 9(b) of the Aquifer Protection Regulations (section 22a-354i(1)-(10) of the Regulations of Connecticut State Agencies), the Stormwater Management Plan must assure that stormwater run-off generated from the MS4 is managed in a manner so as to prevent pollution of groundwater.
  - (iv) The Stormwater Management Plan has been reviewed for consistency with state Historic Preservation statutes, regulations, and policies including identification of any potential impacts on property listed or eligible for listing on the Connecticut Register of Historic Places. A review conducted for an Army Corps of Engineers Section 404 wetland permit would meet this qualification.
  - (v) The Stormwater Management Plan appropriately addresses new or increased discharges to high quality waters, as specified in Section 3(b)(6).
  - (vi) The Stormwater Management Plan appropriately addresses new or increased discharges to impaired waters, as specified in Section 3(b)(7).
- (G) For each of the Minimum Control Measures in Section 6(a), the following information shall be included:
- (i) each Best Management Practice (BMP) to be implemented;
  - (ii) the person(s) responsible for implementing and maintaining each BMP;
  - (iii) the date by which each BMP will be implemented;
  - (iv) the measurable goal(s) by which each BMP will be evaluated.
- (H) Provide an internet address (URL) where the Stormwater Management Plan required by Section 5(b) and the Annual Reports required by Section 6(j) are accessible for public review. Also provide a physical address where a paper copy of the Plan and Annual Reports are available for inspection. If the registrant claims that certain elements of their Plan constitute secure information (pursuant to Section 4(d)(2)) or are otherwise exempt from the disclosure requirements of the state Freedom of Information Act (section 1-210 et seq of the Connecticut General Statutes, also called FOIA) as specified in that Act, the registrant shall follow the procedures provided in the

registration form instructions for this general permit regarding information subject to FOIA requirements. The process of complying with the FOIA requirements does not exempt the registrant from the registration and Plan preparation deadlines of this general permit.

- (I) The certification of the registrant and of the individual or individuals responsible for actually preparing the registration, in accordance with Section 3(b)(8).
- (J) Certification (pursuant to the requirements and conditions of Section 3(b)(9)) that the Stormwater Management Plan has been reviewed by a qualified professional engineer (as defined in Section 2) licensed in the State of Connecticut.

***(d) Availability of Registrations, Stormwater Management Plans and Annual Reports***

**(1) Registration Availability**

Within thirty (30) days of receipt of a registration, the Commissioner shall post on the DEEP website a list of registrations submitted and identify the location where the Stormwater Management Plan is available.

On or before sixty (60) days from the date of posting of a registration by the Commissioner, members of the public may review the registration and submit written comments to the Commissioner.

**(2) Stormwater Management Plan Availability**

A permittee shall make its Stormwater Management Plan (Plan) available, electronically and at a publicly available location, for public review and comment at least ninety (90) days prior to the effective date of this general permit. The permittee shall also provide the internet address (URL) where the Plan may be located or an electronic copy to the Commissioner. Within thirty (30) days of receipt of a Stormwater Management Plan (or its URL), the Commissioner shall post on the DEEP website a list of Plans submitted and identify the location where the Plan will be available for review. In addition to the internet address (URL) required as part of the registration (pursuant to Section 4(c)(2)(H)), reasonable efforts to inform the public of this document shall be undertaken by the permittee. The Plan shall be made available at the permittee's main office or other designated municipal or institution office, a local library or other publicly available location for public inspection and copying consistent with the federal and state Freedom of Information Acts. On or before sixty (60) days from the date of the availability of the Plan, members of the public may review the Plan and submit written comments on it to the Commissioner.

If the registrant claims that certain elements of their Plan constitute secure information subject to restrictions related to Homeland Security or other security issues otherwise exempt from the disclosure requirements of the state Freedom of Information Act (section 1-210 et seq of the Connecticut General Statutes, also called FOIA) as specified in that Act, they shall follow the procedures provided in the registration form instructions for this general permit regarding information subject to FOIA requirements. The process of complying with the FOIA requirements does not exempt the registrant from the registration and Plan preparation deadlines in this general permit.

Following the comment period specified above, the final Plan shall remain available for public inspection on-line and a paper copy made available at the location specified above during regular business hours.

(3) Annual Report Availability

At least forty five (45) days prior to submission of each Annual Report to the Department, pursuant to Section 6(j), each permittee shall make available for public review and comment a draft copy of the complete Annual Report. Comments on the Annual Report may be made to the permittee and are *not* submitted to the Department. Reasonable efforts to inform the public of this document shall be undertaken by the permittee. Such draft copies shall be made available electronically on the permittee's website for public inspection and copying consistent with the federal and state Freedom of Information Acts and at at least one of the following locations: the permittee's main office or other designated municipal or institution office, a local library or other central publicly available location. Following submission of the Annual Report (pursuant to Section 6(j)), a copy of the final report shall be made available for public inspection during regular business hours.

**(e) *Where to File a Registration***

A registration shall be filed with the Commissioner on forms available through the DEEP website.

**(f) *Additional Information***

The Commissioner may require a registrant to submit additional information, which the Commissioner reasonably deems necessary to evaluate the consistency of the subject activity with the requirements for authorization under this general permit.

**(g) *Additional Notification***

For discharges authorized by this general permit to another regulated Small MS4 or to the City of Stamford, a copy of the registration and all attachments thereto shall also be submitted to the owner and operator of that system.

For discharges authorized by this general permit to a DOT separate storm sewer system, a copy of the registration and all attachments thereto shall also be submitted to the DOT upon request.

For discharges within a public drinking water supply watershed or aquifer area, the permittee shall notify the water company of the availability (pursuant to Sections 4(d)(1) and (2), above) of the registration and the Plan described in subsection 5(b) of this general permit or the registration and Plan shall be submitted to the water company upon request.

For discharges to river components and tributaries which have been designated as Wild and Scenic under the Wild and Scenic Rivers Act, a copy of the registration and the Plan described in 5(b) of this general permit shall be submitted to the applicable Wild and Scenic Coordinating Committee upon request.

***(h) Action by Commissioner***

- (1) The Commissioner may require that a permittee obtain an individual permit for any discharge authorized by this permit in accordance with Section 22a-430b of the Connecticut General Statutes.
- (2) The Commissioner may reject without prejudice a registration if he or she determines that it does not satisfy the registration requirements (Section 4(c)) of this general permit. Any registration refiled after such a rejection shall be accompanied by the fee specified in the "Fees" section (Section 4(c)(1)) of this general permit.
- (3) The Commissioner may disapprove a registration if he or she finds that the subject activity is inconsistent with the "Requirements for Authorization" section (Section 3(b)) of this general permit, or for any other reason provided by law.
- (4) Disapproval of a registration under this subsection shall constitute notice to the registrant that the subject activity must be authorized by an individual permit.
- (5) Disapproval of a registration shall be in writing.

**Section 5. Requirements of this General Permit**

The permittee shall at all times continue to meet the requirements for authorization set forth in Section 3 of this general permit. In addition, a permittee shall ensure that authorized activities are conducted in accordance with the following conditions:

***(a) Conditions Applicable for Certain Discharges***

- (1) If the permittee initiates, creates, or originates a discharge of stormwater which is located less than 500 feet from a tidal wetland that is not a fresh-tidal wetland, such discharge shall flow through a system designed to retain the Water Quality Volume, as defined in Section 2.
- (2) If the permittee wishes to initiate, create, or originate a discharge of stormwater below the coastal jurisdiction line into coastal, tidal, or navigable waters for which a permit is required under the Structures and Dredging Act in accordance with Section 22a-361(a) of the Connecticut General Statutes or into tidal wetlands for which a permit is required under the Tidal Wetlands Act in accordance with Section 22a-32 of the Connecticut General Statutes, the municipality shall obtain such permit(s) from the Commissioner prior to initiating, creating or originating such discharge.
- (3) There shall be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge. Excluded from this are naturally occurring substances such as leaves and twigs provided no person has placed such substances in or near the discharge.
- (4) The stormwater discharge shall not result in pollution which may cause or contribute to acute or chronic toxicity to aquatic life, impair the biological integrity of aquatic or marine ecosystems, or result in an unacceptable risk to human health.

- (5) The stormwater discharge shall not cause or contribute to an exceedance of the applicable Water Quality Standards in the receiving water.
- (6) Any new stormwater discharge to high quality waters (as identified by the Commissioner consistent with the Water Quality Standards) shall be discharged in accordance with the Connecticut Anti-Degradation Implementation Policy in the Water Quality Standards manual. At a minimum, the permittee shall evaluate and implement to the Maximum Extent Practicable practices which will prevent the discharge of the Water Quality Volume to a surface water body or other practices necessary to protect and maintain designated uses and meet standards and criteria contained in the Water Quality Standards.
- (7) Any stormwater discharge to the waters identified in Appendix D shall be managed for the Stormwater Pollutant of Concern identified in the appendix consistent with the requirements in Section 6 of this permit.

**(b) *Stormwater Management Plan***

The permittee shall develop, implement, and enforce a stormwater management plan designed to reduce the discharge of pollutants from the Small MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the federal Clean Water Act. Maximum Extent Practicable (MEP) is a technology-based standard established by Congress in the Clean Water Act Section 402(p)(3)(B)(iii). Since no precise definition of MEP exists, it allows for maximum flexibility on the part of MS4 operators as they develop their programs. (40CFR 122.2, See also: Stormwater Phase II Compliance Assistance Guide EPA 833-R-00-002, March 2000). When trying to reduce pollutants to the MEP, there must be a serious attempt to comply, and practical solutions may not be lightly rejected. Factors such as the conditions of receiving waters, specific local concerns, MS4 size, climate, implementation schedules, current ability to finance the program, beneficial uses of receiving water, hydrology, geology, and capacity to perform operation and maintenance should be considered in determining whether permittee has complied with this general permit to the Maximum Extent Practicable.

Under this program, the permittee shall prepare a Stormwater Management Plan pursuant to Section 6 of this general permit, which plan must be completed by such time as specified in Section 4(d)(2) of this general permit. The permittee shall continue to implement the Stormwater Management Plan and all Minimum Control Measures required by this general permit throughout the entire term of the general permit. The permittee shall continue to provide for adequate staffing and economic resources for such implementation throughout the entire term of the general permit. If at any time the Commissioner finds that the Plan is not adequate to protect the waters of the state from pollution, the Commissioner may terminate authorization under this permit and require the permittee to submit an individual permit application.

Failure to implement all elements of the Stormwater Management Plan to the MEP constitutes a violation of this permit.

**Section 6. Development of Stormwater Management Plan (Plan)**

The Plan shall address the Minimum Control Measures as indicated in this section. Section 6(a) contains the requirements for Small MS4s. These measures shall be implemented throughout the boundaries of the municipality or institution except as otherwise indicated in this section.

(a) *Minimum Control Measures*

For each Minimum Control Measure, the permittee shall: define appropriate BMPs; designate a person(s) and job title responsible for each BMP; define a time line for implementation of each BMP; where appropriate, identify the location, including the address and latitude and longitude, for each BMP; and define measurable goals for each BMP. The Minimum Control Measures in the Plan include, but are not limited to:

(1) Public education and outreach

The goals of this minimum control measure are:

- To raise awareness that polluted stormwater runoff is the most significant source of water quality problems;
- To motivate residents to use Best Management Practices (BMPs) which reduce polluted stormwater runoff; and
- To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.

(A) Implement a public education program to distribute educational materials to the permittee's community (i.e. residents, business and commerce, students, staff, contractors, etc.) or conduct equivalent outreach activities about the sources and impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff. The education program shall include, but not be limited to, information on management of pet waste, application of fertilizers, herbicides, and pesticides, impervious cover and impacts of illicit discharges and improper disposal of waste into the MS4. The form and content of the education program will be dependent on the audience and identified areas of concern for each MS4. Permittees may join other permittees in the same region to develop and implement a public education program. Educational information may be developed and/or acquired from other permittees, governmental agencies, community and non-governmental organizations, councils of government, academia, and/or environmental advocacy organizations. Outreach resources will be available from the DEEP stormwater webpage at [www.ct.gov/deep/stormwater](http://www.ct.gov/deep/stormwater). Information may be disseminated with flyers, brochures, door hangers, television public service announcements, and/or web based tools. Each Annual Report shall summarize the types, sources, number of, and methods by which materials disseminated.

- (i) Permittees previously authorized by the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems issued on January 9, 2004 (existing 2004 MS4 permittees) shall begin implementation of this measure within the first year following the effective date of this permit and continue until permit expiration. Permittees shall utilize the materials developed under the 2004 MS4 permit and update or modify as necessary to acquire and/or develop the content of the outreach materials for this general permit.
- (ii) Permittees not previously authorized by the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems issued on January 9, 2004 (new MS4 permittees) shall begin implementation of this measure within the second year following the effective date of this permit and continue until

permit expiration. Permittees shall utilize the one year period following the effective date of this permit to acquire and/or develop the content of the outreach materials.

(B) To implement the public education and outreach program, the permittee shall develop or acquire current educational material from DEEP and other sources that identifies the pollutants (such as pathogens/bacteria, nitrogen, phosphorus, sediments, metals, oils & greases) associated with stormwater discharges, the potential sources of the pollutants, the environmental impacts of these pollutants, and related pollution reduction practices.

(C) Additional measures for discharges to waters associated with a Stormwater Pollutant of Concern

These measures may be implemented solely by the permittee or as part of a collaborative regional or statewide program to address the issue. However, the permittee retains sole responsibility for compliance with this section. The method of implementation shall be indicated in the permittee's Plan.

(i) For waters for which **Phosphorus** is a Stormwater Pollutant of Concern, educational materials shall be specifically tailored and targeted to educate on the sources, impacts, and available pollution reduction practices from the following:

- a. Septic systems
- b. Fertilizer use
- c. Grass clippings and leaves management
- d. Detergent use
- e. Discharge of sediment (to which Phosphorus binds) from Construction sites
- f. Other erosive surfaces

(ii) For waters for which **Nitrogen** is a Stormwater Pollutant of Concern, educational materials shall be specifically tailored and targeted to educate on the sources, impacts, and available pollution reduction practices from the following:

- a. Septic systems
- b. Fertilizer use
- c. Grass clippings and leaves management
- d. Discharge of sediment (to which Nitrogen binds) from Construction sites
- e. Other erosive surfaces

(iii) For waters for which **Bacteria** is a Stormwater Pollutant of Concern, educational materials shall be specifically tailored and targeted to educate on the sources, impacts, and available pollution reduction practices from the following:

- a. Septic systems
- b. Sanitary cross connections
- c. Waterfowl
- d. Pet waste
- e. Manure piles associated with livestock and horses

(iv) For waters for which **Mercury** is a Stormwater Pollutant of Concern, educational materials shall be specifically tailored and targeted to educate on the sources,

impacts and available recycling programs for elemental mercury and mercury-containing items such as:

- a. Thermometers
- b. Thermostats
- c. Fluorescent lights
- d. Button cell batteries

(D) Suggested Strategies.

- (i) Target specific populations: Each permittee is encouraged to direct such outreach program and/or materials at specific populations. Such target populations may include, for example, school age populations, farming populations, and urban populations. Sample educational material for each Stormwater Pollutant of Concern noted above will be made available by DEEP.
- (ii) Partner with local organizations: Permittees may wish to include in its outreach efforts various local organizations which may be able to assist in helping to spread the stormwater message.

(2) Public Involvement/Participation

The permittee shall provide opportunities to engage their community to participate in the review and implementation of the permittee's Plan. The goal of this minimum control measure is to involve the community in both the planning and implementation process of improving water quality. Public participation is beneficial to the success of a municipal stormwater management program because it allows for a broader public support, additional expertise, and a conduit to other programs. Community members are also more likely to apply these lessons/BMPs at home if they are part of the process.

- (A) Publish a public notice on the permittee's website, through an email or mailing list, if the permittee maintains one, or in a newspaper with general circulation in the area to inform the public of the Plan and the Annual Report required by Section 6(j) of this permit and to solicit comments on the Plan and Annual Report. The notice shall provide a contact name (with phone number, address, and email) to whom the public can send comments and a publicly accessible location (such as the MS4's main office or other designated municipal office, a local library or other central publicly available location) and/or URL where the Plan and Annual Report are available for public review. The public notice shall allow for a 30 day comment period, at a minimum. Municipalities and institutions shall publish this public notice annually no later than January 31.
- (B) The permittee is encouraged to enlist local organizations to help implement the elements of their Plan. However, the permittee retains sole responsibility for permit compliance.
- (C) No requirements in addition to those specified in subsections (A)-(B), above, are specified for discharges to waters impaired for Phosphorus, Nitrogen, Bacteria, or Mercury.

(3) Illicit discharge detection and elimination.

Within one (1) year of the effective date of this general permit for existing 2004 MS4 permittees and within two (2) years of the effective date of this general permit for new MS4 permittees, the permittee shall develop a written Illicit Discharge Detection and Elimination (IDDE) program designed to: provide the legal authority to prohibit and eliminate illicit discharges (as defined in Section 2 except for those discharges noted in the Section 3(a)(2) of this permit) to the MS4; find the source of any illicit discharges; eliminate those illicit discharges; and ensure ongoing screening and tracking to prevent and/or eliminate future illicit discharges. Failure to implement all elements of the IDDE program to the MEP constitutes a violation of this permit.

(A) IDDE Program Elements

- (i) The permittee shall, at a minimum, implement the IDDE program elements in this section and the IDDE protocol in Appendix B within the Urbanized Area and those catchment areas of the MS4 with either Directly Connected Impervious Area (DCIA) of greater than 11% (as identified on maps available at [www.ct.gov/deep/municipalstormwater](http://www.ct.gov/deep/municipalstormwater)) or which discharge to impaired waters (“priority” areas). The permittee is encouraged to develop a prioritizing strategy to identify areas outside these identified areas to further implement these IDDE measures. This prioritizing strategy should utilize the prioritizing elements included in Section (A)(7)(c) of Appendix B.
- (ii) Illicit discharges to the MS4 by any person are prohibited, and any such discharges are not authorized by the general permit, are unlawful, and remain unlawful until they are eliminated. The permittee shall prohibit all illicit discharges from entering its MS4. Upon detection, the permittee shall eliminate illicit discharges as soon as possible and require the immediate cessation of such discharges upon confirmation of responsible parties in accordance with its enforceable legal authorities established pursuant to subsection (B) below. Where elimination of an illicit discharge within sixty (60) days of its confirmation is not possible, the permittee shall establish a schedule for its elimination not to exceed 180 days (six (6) months). The permittee shall immediately commence actions necessary for elimination. The permittee shall diligently pursue elimination of all illicit discharges. In the interim, the permittee shall take all reasonable and prudent measures to minimize the discharge of pollutants to its MS4.
- (iii) The permittee shall develop a program for citizen reporting of illicit discharges. This may include maintaining a website, email list or mailing program that provides clear instructions for the public describing how citizens can submit an illicit discharge report. The reporting program shall provide an email address and/or a phone number or other means for submissions. The permittee shall affirmatively investigate and eliminate any illicit discharges reported to it by any citizen or organization, provided that such report incorporates at least a time and location of an observed discharge. The permittee shall commence inspection of such a reported outfall or manhole promptly after receiving such a report, and incorporate those reported outfalls into its IDDE program subject to all provisions

of this subsection (3) and of Appendix B. All citizen reports and the responds to those reports shall be included in the Annual Report.

- (iv) The permittee shall implement outfall screening and an illicit discharge detection protocol pursuant to **Appendix B** to identify, prioritize, and investigate separate storm sewer catchments for suspected illicit discharges of pollutants.
  - (v) The permittee shall maintain a record of illicit discharge abatement activities including, at a minimum: location (identified with an address or latitude and longitude), description, date(s) of inspection, sampling data (if applicable), action(s) taken, date of removal or repair and responsible party(ies). This information shall be included in the permittee's Annual Report pursuant to the Section 6(j) of this permit.
  - (vi) Timelines – permittees shall implement IDDE program elements in accordance with the schedules included in this section and in Appendix B.
- (B) Establish the necessary and enforceable legal authority by statute, ordinance, rules and regulations, permit, easement, contract, order or any other means, to eliminate illicit discharges.
- (i) The legal authority shall:
    - a. prohibit illicit discharges to its storm sewer system and require removal of such discharges consistent with subsection (3)(A), above; and
    - b. control the discharge of spills and prohibit the dumping or disposal of materials including, but not limited to, residential, industrial and commercial wastes, trash, used motor vehicle fluids, pesticides, fertilizers, food preparation waste, leaf litter, grass clippings, and animal wastes into its MS4; and
    - c. authorize fines or penalties and/or recoup costs incurred by the permittee from anyone creating an illicit discharge or spilling or dumping as specified in subsection (3)(A), above. For state and federal institutions, where this provision may conflict with existing rules, regulations, policies, chain of command or other circumstances, alternate provisions for enforcement may be utilized.
    - d. provide any additional legal authorities specified in Section (A)(7)(a) of Appendix B.
  - (ii) Existing 2004 MS4 permittees must establish and implement this legal authority within one year of the effective date of this permit.
  - (iii) New MS4 permittees must establish and implement this legal authority on or before two (2) years of the effective date of this permit.
- (C) Develop a list (spreadsheet or database) and map or series of maps at a minimum scale of 1"=2000' and maximum scale of 1"=100' showing all stormwater discharges from a pipe or conduit located within and owned or operated by the municipality or institution

and all interconnections with other MS4s. The map(s) should, if possible, be developed in a GIS format.

- (i) The list and map(s) shall include for each discharge:
  - a. Type, material, size, and location (identified with a latitude and longitude) of conveyance, outfall or channelized flow (e.g. 24" concrete pipe);
  - b. the name, water body ID and Surface Water Quality Classification of the immediate surface waterbody or wetland to which the stormwater runoff discharges;
  - c. if the outfall does not discharge directly to a named waterbody, the name and water body ID of the nearest named waterbody to which the outfall eventually discharges;
  - d. the name of the watershed, including the subregional drainage basin number (available from CT ECO at [www.cteco.uconn.edu](http://www.cteco.uconn.edu)) in which the discharge is located; and
  - e. the spreadsheet or database should, if possible, be prepared in a format compatible with Microsoft Excel.
- (ii) For existing 2004 MS4 permittees, this list and mapping must be completed within two (2) years of the effective date of this permit.
- (iii) For new MS4 permittees, this list and mapping must commence upon the effective date of this permit and be completed within three (3) years from the effective date of this permit. The entirety of the municipal or institutional MS4 shall be mapped by the expiration date of this permit.

(D) For waters for which **Phosphorus**, **Nitrogen**, or **Bacteria** is a Stormwater Pollutant of Concern:

- (i) To address septic system failures, the IDDE program shall give highest priority for the IDDE program in areas with the highest potential to discharge bacteria, phosphorus, and nitrogen to the MS4. Such areas shall be identified based on assessment of the following criteria: historic on-site sanitary system failures, proximity to bacteria impaired waters, low infiltrative soils, and shallow groundwater. Consultation with local or state health officials is strongly encouraged. The Annual Report shall include a summary of the program, the number of areas identified with failing systems, actions taken by the permittee to respond to and address the failures, and the anticipated pollutant reduction.

(E) No requirements in addition to those specified in subsections (A) - (C) above exist for discharges to waters for which **Mercury** is a Stormwater Pollutant of Concern.

#### (4) Construction Site Stormwater Runoff Control

The permittee shall implement and enforce a program to control stormwater discharges (to its MS4) associated with land disturbance or development (including re-development)

activities from sites (as defined in the Department's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities) with one acre or more of soil disturbance, whether considered individually or collectively as part of a larger common plan. Such program shall include the following elements:

(A) Legal Authority

- (i) The permittee shall establish an ordinance, bylaw, regulation, standard condition of approval or other appropriate legal authority that requires:
  - a. developers, construction site operators, or contractors to maintain consistency with the 2002 Guidelines for Soil Erosion and Sedimentation Control, as amended, the Connecticut Stormwater Quality Manual, and all stormwater discharge permits issued by the DEEP within the municipal or institutional boundary pursuant to CGS 22a-430 and 22a-430b;
  - b. the implementation of additional measures to protect/improve water quality (in addition to the above requirements) as deemed necessary by the municipality or institution;
  - c. the permittee to carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with municipal regulations, ordinances or programs or institutional requirements related to the management of the permittee's MS4. Specifically, inspections shall be conducted, where allowed, to inventory the number of privately-owned retention ponds, detention ponds and other stormwater basins that discharge to or receive drainage from the permittee's MS4;
  - d. the owner of a site seeking development approval from the permittee to provide and comply with a long term maintenance plan and schedule to ensure the performance and pollutant removal efficiency of privately-owned retention ponds, detention ponds and other stormwater basins that discharge to or receive discharge from the permittee's MS4 including short-term and long-term inspection and maintenance measures to be implemented by the private owner; and
  - e. the permittee to control through interagency or inter-jurisdictional agreements, the contribution of pollutants between the permittee's MS4 and MS4s owned or operated by others.
- (ii) For existing 2004 MS4 permittees, within two (2) year from the start of the permittee's first fiscal year that begins after the effective date of this permit, the permittee shall implement, upgrade (if necessary) and enforce its land use regulations to meet the requirements of subsections 4(A)(i)a. – e. above.
- (iii) For new MS4 permittees, within three (3) years from the start of the permittee's first fiscal year that begins after the effective date of this permit, the permittee shall implement, upgrade (if necessary) and enforce its land use regulations (for municipalities) or its construction requirements (for institutions) to meet the requirements of Sections 4(A)(i)a. – e. above.

(B) Interdepartmental Coordination

- (i) The permittee will develop and implement a plan outlining how all municipal or institutional departments and boards with jurisdiction over the review, permitting, or approval of land disturbance and development projects within the MS4 will coordinate their functions with one another.
- (ii) All municipalities and institutions shall implement this measure upon the effective date of this permit.

(C) Site Review and Inspection

- (i) The permittee will conduct site plan reviews that incorporate consideration of stormwater controls or management practices to prevent or minimize impacts to water quality.
- (ii) The permittee will conduct site inspection(s) and enforcement to assess the adequacy of the installation, maintenance, operation, and repair of construction and post construction control measures.
- (iii) All municipalities and institutions shall implement this measure upon the effective date of this permit.

(D) Public Involvement

- (i) The permittee will implement a procedure for receipt and consideration of information submitted by the public concerning proposed and ongoing land disturbance and development activities.
- (ii) All municipalities and institutions shall implement this procedure upon the effective date of this permit.

(E) State Permit Notification

- (i) The permittee will implement a procedure for notifying developers (working in a municipality) or contractors (working for a municipality or an institution) of their potential obligation to obtain authorization under the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities ("construction general permit") if their development or redevelopment project disturbs one or more acres of land, either individually or collectively, as part of a larger common plan, and results in a point source discharge to the surface waters of the state directly or through the permittee's MS4. The notification shall include a provision informing the developer/contractor of their obligation to provide a copy of the Storm Water Pollution Control Plan (required by the construction general permit) to the permittee upon request.
- (ii) All municipalities and institutions shall implement this procedure upon the effective date of this permit.

- (F) For construction discharges to waters for which **Phosphorus, Nitrogen, Bacteria, or Mercury** is a Stormwater Pollutant of Concern no additional measures are included in this section except as may be required by Sections 3(b)(7) or 6(k).
- (5) Post-construction stormwater management in new development or redevelopment

- (A) Legal Authority

- (i) The permittee shall establish an ordinance, bylaw, regulation, standard condition of approval or other appropriate legal authority that requires, to the MEP, that a developer or contractor seeking the permittee's approval shall consider the use of low impact development ("LID") and runoff reduction site planning and development practices prior to the consideration of other practices in the permittee's land use regulations, guidance or construction project requirements to meet or exceed those LID and runoff reduction practices identified in the Stormwater Quality Manual. Such legal authority shall include the following standards: 1) for redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, retain on-site half the water quality volume for the site, or 2) for new development and redevelopment of sites with less than forty percent DCIA, retain the water quality volume for the site, or 3) an alternate retention/treatment standard as outlined in subsections 5(B)(i)-(ii) below. All permittees shall identify and, where appropriate, reduce or eliminate existing local regulatory barriers to implementing LID and runoff reduction practices to the MEP. These may include site planning requirements, zoning regulations, street design regulations, or infrastructure specifications that address minimal dimensional criteria for the creation of roadways, parking lots, and other DCIA. If such barriers cannot be eliminated within the timeframe dictated by subsections 5(A)(ii) and (iii), below, the permittee shall provide in the Annual Report(s) required by Section 6(j) a justification and a revised schedule for implementation.

In establishing the legal authority, the permittee shall consider the following watershed protection elements to manage the impacts of stormwater on receiving waters, except where noted:

- a. Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each municipality by minimizing the creation, extension, and widening of parking lots, roads, and associated development and encourage the use of Low Impact Development or green infrastructure practices.
- b. Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- c. Implement stormwater management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.

- d. Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.
  - e. Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
  - f. Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- (ii) For existing 2004 MS4 permittees, the permittee shall consider the elements of this section during regular reviews and implement this requirement no later than four (4) years after the effective date of this permit.
  - (iii) For new permittees, the permittee shall consider the elements of this section during regular reviews and implement this requirement no later than five (5) years after the effective date of this permit.

(B) Runoff Reduction/Low Impact Development (“LID”) Measures

Pursuant to the requirements of subsection 5(A)(i) above, the permittee shall require the party responsible (i.e. a developer within a municipal boundary or a developer/contractor with the institution) for development and redevelopment projects within its MS4 to:

- (i) For development or redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, retain on-site half the water quality volume for the site. In cases where this entire amount cannot be retained, the permittee shall require the responsible party to retain runoff volume to the maximum extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice. In such cases, additional stormwater treatment, to the maximum extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice, shall be required for sediment, floatables and nutrients for the volume above that which can be retained up to the water quality volume. In cases where the runoff reduction requirement cannot be met, the developer/contractor shall submit, for the permittee’s review, a report detailing factors limiting the capability of achieving this goal. In such cases, the permittee shall approve a stormwater mitigation project on another site proposed by the developer/contractor or approve a fee to be deposited into a dedicated account of the permittee for use by the permittee to fund in whole or in part the retrofit of one or more existing DCIA. Unless such fee is established by DEEP, the fee proposed by the developer/contractor should be set in amount approved by the permittee as calculated based on an estimate of the cost necessary to implement the retrofit to achieve a similar amount of runoff reduction to the amount by which the actual amount of runoff reduced fails to achieve the requirement to retain the water quality volume for the site. The report shall include: the measures taken to maximize runoff reduction practices on the site; the reasons why those practices constitute the maximum extent achievable; the alternative retention volume; and a description of the measures used to provide additional stormwater treatment above

the alternate volume up to the water quality volume. In the case of linear redevelopment projects (e.g. roadway reconstruction or widening) for the developed portion of the right of way: (1) for projects that may be unable to comply with the full retention standard, the alternate retention and treatment provisions may also be applied as specified above, or (2) for projects that will not increase the DCIA within a given watershed, the developer/contractor shall implement the additional stormwater treatment measures referenced above, but will not be required to retain half of the water quality volume.

- (ii) For all new development and for redevelopment of sites with less than forty percent DCIA, retain the water quality volume for the site. If there are site constraints that would prevent retention of this volume on-site (e.g. brownfields, capped landfills, bedrock, elevated groundwater, etc.), documentation must be submitted, for the permittee's review and written approval, which: explains the site limitations; provides a description of the runoff reduction practices implemented; provides an explanation of why this constitutes the maximum extent achievable; offers an alternative retention volume; and provides a description of the measures used to provide additional stormwater treatment for sediment, floatables and nutrients above the alternate volume up to the water quality volume. In such cases, the permittee shall approve a stormwater mitigation project on another site proposed by the developer/contractor or approve a fee to be deposited into a dedicated account of the permittee for use by the permittee to fund in whole or in part the retrofit of one or more existing DCIA. Unless such fee is established by DEEP, the fee proposed by the developer/contractor should be set in amount approved by the permittee as calculated based on an estimate of the cost necessary to implement the retrofit to achieve a similar amount of runoff reduction to the amount by which the actual amount of runoff reduced fails to achieve the requirement to retain the water quality volume for the site. Any such treatment shall otherwise be designed, installed and maintained consistent with the Stormwater Quality Manual. In the case of linear projects that do not involve impervious surfaces (e.g. electrical transmission rights-of-way or natural gas pipelines), retention of the water quality volume is not required as long as the post-development runoff characteristics do not differ significantly from pre-development conditions.
- (iii) Consider the limitation of turf areas to those areas necessary to construct buildings, utilities, stormwater management measures, parking, access ways, reasonable lawn areas and contouring necessary to prevent future site erosion,
- (iv) Maintain consistency with the Connecticut Stormwater Quality Manual, or if inconsistent, provide an explanation of why consistency is not feasible or practicable and information that the proposed plan of development is adequately protective.
- (v) In areas served by on-site sewage disposal (septic) systems, the permittee should coordinate with the state or local health official, as appropriate, to confirm that any infiltration measures are appropriately sized, located and constructed in a manner consistent with the Connecticut Department of Public Health's *Technical Standards for Subsurface Sewage Disposal Systems*, Section 19-13-B100A of the Regulations of Connecticut State Agencies and/or DEEP requirements for on-site sewage disposal systems.

- (vi) For existing 2004 MS4 permittees, the permittee shall implement this requirement within two (2) years after the effective date of this permit.
- (vii) For new MS4 permittees, the permittee shall implement this requirement within three (3) years from the start of the permittee's first fiscal year that begins after the effective date of this permit.

(C) Directly Connected Impervious Area

Using mapping provided by the Commissioner (available at [www.ct.gov/deep/municipalstormwater](http://www.ct.gov/deep/municipalstormwater)) or other equivalent source, the permittee shall calculate the Directly Connected Impervious Area (DCIA) that contributes stormwater runoff to each of its MS4 outfalls (i.e. catchment area) within three (3) years of the effective date of this general permit. The DCIA calculation shall be based upon the criteria available through the DEEP stormwater webpage ([www.ct.gov/deep/municipalstormwater](http://www.ct.gov/deep/municipalstormwater)) and the precise methodology and assumptions shall be described in the permittee's Plan and initial annual report. Each annual report shall document the progress of this task until its completion. The Permittee shall revise its DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA to its MS4.

(D) Long Term Maintenance

- (i) The permittee shall implement a maintenance plan for ensuring the long-term effectiveness of retention or detention ponds located in the Urbanized Area and those catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters and which discharge to, or receive stormwater from, its MS4. This shall include such ponds that are owned by the permittee and all privately-owned ponds where the permittee maintains an easement or other legal authority pursuant to Section 6(a)(4)(A)(i) of this permit. At a minimum, the permittee shall annually inspect all such retention or detention ponds and remove accumulated sediment to restore full solids capture design capacity where found to be in excess of 50% design capacity.
- (ii) The permittee shall implement a maintenance plan for ensuring the long-term effectiveness of stormwater treatment structures or measures (such as swirl concentrators, oil/grit separators, water quality wetlands or swales, etc.) installed within the Urbanized Area and those catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters. This shall include structures that are owned by the permittee or those for which the permittee maintains an easement or other legal authority pursuant to Section 6(a)(4)(A)(i) of this permit. At a minimum, the permittee shall annually inspect all such structures/measures and remove accumulated pollutants (such as sediment, oils, leaves, litter, etc.) to restore full solids capture design capacity where found to be in excess of 50% design capacity.
- (iii) For existing 2004 MS4 permittees, the permittee shall implement this requirement within two (2) years of the effective date of this permit.
- (iv) For new MS4 permittees, the permittee shall implement this requirement within three (3) years after the effective date of this permit.

(E) Additional measures for discharges to impaired waters (with or without a TMDL)

- (i) For waters for which **Nitrogen, Phosphorus** or **Bacteria** is a Stormwater Pollutant of Concern:

To address erosion and sediment problems noted during the course of conducting the inspections required by subsection D above and identified by other means, the permittee shall develop, fund, implement, and prioritize these problems under the Retrofit program specified in Section 6(a)(6)(B) to correct the problem(s) in a specific timeframe and to establish short term and long term maintenance. Each annual report shall include which problem areas were retrofitted, the cost of the retrofit, and the anticipated pollutant reduction.

- (ii) No requirements in addition to those specified in subsections (A)-(D) above exist for discharges to waters for which **Mercury** is a Stormwater Pollutant of Concern.

(6) Pollution Prevention/Good Housekeeping

The permittee shall implement an operations and maintenance program for permittee-owned or -operated MS4s that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned or -operated MS4s.

(A) Employee Training

The existing 2004 MS4 permittees shall continue a formal employee training program to increase awareness of water quality related issues in management of its MS4. New MS4 permittees shall develop this program within two (2) years of the effective date of this general permit. In addition to providing key staff with topical training regarding standard operating procedures and other activities necessary to comply with the provisions of this permit, the training program shall include establishing an awareness of the general goals and objectives of the Plan; identification and reporting of illicit discharges and improper disposal; and spill response protocols and respective responsibilities of involved personnel.

(B) Infrastructure Repair, Rehabilitation and Retrofit

- (i) The permittee shall repair and rehabilitate its MS4 infrastructure in a timely manner to reduce or eliminate the discharge of pollutants from its MS4 to receiving waters. Priority for repair and rehabilitation shall be based on the following:
- a. For existing 2004 MS4 permittees, the permittee shall utilize the information developed pursuant to Section 6(a)(6)(A)(v) of the 2004 MS4 permit to fund and implement a program for repairing, retrofitting or upgrading the conveyances, structures and outfalls of the MS4. This program shall be updated based on new information on outfalls discharging pollutants, impaired waters, inspection observations or observations made during outfall mapping pursuant to Section 6(a)(3)(C) of this permit.
  - b. For new MS4 permittees, the permittee shall, within the first three (3) years following the effective date of this general permit, develop a program to

identify conveyances, structures and outfalls in need of repairing, retrofitting or upgrading utilizing new and existing information on outfalls discharging pollutants, impaired waters, inspection observations or observations made during outfall mapping pursuant to Section 6(a)(3)(C) of this permit.

(ii) Retrofit Program

The goal of the retrofit program is to “disconnect” existing Directly Connected Impervious Areas (DCIA). An area of DCIA is considered disconnected when the appropriate portion of the Water Quality Volume has been retained in accordance with the requirements of Section 6(a)(5)(B)(i) or (ii) of this general permit. This may be accomplished through retrofits or redevelopment projects (public or private) that utilize Low Impact Development (LID) and runoff reduction measures or any other means by which stormwater is infiltrated into the ground or reused for other purposes without a surface or storm sewer discharge. A redevelopment project, as that term is used here and in Section 6(a)(5)(B)(i) and (ii), is one that modifies an existing developed site for the purpose of enhancing, expanding or otherwise modifying its function or purpose. A retrofit project is one that modifies an existing developed site for the primary purpose of disconnecting DCIA. The DCIA calculation performed pursuant to Section 6(a)(5)(C) shall serve as the baseline for the retrofit program required in this section.

a. DCIA Disconnection Tracking

Beginning on the effective date of this general permit, the permittee shall track on an annual basis the total acreage of DCIA that is disconnected as a result of redevelopment or retrofit projects within the MS4. Tracking the disconnection of DCIA means documenting within a given redevelopment or retrofit project the amount of existing DCIA that is modified such that it is disconnected. This tracking may include disconnections of DCIA from redevelopment or retrofit projects implemented as early as five (5) years prior to the effective date of this permit. Any redevelopment or retrofit of an existing developed site, whether public (municipal, state or federal) or private (residential, commercial or industrial) shall be included in this tracking.

Tracking the disconnection of DCIA does not apply for sites that were previously undeveloped as there were no existing impervious surfaces on those sites. The total amount of DCIA that has been disconnected during a given year shall be reported in that year’s Annual Report.

b. Retrofit Planning

On or before the end of third year after the effective date of this general permit, the permittee shall develop a plan to implement retrofit projects to meet the goals of this section. The permittee shall identify and prioritize sites that may be suitable for retrofit. Considerations for prioritizing retrofit projects may include outfall catchment areas that discharge to impaired waters, areas within the Urbanized Area of the MS4 or catchment areas with greater than eleven percent (11%) DCIA. The permittee shall select from the list of prioritized projects those that it will implement to meet the goals in subparagraph (c) below. In the Annual Report for the third year of this general permit, the

permittee shall report on its identification and prioritization process, the selection of the projects to be implemented, the rationale for the selection of those projects and the total DCIA to be disconnected upon implementation of the projects.

c. Retrofit Schedule

By the end of this permit term, the permittee shall commence the implementation of the retrofit projects identified in subparagraph (b), above, with a goal of disconnecting one percent (1%) per year of the permittee's DCIA for the fourth and fifth years of this general permit, or a total of 2%, to the MEP. The two percent (2%) goal may be achieved by compiling the total disconnected DCIA tracked pursuant to subparagraph (a), above, or the retrofit projects designated in subparagraph (b), above, or a combination of the two.

If the two percent (2%) goal will not be met, the permittee shall include in the Annual Report a discussion of what percentage of DCIA will actually be disconnected and why the remainder of the two percent (2%) goal could not be achieved based on the MEP standard outlined in Section 5(b). The permittee shall also provide in the Annual Report for the fifth year of this permit for continuation of the retrofit program and continue such program with a goal to disconnect one percent (1%) of DCIA in each year thereafter.

(C) MS4 Property and Operations Maintenance

Permittee-owned or -operated properties, parks, and other facilities that are owned, operated, or otherwise the legal responsibility of the permittee shall be maintained so as to minimize the discharge of pollutants to its MS4. Such maintenance shall include, but not be limited to:

(i) Parks and open space

The permittee shall optimize the application of fertilizers by municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance. Optimization practices considered may include conducting soil testing and analysis to determine soil phosphorus levels, the reduction or elimination of fertilizers, reduction of usage by adhering to the manufacturers' instructions, and use of alternative fertilizers forms (i.e. products with reduced, slow-releasing, or insoluble phosphorus compositions). Additional optimization practices to be considered include: proper storage and application practices (i.e. avoid impervious surfaces), application schedule (i.e. appropriate season or month) and timing (i.e. coordinated with climatic conditions to minimize runoff potential); develop and implement standard operating practices for the handling, storage, application, and disposal of pesticides and herbicides in compliance with applicable state and federal laws; evaluate lawn maintenance and landscaping activities to promote water quality (protective practices include reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials like drought resistant and native plantings); and establish procedures for management of trash containers at parks (scheduled cleanings; sufficient number).

The permittee shall establish practices for the proper disposal of grass clippings and leaves at permittee-owned lands. Clippings shall be composted or otherwise appropriately disposed. Clippings should not enter the MS4 system or waters of the state.

(ii) Pet waste management

The permittee shall identify locations within its community/institution where inappropriate pet waste management practices are immediately apparent and pose a threat to receiving water quality due to proximity and potential for direct conveyance of waste to its storm system and waters. In such areas, the permittee shall, implement targeted management efforts such as public education and enforcement (e.g. increased patrol for violators). In permittee-owned recreational areas where dog walking is allowed, the permittee shall install educational signage, pet waste baggies, and disposal receptacles (or require carry-out). The permittee shall document its efforts in its annual reports. The permittee should consider including information regarding the scope and extent of its education, compliance, and enforcement efforts (including the number of violations pursued and fines levied or other enforcement taken).

(iii) Waterfowl management

Identify lands where waterfowl congregate and feeding by the public or institutional staff/residents occurs. To raise awareness regarding the water quality impacts, the permittee shall install signage or use other targeted techniques to educate the public about the detrimental impacts of feeding waterfowl (including the resulting feces deposition) and discourage such feeding practices. The permittee shall also implement practices that discourage the undesirable congregation of waterfowl in these areas, or otherwise isolate the direct drainage from these areas away from its storm system and waters.

(iv) Buildings and facilities (schools under the jurisdiction of the permittee, town offices, police and fire stations, pools, parking garages and other permittee-owned or operated buildings or utilities)

Evaluate the use, storage, and disposal of both petroleum and non-petroleum products; ensure, through employee training, that those responsible for handling these products know proper procedures; ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the fire department as necessary; develop management procedures for dumpsters and other waste management equipment; sweep parking lots and keep areas surrounding the facilities clean to minimize runoff of pollutants; and ensure that all interior building floor drains are not connected to the MS4. This permit does not authorize such discharges; wastewaters from interior floor drains must be appropriately permitted.

(v) Vehicles and Equipment

Establish procedures for the storage of permittee-owned or -operated vehicles; require vehicles with fluid leaks to be stored indoors or in contained areas until repaired; evaluate fueling areas owned by the permittee and used by permittee-owned or -operated vehicles and if possible, place fueling areas under cover in

order to minimize exposure; establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters. This permit does not authorize such discharges; wastewaters from interior floor drains must be appropriately permitted.

(vi) Leaf Management

The permittee shall establish and implement procedures to minimize or prevent the deposition of leaves in catch basins, streets, parking lots, driveways, sidewalks or other paved surfaces that discharge to the MS4. Such procedures shall also apply to leaves collected by the permittee.

(D) Street, Parking & MS4 Maintenance

The permittee shall implement a program to provide for regular inspection and maintenance of permittee-owned or -operated streets, parking areas and other MS4 infrastructure.

(i) Sweeping

- a. Establish and implement procedures for sweeping permittee-owned or -operated streets and parking lots. All streets and parking lots within the Urbanized Area of the MS4, and outside the Urbanized Area within the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters, shall be inspected, swept and/or cleaned (as necessary) with a minimum frequency of once per year in the spring following the cessation of winter maintenance activities (i.e. sanding, deicing, etc.). The procedures shall also include more frequent inspections, cleaning and/or sweeping of targeted areas determined by the permittee to have increased pollutant potential based on the presence of active construction activity or other potential pollutant sources. The permittee shall identify such potential pollutant sources based upon surface inspections, catch basin cleaning or inspection results, land use, winter road deicing and/or sand application, impaired or TMDL waters or other relevant factors as determined by the permittee. If wet dust suppression is conducted, the use of water should be minimized such that a discharge of excess water to surface waters and/or the storm sewer system does not occur.

For streets and parking lots outside the Urbanized Area and outside the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters, including any rural uncurbed streets and parking lots with no catch basins, the permittee shall either meet the minimum frequencies above, or develop and implement an inspection, documentation and targeted sweeping and/or cleaning plan within one (1) year of the effective date of the general permit, and submit such plan with its year one Annual Report. For new and redeveloped municipal parking lots, evaluate options from reducing stormwater runoff to surface waters and/or the storm sewer system by the installing pervious pavements and/or other measures to promote sheet flow of stormwater.

- b. Ensure the proper disposal of street sweepings in accordance with Department policies, guidance and regulations. Sweepings shall not be discharged back into the storm drain system and/or surface waters.
- c. In its Annual Report, the permittee shall document results of its sweeping program including, at a minimum: a summary of inspection results, curb miles swept, dates of cleaning, volume or mass of material collected, and method(s) of reuse or disposal. The permittee shall also include documentation of any alternate sweeping plan for rural uncurbed streets and any runoff reduction measures implemented.

(ii) Catch Basin Cleaning

The Permittee shall conduct routine cleaning of all catch basins. The Permittee shall track catch basin inspection observations. Utilizing information compiled through its inventory of catch basins, operational staff and public complaints, the Permittee shall optimize routine cleaning frequencies for particular structures or catchment areas as follows to maintain acceptable sediment removal efficiencies:

- a. Inspect all permittee-owned catch basins within the Urbanized Area of the MS4 and outside the Urbanized Area within the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters at least once by the end of the third year following the effective date of this general permit. Catch basins outside the Urbanized Area and outside the catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters shall be inspected by the end of the fifth year following the effective date of this general permit.
- b. Prioritize inspection and maintenance for permittee-owned catch basins located near impaired waters and construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.
- c. Establish a schedule that the frequency of routine cleaning will ensure that no catch basin at any time will be more than fifty (50) percent full.
- d. If a catch basin sump is more than fifty (50) percent full during two consecutive routine inspections/cleaning events, the permittee shall document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources. The permittee shall describe any actions taken in its Annual Report.
- e. For the purposes of this subsection, an excessive sediment or debris loading is a catch basin sump more than fifty (50) percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.

- f. The permittee shall document in the Plan and in the first Annual Report its plan for optimizing catch basin cleaning, inspection plans, or its schedule for gathering information to develop the optimization plan. Documentation shall include metrics and other information used to reach the determination that the established plan for cleaning and maintenance is optimal for the MS4. The permittee shall keep a log of catch basins cleaned or inspected.
- g. The permittee shall report in each Annual Report the total number of catch basins, number inspected, number cleaned, the total volume or mass of material removed from all catch basins and, if practicable, the volume or mass of material removed from each catch basin draining to water quality limited waters.

(E) Snow Management Practices

(i) Deicing Material Management

Develop and implement standard operating practices for the use, handling, storage, application, and disposal of deicing products such as salt and sand to minimize exposure to stormwater; consider means to minimize the use and optimize the application of chloride-based or other salts or deicing product (while maintaining public safety) and consider opportunities for use of alternative materials; for any exterior containers of liquid deicing materials installed after the effective date of this permit, provide secondary containment of at least 110% of the largest container or 10% of the total volume of all containers, whichever is larger, without overflow from the containment area.

(ii) Snow and Ice Control Practices

The permittee shall implement and refine its standard operating practices regarding its snow and ice control to minimize the discharge of sand, anti-icing or de-icing chemicals and other pollutants (while maintaining public safety). The permittee shall establish goals for the optimization of sand and/or chemical application rates through the use, where practicable, of automated application equipment (e.g. zero-velocity spreaders), anti-icing and pre-wetting techniques, implementation of pavement management systems, and alternate chemicals. The permittee shall maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals. The permittee shall ensure the proper training for deicing applications for municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance.

The permittee shall manage and dispose of snow accumulations in accordance with DEEP's Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots, revised 2/4/11 and as amended (see link at: [www.ct.gov/deep/stormwater](http://www.ct.gov/deep/stormwater)). In its Annual Report, the permittee shall document results of its snow removal program including, at a minimum: the type of staff training conducted on application methods and equipment, type(s) of deicing materials used; lane-miles treated; total amount of each deicing material used; type(s) of deicing equipment used; any changes in deicing practices (and the reasons for the change); and snow disposal methods.

(F) Interconnected MS4s

As part of interagency agreements established pursuant to Section 6(c)(3) of this permit, the Permittee shall coordinate with operators of interconnected MS4s (such as neighboring municipalities, institutions and DOT) regarding the contribution of potential pollutants from the storm sewer systems, contributing land use areas and stormwater control measures in the respective MS4s. This same coordination shall be conducted regarding operation and maintenance procedures utilized in the respective systems.

(G) Sources contributing pollutants to the MS4

The permittee shall develop and implement a program to control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities, not otherwise authorized by permit issued pursuant to Sections 22a-430 or 22a-430b of the Connecticut General Statutes.

(H) Additional measures for discharges to impaired waters (with or without a TMDL)

- (i) For waters for which **Nitrogen** or **Phosphorus** is a Stormwater Pollutant of Concern:

On Permittee-owned or -operated lands, implement a turf management practices and procedures policy which includes, but is not limited to, procedures for proper fertilizer application and the planting of native plant materials to lessen the amount of turf area requiring mowing and the application of chemicals. Each Annual Report shall discuss the actions taken to implement this policy with an estimate of fertilizer and turf reduction.

- (ii) For waters for which **Bacteria** is a Stormwater Pollutant of Concern:

On Permittee-owned or -operated lands with a high potential to contribute bacteria (such as dog parks, parks with open water, sites with failing septic systems), the permittee shall develop, fund, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. Each Annual Report shall identify problem areas for which a retrofit or source management program were developed, the location of the closest outfall monitored in accordance with Section 6(i), the cost of such retrofit or program, and the anticipated pollutant reduction.

On Permittee-owned or -operated lands, prohibit the feeding of geese or waterfowl and implement a program to manage geese and waterfowl populations. Each Annual Report shall discuss the actions taken to implement this program.

- (iii) No additional requirements in addition to those specified in subsections (A)-(C) above exist for discharges to waters for which **Mercury** is a Stormwater Pollutant of Concern.

**(b) Sharing Responsibility**

**(1) Qualifying Local Program**

The permittee may satisfy the requirement to implement a BMP for a Minimum Control Measure by having a third party implement the BMP.

When a permittee is relying on a third party to implement one or more BMP(s), the permittee shall note that fact in the registration and Annual Report required in Section 6(j), below. If the third party fails to implement the BMP(s), the permittee remains responsible for its implementation.

(Note: For example, if a local watershed organization performs an annual “river clean-up”, this event may be used to satisfy a BMP for the Public Participation and/or the Pollution Prevention and Good Housekeeping Minimum Control Measure.)

**(2) Qualifying State or Federal Program**

If a BMP or Minimum Control Measure is the responsibility of a third party under another NPDES stormwater permit, the permittee is not required to include such BMP or Minimum Control Measure in its Stormwater Management Plan. The permittee shall reference this qualifying program in their Stormwater Management Plan. However, the permittee is not responsible for its implementation if the third party fails to perform. The permittee shall periodically confirm that the third party is still implementing this measure. If the third party fails to implement the measure, the Stormwater Management Plan may be modified to address the measure, if necessary.

In the case of a permitted municipal industrial activity that is covered by the General Permit for the Discharge of Stormwater Associated with Industrial Activity, the permittee may reference the activity’s Stormwater Pollution Prevention Plan to address a portion of the permittee’s Stormwater Management Plan.

(Note: For example, the permittee may reference a regional mall’s requirement to perform sweeping and catch basin cleaning under the General Permit for the Discharge of Stormwater Associated with Commercial Activity. This third party action may be used to address a portion of the permittee’s requirement under the Good Housekeeping and Pollution Prevention Minimum Control Measure.)

**(3) Coordination of Permit Responsibilities**

Where a portion of the separate storm sewer system within a municipality is owned or otherwise the responsibility of another municipality, institution or a state or federal agency the entities shall coordinate the development and implementation of their respective Stormwater Management Plans to address all the elements of Section 6. A description of the respective responsibilities for these elements shall be included in the Stormwater Management Plan for each municipality.

(Note: For example, a storm sewer system within a municipality may be operated and maintained by the DOT. In cases such as these, the two entities shall coordinate their Stormwater Management Plans to address the Minimum Control Measures, particularly at the interface between the two storm sewer systems.)

(4) Co-Permitting

When a municipal Regulated Small MS4s is co-located within the corporate boundary of another Regulated Small MS4, the two may, at their discretion, submit a single registration and share a single Plan as co-permittees. In such a case, the Plan shall clearly indicate which co-permittee is responsible for implementing each of the control measures and other elements of the Plan.

(Note: This provision currently applies only to the City of Groton within the Town of Groton and the Borough of Stonington within the Town of Stonington.)

**(c) *Proper Operation and Maintenance***

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control, including related appurtenances, which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee when necessary to achieve compliance with this permit.

**(d) *Signature Requirements***

The Plan shall be signed by the chief elected official or principal executive officer, as those terms are defined in Section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies. The Plan shall be retained by the chief elected official or principal executive officer and copies retained by MS4 officials or employees responsible for implementation of the Plan.

**(e) *Plan Review Fee***

When submitting a Stormwater Management Plan as requested by the Commissioner pursuant to Section 6(f), below, the permittee shall submit a plan review fee of \$375.

**(f) *Keeping Plans Current***

The permittee shall amend the Plan whenever; (1) there is a change which has the potential to cause pollution of the waters of the state; or (2) the actions required by the Plan fail to prevent pollution of the waters of the state or fail to otherwise comply with any other provision of this general permit; or (3) the Commissioner requests modification of the Plan. The amended Plan shall be completed and all actions required by such Plan shall be completed within a time period determined by the Commissioner.

The Commissioner may notify the permittee in writing at any time that the Plan does not meet one or more of the requirements of this general permit. Within thirty (30) days of such notification, unless otherwise specified by the Commissioner in writing, the permittee shall respond to the Commissioner indicating how they plan to modify the Plan to address these requirements. Within ninety (90) days of this response or within one hundred twenty (120) days of the original notification, whichever is less, unless otherwise specified by the Commissioner in writing, the permittee shall then revise the Plan, perform all actions required by the revised Plan, and shall certify to the Commissioner that the requested changes have been

made and implemented. The permittee shall provide such information as the Commissioner requires to evaluate the Plan and its implementation. If at any time the Commissioner finds that the Plan is not adequate to protect the waters of the state from pollution, the Commissioner may terminate authorization under this permit and require the permittee to submit an individual permit application.

**(g) *Failure to Prepare or Amend Plan***

In no event shall failure to complete or update a Plan in accordance with Sections 5(b) and 6 of this general permit relieve a permittee of responsibility to implement actions required to protect the waters of the state and to comply with all conditions of this general permit.

**(h) *Plan Review Certification***

A copy of the Plan review certification made in accordance with Section 3(b)(9) shall be maintained with the Plan.

**(i) *Monitoring Requirements***

All permittees shall comply with the screening and monitoring requirements in this subsection.

**(1) Impaired Waters Outfall Investigation and Monitoring**

Regulated Small MS4s that discharge to impaired waters, as identified in Section 6(k) below, must create an inventory of all outfalls that discharge to impaired waters utilizing the list and mapping prepared pursuant to Section 6(a)(3)(C). The permittee shall then screen these outfalls for the pollutant identified as the pollutant of concern for the impairment in accordance with the following procedures. If the permittee has wet weather sampling data for an outfall pursuant to their sampling conducted under the 2004 MS4 permit or other appropriate wet weather sampling, they may use that data for their outfall screening and will not be required to screen that outfall under this general permit.

**(A) Outfall Screening for Phosphorus and Nitrogen**

The permittee shall screen outfalls from the MS4 identified in Section 6(a)(3)(C) that discharge to impaired waters for which phosphorus or nitrogen is the pollutant of concern. The permittee may take a sample at the outfall during any rain event that results in a discharge from the outfall in accordance with subsection (2), below. This screening shall be conducted for all such outfalls at least once during the term of this general permit in accordance with subparagraphs (i) and (ii) below.

**(i) Nitrogen Screening**

The permittee may use a portable nitrogen meter to take a field reading during the wet weather discharge. If the nitrogen reading exceeds the following threshold, the outfall shall be identified for follow-up investigation pursuant to subsection (D) below.

Total Nitrogen > 2.5 mg/l

(ii) Phosphorus Screening

The permittee may use a portable phosphorus meter to take a field reading during the wet weather discharge. If the phosphorus reading exceeds the following threshold, the outfall shall be identified for follow-up investigation pursuant to subsection (D) below.

Total Phosphorus > 0.3 mg/l

(B) Outfall Screening for Bacteria

The permittee shall screen outfalls from the MS4 that discharge to impaired waters for which bacteria is the pollutant of concern. The permittee may take a sample at the outfall during any rain event that results in a discharge from the outfall in accordance with subsection (2), below. The sample shall be analyzed for the following:

- E. coli and Total Coliform (col/100ml) (for discharges to Class AA, A and B surface waters)
- Fecal coliform and Enterococci (col/100ml) (for discharges to Class SA and SB surface waters)

The outfall shall be identified for follow-up investigation pursuant to subsection (D) below if any of the following conditions apply:

- E. coli >235 col/100ml for swimming areas and >410 col/100ml for all others, or
- Total Coliform >500 col/100ml, or
- Fecal coliform >31 col/100ml for Class SA and >260 col/100ml for Class SB, or
- Enterococci >104 col/100ml for swimming areas and >500 col/100ml for all others.

If the permittee can document that bacteria levels at an outfall that exceed these levels are solely the result of natural sources of bacteria, they are not required to conduct a follow-up investigation for that outfall. Natural sources may include wildlife or runoff from undeveloped wooded areas but do not include pet waste or waterfowl congregating at parks, ponds or other attractive nuisance areas.

(C) Outfall Screening for Other Pollutants of Concern

The permittee shall screen outfalls from the MS4 identified in Section 6(a)(3)(C) that discharge to impaired waters for which pollutants other than phosphorus, nitrogen or bacteria are listed as the pollutant of concern. The permittee shall take a sample at the outfall and in-stream immediately upstream or otherwise outside the influence of the outfall. The sample may be taken during any rain event that results in a discharge from the outfall in accordance with subsection (2), below. These samples shall be analyzed for turbidity. The permittee may use a field turbidity meter for these analyses. If the

outfall sample is more than 5 NTU greater than the in-stream sample, the outfall shall be identified for follow-up investigation pursuant to subsection (D) below.

(D) Follow-up Investigations

The permittee shall conduct follow-up investigations for the drainage areas associated with the outfalls identified as potentially contributing to an impairment as a result of the analyses conducted pursuant to subsections (A) – (C), above.

(i) Drainage Area Investigation

The permittee shall investigate activities within the drainage area contributing to each outfall identified for follow-up investigation pursuant to subsections (A) – (C), above. This investigation shall include factors potentially associated with the cause of the related stream impairment. Such factors may include: land use or development patterns; business or commercial activities; industrial activities; DCIA; natural contributors; potential MS4 maintenance issues; residential activities; and any other activities identified by the permittee as potentially contributing to the related impairment.

(ii) Control Measure Implementation

In each outfall drainage area identified for follow-up investigation pursuant to subsections (A) – (C), above, the permittee shall implement a BMP program focusing on the impaired waters provisions of each of the Control Measures in Section 6(a) of this general permit and on the findings of the drainage area investigation in subparagraph (i), above.

(iii) Prioritized Outfall Monitoring

Once outfall screening has been completed for at least half of the outfalls identified pursuant to this section, the permittee shall utilize the screening results to select six (6) of the highest contributors of any of the pollutants of concern. These six outfalls shall be sampled annually for the appropriate pollutant of concern in accordance with the schedule in subsection (E), below. If more than one pollutant of concern is identified for any monitored outfall (i.e. more than one impairment), all of these pollutants shall be monitored. If fewer than six outfalls were identified for follow-up investigation, all of these outfalls shall be monitored, but no more than six.

(E) Schedule

(i) Impaired Waters Discharge Mapping

Inventory and mapping of discharges to impaired waters prepared pursuant to this section shall be completed within two (2) years from the effective date of this general permit for existing 2004 MS4 permittees and within three (3) years from the effective date of this general permit for new MS4 permittees.

(ii) Outfall Screening

Outfall screening pursuant to subsections (A) – (C) shall begin within one (1) year of the effective date of this general permit for existing 2004 MS4 permittees and two (2) years for new MS4 permittees. At least fifty percent (50%) of these outfalls shall be screened no later than the end of the third year following the effective date of this general permit for existing 2004 MS4 permittees and no later than the end of the fourth year for new MS4 permittees. All such outfalls shall be screened by the end of the term of this general permit (5 years).

(iii) Follow-up Investigations

The permittee shall commence follow-up investigations identified pursuant to subsection (D), above, no later than two (2) years following the effective date of this general permit for existing 2004 MS4 permittees and three (3) years for new MS4 permittees.

(iv) Prioritized Outfall Monitoring

The permittee shall commence annual monitoring of the six outfalls identified pursuant to subsection (D)(iii), above, no later than beginning of the fourth year following the effective date of this general permit for existing 2004 MS4 permittees and no later than the beginning of the fifth year for new MS4 permittees.

(F) Reporting

The permittee shall report on the progress of their impaired waters investigation and monitoring program in their Annual Report beginning in the second year following the effective date of this general permit. The report shall include a listing of the outfalls screened during the year, the number of outfalls identified for follow-up investigation, the progress of drainage area investigations, a description of the control measure implementation for the different impairments, identification of the six outfalls to be monitored, and the results of the prioritized outfall monitoring.

(2) Stormwater Monitoring Procedures

(A) Wet Weather Outfall Monitoring

Samples shall be collected from discharges resulting from any rain storm that produces a discharge from the outfall(s) being monitored and that occurs at least 48 hours after any previous rain storm that produced a discharge from the outfall. Runoff events resulting from snow or ice melt alone cannot be used to meet these monitoring requirements. However, monitoring may be conducted during a rain event that may include insignificant amounts of snow or ice melt. Monitoring shall consist of a single grab sample taken within the first six (6) hours of discharge from the outfall.

(B) Rain Event Information

The following information shall be collected for the rain events during which monitoring is conducted:

- (i) The date, temperature, time of the start of the discharge, time of sampling, and magnitude (in inches) of the rain event sampled.
- (ii) The duration between the rain event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) rain event.

(C) Test Procedures

Unless otherwise specified in this permit, all pollutant parameters shall be tested according to methods prescribed in Title 40, CFR, Part 136 (1990). Laboratory analyses must be consistent with Connecticut Reasonable Confidence Protocols.

**(j) Reporting & Record Keeping Requirements**

- (1) The permittee shall keep records required by this permit for at least 5 years following its expiration or longer if requested by the Commissioner in writing. Such records, including the Stormwater Management Plan, shall be available to the public at reasonable times during regular business hours.

(2) Annual Report

By April 1 of the second year following the effective date of this general permit and annually thereafter by April 1, the permittee shall submit an Annual Report for the preceding calendar year electronically to the Department. The DEEP MS4 stormwater webpage ([www.ct.gov/deep/municipalstormwater](http://www.ct.gov/deep/municipalstormwater)) will provide guidance on Annual Report submittal. The Annual Report must be in Microsoft Word®, Adobe Acrobat® or other format acceptable to the Commissioner. In the event that electronic submission is not available or possible, please contact the Stormwater Section at (860) 424-3025.

The report shall include:

(A) The Annual Report review fee is \$375.00.

- (i) The fees for municipalities shall be half of those indicated above pursuant to section 22a-6(b) of the Connecticut General Statutes. State and Federal agencies shall pay the full fees specified in this subsection.

(B) A written discussion of the status of compliance with this general permit including, but not limited to:

- (i) a listing and brief description (including, where appropriate, the address or latitude and longitude) of all BMPs within each Minimum Control Measure;
- (ii) any reporting requirements enumerated in the controls measures sections 6(a) and its subsections;
- (iii) an implementation schedule for each BMP and an indication of whether or not the BMP or any portion of the BMP was scheduled to be implemented during the year covered by the Annual Report;

- (iv) the status of implementation for each BMP scheduled to be completely or partially implemented during the year covered by the Annual Report, including an assessment of the appropriateness of the BMP and progress towards achieving the implementation dates and measurable goals for that BMP;
  - (v) for any portion of a BMP implementation scheduled for the year covered by the Annual Report that was *not* completed as scheduled, a discussion of the circumstances and reasons for non-implementation, a modified implementation schedule, and, if necessary, a modified or alternate BMP to replace the BMP not implemented including the rationale for such modification or alternate BMP;
  - (vi) the overall status of each of the six categories of the Minimum Control Measures and a discussion of the effectiveness of each category in achieving its goals;
  - (vii) a discussion of any changes to personnel responsible for the Plan or BMP implementation;
  - (viii) a description of any new BMPs added to the Plan during the year including a description of the BMP, the reason or rationale for adding the BMP, the timeline for implementation, the party responsible for implementation and the measurable goal for the BMP and, where appropriate, the location for each BMP, including the address and latitude and longitude;
  - (ix) a discussion of the progress and status of the MS4's IDDE program (see Section 6(a)(3)) including outfall screening, mapping, drainage area evaluation and prioritization, illicit discharge tracking activities, IDDP field monitoring results, number and type of illicit discharges detected, and number of illicit discharges eliminated;
  - (x) a discussion of measures included in the Plan for the control of discharges to impaired waters (see Section 6(k) below) including a list of BMPs in the Minimum Control Measures that are targeted for such discharges, progress in implementing these measures, any evaluation of the effectiveness of these measures in meeting the goals of the Plan's impaired waters program, and any new or modified BMPs to be added to the Plan to improve its effectiveness;
  - (xi) a discussion of the MS4's stormwater monitoring program describing the status of monitoring for the year of the report, the overall status of the monitoring program, a summary of the findings, any significant observations regarding the results, any modifications to the Plan as a result of the monitoring results; and
  - (xii) a discussion of any planned BMP implementation in the coming year, including a discussion of any new or modified BMPs planned for future implementation.
- (C) All monitoring data collected and analyzed pursuant to Section 6(i).
- (D) All other information collected and analyzed, including data collected under the Illicit Discharge Detection Protocol (Appendix B), during the reporting period.

**(k) Discharges to Impaired Waters or Water bodies subject to a Pollutant Load Reduction within a TMDL**

MS4s that discharge to impaired waters (with or without a TMDL), waters for which nitrogen, phosphorus, bacteria or mercury are stormwater pollutants of concern, or waters which have pollution load reductions specified within a TMDL are required to meet certain criteria identified in this section and other sections of this general permit.

**(1) Existing Discharge to an Impaired Water without an Established TMDL**

If the permittee discharges to an impaired water without an established TMDL, the permittee must follow:

- (A) For waters for which Phosphorus, Nitrogen, Bacteria, or Mercury are stormwater pollutants of concern, the control measures in Section 6(a) and the screening and monitoring requirements of Section 6(i)(1),
- (B) For all other impairments, implement control measures to reduce the discharge of the pollutant(s) associated with the impairment and follow the requirements of Section 6(i)(1)(C), or as directed by the Commissioner.

**(2) Existing Discharge to a Water with an Established TMDL or with a Pollutant Load Reduction specified within the TMDL**

If the permittee discharges to a water included in a TMDL, the permittee must follow:

- (A) For waters for which Phosphorus, Nitrogen, Bacteria, or Mercury is a stormwater pollutant of concern, the control measures in Section 6(a) and the screening and monitoring requirements of Section 6(i)(1),
- (B) For all other discharges subject to a pollutant load reduction contained within a TMDLs, implement control measures to be consistent with the Waste Load Allocation in the specific TMDL. The permittee must also conduct the appropriate screening and monitoring in accordance with Section 6(i)(1).
- (C) The permittee shall implement BMPs as necessary to achieve the Waste Load Allocation, Load Allocation or Water Quality Targets specified within the TMDL (see Appendix D).

**(3) New Discharge to an Impaired Water without an Established TMDL**

If a new discharge to an impaired water without a TMDL is authorized pursuant to the conditions of Section 3(b)(7), the permittee must implement and maintain any control measures or conditions on the site that enabled such authorization, and modify such measures or conditions as necessary to maintain such authorization. The permittee must also maintain compliance with this subsection and Section 6(i) and maintain documentation of these measures and conditions in their Plan.

**(4) New Discharge to a Water with an Established TMDL or with a Pollutant Load Reduction specified within the TMDL**

If a new discharge to a water with a TMDL or with a pollutant load reduction established within the TMDL is authorized pursuant to the conditions of Section 3(b)(7), the permittee must follow the discharge requirements consistent with the applicable Wasteload Allocations, Load Allocations or Water Quality Targets for that TMDL. The permittee must also conduct the appropriate screening and monitoring in accordance with Section 6(i)(1) and maintain documentation of these measures and conditions in their Plan.

## **Section 7. Additional Requirements of this General Permit**

### ***(a) Regulations of Connecticut State Agencies Incorporated into this General Permit***

The permittee shall comply with all laws applicable to the subject discharges, including but not limited to, the following Regulations of Connecticut State Agencies which are hereby incorporated into this general permit, as if fully set forth herein:

(1) Section 22a-430-3:

Subsection (b) General - subparagraph (1)(D) and subdivisions (2), (3), (4) and (5)

Subsection (c) Inspection and Entry

Subsection (d) Effect of a Permit - subdivisions (1) and (4)

Subsection (e) Duty to Comply

Subsection (f) Proper Operation and Maintenance

Subsection (g) Sludge Disposal

Subsection (h) Duty to Mitigate

Subsection (i) Facility Modifications, Notification - subdivisions (1) and (4)

Subsection (j) Monitoring, Records and Report Requirements - subdivisions (1), (6), (7), (8), (9) and (11) (except subparagraphs (9) (A) (2) and (9) (c))

Subsection (k) Bypass

Subsection (m) Effluent Limitation Violations

Subsection (n) Enforcement

Subsection (p) Spill Prevention and Control

Subsection (q) Instrumentation, Alarms, Flow Recorders

Subsection (r) Equalization

(2) Section 22a-430-4

Subsection (t) Prohibitions

Subsection (p) Revocation, Denial, Modification

Appendices

### ***(b) Reliance on Registration***

In evaluating the permittee's registration, the Commissioner has relied on information provided by the permittee. If such information proves to be false or incomplete, the permittee's authorization may be suspended or revoked in accordance with law, and the Commissioner may take any other legal action provided by law.

### ***(c) Duty to Correct and Report Violations***

Upon learning of a violation of a condition of this general permit, a permittee shall immediately take all reasonable action to determine the cause of such violation, correct and mitigate the results of such violation and prevent further such violation. The permittee shall report in writing such violation and such corrective action to the Commissioner within five (5) days of the permittee's learning of such violation. Such information shall be filed in accordance with the certification requirements prescribed in Section 7(e) of this general permit.

**(d) *Duty to Provide Information***

If the Commissioner requests any information pertinent to the authorized activity or to compliance with this general permit or with the permittee's authorization under this general permit, the permittee shall provide such information within thirty (30) days of such request. Such information shall be filed in accordance with the certification requirements prescribed in Section 7(e) of this general permit.

**(e) *Certification of Documents***

Any document, including but not limited to any notice, information or report, which is submitted to the Commissioner under this general permit shall be signed by the chief elected official or principal executive officer of the municipality or institution, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

“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.”

**(f) *Date of Filing***

For purposes of this general permit, the date of filing with the Commissioner of any document is the date such document is received by the Commissioner. The word “day” as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day.

**(g) *False Statements***

Any false statement in any information submitted pursuant to this general permit may be punishable as a criminal offense, in accordance with Section 22a-6, under Section 53a-157b of the Connecticut General Statutes.

**(h) *Correction of Inaccuracies***

Within fifteen days after the date the permittee becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, the permittee shall correct the inaccurate or misleading information or supply the omitted

information in writing to the Commissioner. Such information shall be filed in accordance with the certification requirements prescribed in Section 7(e) of this general permit.

**(i) Other Applicable Law**

Nothing in this general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state and local law, including but not limited to the obligation to obtain any other authorizations required by such law.

**(j) Other Rights**

This general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal, state, and local laws pertinent to the property or activity affected by such general permit. In conducting any activity authorized hereunder, the permittee may not cause pollution, impairment, or destruction of the air, water, or other natural resources of this state. The issuance of this general permit shall not create any presumption that this general permit should or will be renewed.

**Section 8. Commissioner's Powers**

**(a) Abatement of Violations**

The Commissioner may take any action provided by law to abate a violation of this general permit, including but not limited to penalties of up to \$25,000 per violation per day under Chapter 446k of the Connecticut General Statutes, for such violation. The Commissioner may, by summary proceedings or otherwise and for any reason provided by law, including violation of this general permit, revoke a permittee's authorization hereunder in accordance with Sections 22a-3a-2 through 22a-3a-6, inclusive, of the Regulations of Connecticut State Agencies. Nothing herein shall be construed to affect any remedy available to the Commissioner by law.

**(b) General Permit Revocation, Suspension, or Modification**

The Commissioner may, for any reason provided by law, by summary proceedings or otherwise, revoke or suspend this general permit or modify to establish any appropriate conditions, schedules of compliance, or other provisions which may be necessary to protect human health or the environment.

**(c) Filing of an Individual Application**

If the Commissioner notifies a permittee in writing that such permittee shall obtain an individual permit under Section 22a-430 of the Connecticut General Statutes if he wishes to continue lawfully conducting the authorized activity, the permittee shall file an application for an individual permit within thirty (30) days of receiving the Commissioner's notice, or at such other date as the Commissioner may allow. While such application is pending before the Commissioner, the permittee shall comply with the terms and conditions of this general permit and the subject approval of registration. If the Commissioner issues an individual permit to a permittee under this general permit, this general permit, as it applies to such permittee, shall automatically terminate on the date such individual permit is issued. Nothing herein shall affect the Commissioner's power to revoke a permittee's authorization under this general permit at any time.

Issued Date: January 20, 2016

Michael Sullivan

Deputy Commissioner

This is a true and accurate copy of the general permit executed on January 20, 2016 by the Department of Energy and Environmental Protection.

## Appendix A – Small MS4 Municipalities

<b>Connecticut Municipalities with &gt;1,000 People in Urbanized Areas</b>		
Ansonia	Avon	Beacon Falls
Berlin	Bethany	Bethel
Bloomfield	Bolton	Branford
Bridgeport	Bristol	Brookfield
Brooklyn*	Burlington	Canton
Cheshire	Chester	Clinton
Cromwell	Danbury	Darien
Deep River	Derby	Durham
East Granby	East Hartford	East Haven
East Lyme	East Windsor	Easton
Ellington	Enfield	Essex
Fairfield	Farmington	Glastonbury
Granby	Greenwich	Griswold
Groton (City)	Groton (Town)	Guilford
Haddam*	Hamden	Hartford
Hebron	Killingly*	Ledyard
Lisbon	Madison	Manchester
Marlborough	Meriden	Middlebury
Mansfield*	Middlefield	Middletown
Milford	Monroe	Montville
Naugatuck	New Britain	New Canaan
New Fairfield	New Hartford*	New Haven
New London	New Milford	Newington
Newtown	North Branford	North Haven
Norwalk	Norwich	Old Lyme
Old Saybrook	Orange	Oxford
Plainfield*	Plainville	Plymouth
Portland	Prospect	Putnam
Redding	Ridgefield	Rocky Hill
Seymour	Shelton	Simsbury
Somers	South Windsor	Southbury
Southington	Sprague*	Stonington (Town & Borough)
Stratford	Suffield	Thomaston
Thompson	Tolland	Trumbull
Vernon	Wallingford	Waterbury
Waterford	Watertown	West Hartford
West Haven	Westbrook	Weston
Westport	Wethersfield	Wilton
Willington*	Windsor	Windsor Locks
Wolcott	Woodbridge	Woodbury

\* Designates New MS4 Permittees

## **Appendix B**

### **Illicit Discharge Detection and Elimination (IDDE) Program Protocol**

#### **(A) Illicit Discharge Detection and Elimination (IDDE) Program**

Objective: The permittee shall implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges.

During the development of the new components of the IDDE program required by this permit, permittees previously authorized by the permit issued January 9, 2004 must continue to implement their existing IDDE program required by that permit to detect and eliminate illicit discharges to their MS4.

##### **(1) Definitions and Prohibitions**

The permittee shall prohibit illicit discharges and sanitary sewer overflows (SSOs) to its MS4 and require removal of such discharges consistent with subsections (2) and (4), below.

An SSO is a discharge of untreated sanitary wastewater from a municipal sanitary sewer.

An illicit discharge is any discharge to an MS4 that is not composed entirely of stormwater, *except*:

- (a) discharges authorized under a separate NPDES permit that authorize a discharge to the MS4
- (b) non-stormwater discharges allowed by Section 3(a)(2) of this general permit

##### **(2) Elimination of Illicit Discharges**

- (a) Upon detection, the permittee shall eliminate illicit discharges as soon as possible and require the immediate cessation of such discharges upon confirmation of responsible parties in accordance with its enforceable legal authorities established pursuant to subsection (B) below. Where elimination of an illicit discharge within sixty (60) days of its confirmation is not possible, the permittee shall establish a schedule for its elimination not to exceed 180 days (six (6) months). The permittee shall immediately commence actions necessary for elimination. The permittee shall diligently pursue elimination of all illicit discharges. In the interim, the permittee shall take all reasonable and prudent measures to minimize the discharge of pollutants to its MS4.
- (b) The period between identification and elimination of an illicit discharge is not a grace period. Discharges from an MS4 that are mixed with an illicit discharge are not authorized by this general permit, are unlawful, and remain unlawful until eliminated.

##### **(3) Non-Stormwater Discharges**

The permittee may presume that the sources of non-stormwater listed in Section 3(a)(2) of this permit need not be addressed. However, if the permittee identifies any of these sources as significant contributors of pollutants to the MS4, then the permittee shall implement measures to control these sources so they are no longer significant contributors of pollutants, and/or eliminate them entirely, consistent with this appendix.

#### (4) Sanitary Sewer Overflows

- (a) Upon detection of an SSO the permittee shall eliminate it as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from its MS4 until elimination is completed.
- (b) The permittee shall identify all known locations where SSOs have discharged to the MS4 within the previous five years. This shall include SSOs resulting, during dry or wet weather, from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for communication of flow between the systems. Within 120 days of the effective date of the permit, the permittee shall develop an inventory of all identified SSOs indicating:
  - Location (approximate street crossing/address and receiving water, if any);
  - A clear statement of whether the discharge entered a surface water directly or entered the MS4;
  - Date(s) and time(s) of each known SSO occurrence (i.e. beginning and end of any known discharge);
  - Estimated volume(s) of the occurrence;
  - Description of the occurrence indicating known or suspected cause(s);
  - Mitigation and corrective measures completed with dates implemented; and
  - Mitigation and corrective measures planned with implementation schedules.

The permittee shall maintain the inventory as a part of the Plan and update the inventory annually.

- (c) The permittee shall provide written notice to the Commissioner within five (5) days of becoming aware of the SSO occurrence and shall include the information in the updated inventory. The notice shall contain all of the information listed in subsection (b), above.
- (d) The permittee shall include and update the SSO inventory in its annual report, including the status of mitigation and corrective measures implemented by the permittee to address each SSO identified pursuant to this appendix.
- (e) The period between identification and elimination of a discharge from the SSO to the MS4 is not a grace period. Discharges from an MS4 that are mixed with an SSO are not authorized by this general permit, are unlawful and remain unlawful until eliminated.

#### (5) Outfall/Interconnection Inventory

The permittee shall develop an outfall and interconnection inventory that identifies each outfall and interconnection discharging from the MS4, records its location and condition, and provides a framework for tracking inspections, screenings and other activities under the permittee's IDDE program pursuant to Section 6(a)(3) of this general permit.

- (a) An outfall means a point source as defined by 40 CFR § 122.2 and in Section 2 of this general permit as the point where the MS4 discharges to waters of the state. An outfall does not include open conveyances connecting two separate storm sewers or pipes, tunnels or other conveyances that connect segments of the same stream or other waters of the state and that are used to convey waters of the state. However, it is strongly recommended that a permittee inspect all

accessible portions of the system as part of this process. Culverts longer than a simple road crossing shall be included in the inventory unless the permittee can confirm that they are free of any connections and simply convey waters of the state.

An interconnection means the point where the permittee's MS4 discharges to another MS4 or other storm sewer system, through which the discharge is conveyed to waters of the state or to another storm sewer system and eventually to a water of the state.

- (b) The permittee shall complete its outfall and interconnection inventory in accordance with the timelines in Sections 6(a)(3)(C)(ii) and (iii) and shall include the progress of this inventory in each annual report. The inventory shall be updated annually to include data collected in connection with the dry weather screening under subsection (7(d)), below, and other relevant inspections conducted by the permittee.
- (c) The inventory shall include the following information: unique identifier, receiving water, date of most recent inspection, dimensions, shape, material (concrete, PVC), spatial location (latitude and longitude with a minimum accuracy of +/-30 feet, physical condition and indicators of potential non-stormwater discharges (including presence or evidence of suspect flow and sensory observations such as odor, color, turbidity, floatables, or oil sheen) as of the most recent inspection.

(6) System mapping

The permittee shall develop a revised and more detailed map than was required by the previous permit issued January 9, 2004. This revised map of the MS4 shall include, at a minimum, parts of the MS4 within the Urbanized Area and those catchment areas of the MS4 with either DCIA of greater than 11% or which discharge to impaired waters ("priority" areas). This map shall be completed within three (3) years of the effective date of this permit for existing 2004 MS4 permittees and by the end of the permit term for new 2004 MS4 permittees. This permit does not provide additional time for existing 2004 MS4 permittees for completion of the mapping that was required by the previous permit.

- (a) The mapping shall include, at a minimum, a depiction of the permittee's separate storm sewer system in the priority areas described above. The mapping is intended to facilitate the identification of key infrastructure and factors influencing proper system operation, and the potential for illicit sanitary sewer discharges. The map shall include the required infrastructure and water resources information as indicated in subparagraph (i), below, and shall include the information in subparagraph (ii), below, where available. The Commissioner also recommends the inclusion of additional items as indicated in subparagraph (iii), below.

(i) Required mapping elements

- Municipal separate storm sewer system
  - outfalls and receiving waters (required by previous permit)
  - pipes
  - open channel conveyances (swales, ditches, etc.)
  - catch basins
  - manholes
  - interconnections with other MS4s and other storm sewer systems

- municipally-owned stormwater treatment structures (e.g. detention and retention basins, infiltration systems, bioretention areas, water quality swales, gross particle separators, oil/water separators, or other proprietary systems)
- Catchment delineations as defined in Section 2 for use in priority rankings required in subsection (7)(c), below, or prioritizing BMP retrofits.
- Waterbodies identified by name and indication of all use impairments as identified on the most recent Integrated Water Quality Report pursuant to Clean Water Act section 303(d) and 305(b).

(ii) Elements required where available

- Municipal sanitary sewer system;
- Municipal combined sewer system, if applicable

(iii) Recommended elements

- Storm sewer material, size and age.
- Sanitary sewer system material, size and age
- Where a municipal sanitary sewer system exists, properties known or suspected to be served by a septic system, especially in high-density urban areas
- Area where the permittee's MS4 has received or could receive flow from septic system discharges (e.g. areas with poor soils, or high ground water elevations unsuitable for conventional subsurface disposal systems)
- Seasonal high water table elevations impacting sanitary alignments
- Topography
- Orthophotography
- Alignments, dates and representation of work completed (with legend) of past illicit discharge investigations (e.g. flow isolation, dye testing, CCTV)
- Locations of suspected, confirmed and corrected illicit discharges (with dates and flow estimates)

(b) The mapping may be produced by hand or through computer-aided methods (e.g. GIS). The required scale and detail of the map shall be appropriate to facilitate a rapid understanding of the system by the permittee and the Commissioner. In addition, the mapping shall serve as a planning tool for the implementation and phasing of the IDDE program and demonstration of the extent of complete and planned investigations and corrections. The permittee shall update the mapping as necessary to reflect newly discovered information and required corrections or modifications.

(c) The permittee shall report on the progress towards the completion of the map required by this permit in each annual report.

(7) Written Illicit Discharge Detection and Elimination Program

The IDDE program shall be recorded in a written document pursuant to Section 6(a)(3) of the general permit. The IDDE program shall include each of the elements described in subsections (a) – (h), below, unless the permittee provides a written explanation within the IDDE program as to why a particular element is not applicable to the permittee.

Notwithstanding the permittee's explanation, the Commissioner may at any time determine that a particular element is in fact applicable to the permittee and require the permittee to add it to the IDDE program. The written IDDE program shall be completed within one (1) year of the effective date of the permit for existing 2004 MS4 permittees and within two (2) years of the effective date of this general permit for new MS4 permittees. The permittee shall implement the IDDE program in accordance with the goals and milestones set forth in subsection (8), below.

(a) Legal Authority

The IDDE program shall provide that the permittee has adequate legal authority to accomplish the following tasks: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions. Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. For existing 2004 MS4 permittees, the ordinance, by-law, or other regulatory mechanism was a requirement of that permit and was required to be effective by January 8, 2009. These permittees shall update their IDDE legal authority within one year of the effective date of this permit. New MS4 permittees must establish this legal authority on or before two (2) years of the effective date of this permit. The written IDDE program shall include a reference or citation of the authority the permittee will use to implement all aspects of the IDDE program.

(b) Statement of IDDE Program Responsibilities

The permittee shall establish a written statement that clearly identifies responsibilities with regard to eliminating illicit discharges. The statement shall identify the lead permittee agency(ies), department(s) or personnel responsible for implementing the IDDE Program as well as any other agencies, departments or personnel that may have responsibilities for aspects of the program (e.g. state or local health officials responsible for overseeing septic system construction; sanitary sewer system staff; inspectional services for enforcing plumbing codes; town counsel responsibilities in enforcement actions, institutional support staff etc.). Where multiple departments, agencies or personnel have responsibilities with respect to the IDDE program specific areas of responsibility shall be defined and processes for coordination and data sharing shall be established and documented.

(c) Assessment and Priority Ranking of Catchments

The permittee shall assess and priority rank the catchments, delineated as required by subsection (6)(a), above, in terms of their potential to have illicit discharges and SSOs and the related public health significance. This ranking will determine the priority order for screening of outfalls and interconnections pursuant to subsection (d), below, catchment investigations for evidence of illicit discharges and SSOs pursuant to subsection (e), below, and provides the basis for determining permit milestones pursuant to subsection (8), below.

(i) The permittee shall classify each catchment into one of the following categories:

- Excluded catchments: Catchments with no potential for illicit discharges may be excluded from the IDDE program. This category is limited to roadway drainage in undeveloped areas with no dwellings and no sanitary sewers; drainage for athletic fields, parks or undeveloped green space and associated parking without services;

cross-country drainage alignments (that neither cross nor are in proximity to sanitary sewer alignments) through undeveloped land.

- Problem Catchments: Catchments with known or suspected contributions of illicit discharges based on existing information shall be designated as Problem Catchments. This shall include any catchments where previous outfall/interconnection screening indicates sewer input based on olfactory/visual evidence or sampling results (ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and bacteria levels greater than the water quality criteria applicable to the receiving water; or ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and detectable levels of chlorine). Problem Catchments need not be screened pursuant to subsection (d), below, and shall be scheduled for catchment investigation pursuant to subsection (e), below. Problem catchments shall be identified during the initial ranking of catchments and subsequent rankings shall not add any catchments to the Problem Catchment category.
  - High Priority Catchments: Catchments that have not been classified as Problem Catchments and that are discharging to an area of concern to public health due to proximity of public beaches, recreational areas, drinking water supplies or shellfish beds; catchments determined by the permittee as high priority based on outfall/interconnection screening under subsection (d), below, and catchment characteristics assessment under subparagraph (c)(ii), below. Any catchment where outfall/interconnection screening indicates sewer input based on olfactory/visual evidence or sampling results (ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and bacteria levels greater than the water quality criteria applicable to the receiving water; or ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and detectable levels of chlorine) shall be ranked at the top of the High Priority Catchments category and scheduled for catchment investigation pursuant to subsection (e), below.
  - Low Priority Catchments: Catchments determined by the permittee as low priority based on outfall/interconnection screening under subsection (d), below, and catchment characteristics assessment under subparagraph (c)(ii), below.
- (ii) The permittee shall priority rank catchments within each category (except for excluded catchments), based on screening factors. The permittee shall, at a minimum, consider the following screening factors:
- Past discharge complaints and reports.
  - Poor dry weather receiving water quality- the following guidelines are recommended to identify waters as having a high illicit discharge potential: exceeding water quality standards for bacteria; ammonia levels above 0.5 mg/l; surfactants levels greater than or equal to 0.25 mg/l.
  - Density of generating sites - Generating sites are those places, including institutional, municipal, commercial, or industrial sites, with a potential to generate pollutants that could contribute to illicit discharges. Examples of these sites include, but are not limited to, car dealers; car washes; gas stations; garden centers; and industrial manufacturing areas.
  - Age of surrounding development and infrastructure – Industrial areas greater than 40 years old and areas where the sanitary sewer system is more than 40 years old will probably have a high illicit discharge potential. Developments 20 years or younger will probably have a low illicit discharge potential.
  - Sewer conversion – Catchments that were once serviced by septic systems, but have been converted to sewer connections may have a high illicit discharge potential.

- Historic combined sewer systems – Catchments that were once serviced by a combined sewer system, but have been separated may have a high illicit discharge potential.
- Density of aging septic systems – Septic systems thirty years or older in residential land use areas are prone to have failures and may have a high illicit discharge potential. Consultation with local or state health officials is strongly encouraged.
- Culverted streams – any river or stream that is culverted for distances greater than a simple roadway crossing may have a high illicit discharge potential.

The permittee may also consider as priorities for evaluation for illicit discharges, although not necessarily indicators of the presence of illicit connections or discharges:

- Water bodies that receive a discharge from the MS4 and are drinking water supplies, shell fishing areas, beaches or waters used for contact recreation.
- Impaired waterbodies that receive a discharge from the MS4 or waters with approved TMDLs applicable to the permittee, where illicit discharges have the potential to contain the pollutant identified as the cause of the impairment.

The permittee may add additional relevant factors, including location-specific screening factors; if so, the permittee shall include the additional factors in its written IDDE program.

- (iii) An initial illicit discharge potential assessment and priority ranking based on existing information shall be completed within two (2) years from the effective date of the permit for existing 2004 MS4 permittees. New MS4 permittees shall complete this assessment and ranking by the end of the term of the permit. The permittee shall update its assessment and priority ranking annually based on catchment delineations pursuant to subsection (6), above, the results of screening pursuant to subsection (d), below, and other new relevant information. The permittee shall provide a listing of all catchments and the results of the ranking for each catchment in each annual report. For each catchment being investigated the permittee shall also provide in its annual report (1) a summary of evidence of known or suspected illicit discharges and SSOs; (2) completed, ongoing or planned corrective measures addressing confirmed illicit discharges and SSOs; and (3) a schedule for completing and verifying measures correcting the confirmed illicit discharges and SSOs.

(d) Outfall and Interconnection Screening and Sampling

The IDDE program shall include a written procedure for screening and sampling of outfalls and interconnections from the MS4 in dry and wet weather for evidence of illicit discharges and SSOs. This screening procedure shall be used for:

- baseline outfall and interconnection screening pursuant to subparagraph (iii), below (dry weather);
  - confirmatory screenings pursuant to subsection (f), below (dry and/or wet weather depending on catchment characteristics);
  - follow-up screening pursuant to subsection (g), below (dry and/or wet weather depending on catchment characteristics).
- (i) The screening and sampling procedure shall include procedures for sample collection, use of field kits, storage and conveyance of samples (including relevant hold times).

- (ii) If an outfall is inaccessible or submerged, the permittee shall proceed to the first accessible upstream manhole or structure for the observation and sampling and report the location with the screening results. If an interconnection is inaccessible or submerged, interconnection screening shall occur at the first accessible location within the permittee's system upgradient of the interconnection.
- (iii) Dry weather screening and sampling shall proceed only when no more than 0.1 inches of rainfall has occurred in the previous 24-hour period. When a flow is observed, a sample of the flow shall be collected and analyzed for the parameters listed in subparagraph (v), below. If no dry weather flow is observed, the permittee shall record the condition of the outfall and other relevant information. If no flow is observed, but evidence of dry weather flow exists, the permittee shall revisit the outfall during dry weather within one week of the initial observation, if practicable, to perform a second dry weather screening and sample any observed flow. The permittee shall identify in the annual report any other necessary follow-up actions to identify the source of any apparent intermittent flow not sampled.
- (iv) Wet weather screening and sampling, which shall be conducted at an outfall and/or within the catchment area in accordance with subparagraph (e)(ii)b., below, shall proceed during or after a storm event of sufficient depth or intensity to produce a stormwater discharge but only during the spring (March to June) when groundwater levels are relatively high. The permit does not require a minimum rainfall event prior to wet weather screening. However, the purpose of wet weather screening and sampling under the IDDE program is to identify illicit discharges that may activate or become evident during wet weather. Permittees may incorporate provisions that assist in targeting such discharges, including avoiding sampling during the initial period of discharge ("first flush") and/or identifying minimum storm event intensities likely to trigger sanitary sewer interconnections.
- (v) Samples shall be analyzed at a minimum for ammonia, chlorine, conductivity, salinity, *E. coli*. (freshwater receiving water) or enterococcus (saline or brackish receiving water), surfactants (such as MBAS), and temperature. All analyses with the exception of indicator bacteria can be performed with field test kits or field instrumentation. In addition, where the discharge is directly into a water quality limited water or a water subject to an approved TMDL, the sample shall be analyzed for the pollutants identified as the cause of the impairment. Sampling for pollutants of concern shall be conducted using the analytical methods found in 40 CFR §136, or alternative methods approved by the Commissioner in accordance with the procedures in 40 CFR §136. Other IDDE screening parameters shall be considered field screening and are not subject to 40 CFR Part 136 requirements.
- (vi) Catchments where there is relevant information indicating sewer input to the MS4 or sampling results where ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and bacteria levels greater than the water quality criteria applicable to the receiving water (or alternatively, ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and detectable levels of chlorine) shall be considered highly likely to contain illicit discharges from sanitary sources, and such catchments shall be ranked at the top of the High Priority Catchments category for investigation.

(e) Catchment Investigation Procedure

The permittee shall develop a written systematic procedure for catchment investigation that includes (1) a review of mapping and historic plans and records for the catchment; (2) a manhole inspection methodology; and (3) procedures to isolate and confirm sources of illicit discharges, as set forth below.

(i) For each catchment being investigated, the permittee shall review relevant mapping and historic plans and records to the extent available, including but not limited to plans related to the construction of the storm drain and of sanitary sewers in the catchment, prior work performed on the storm drain or sanitary sewers, local health official or other municipal data on septic system failures or required upgrades, and complaint records related to SSOs, sanitary sewer surcharges, and septic system breakouts. This review shall be used to identify areas within the catchment with higher potential for illicit connections and System Vulnerability Factors that indicate a risk of sanitary or septic system inputs to the MS4 under wet weather conditions. Consultation with local or state health officials is strongly encouraged. The permittee shall identify and record the presence of any of the following specific System Vulnerability Factors:

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages;
- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs;
- Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints;
- Common or twin-invert manholes serving storm and sanitary sewer alignments;
- Common trench construction serving both storm and sanitary sewer alignments;
- Crossings of storm and sanitary sewer alignments;
- Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
- Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
- Areas formerly served by combined sewer systems;
- Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas;
- Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance);
- History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance);

The permittee shall document the presence or absence of System Vulnerability Factors for each catchment, retain this documentation as part of its IDDE program, and report this

information in Annual Reports. Where System Vulnerability Factors are present, the catchment shall be investigated pursuant to subparagraph (ii)b., below.

- (ii) The manhole inspection methodology shall describe a storm drain network investigation that involves systematically and progressively observing, sampling (as required below) and evaluating key junction manholes in the MS4 to narrow the location of suspected illicit discharges or SSOs to an isolated pipe segment between two manholes, locate evidence of illicit discharges or SSOs that may not be evident at the outfall under all circumstances, and confirm or identify potential system vulnerability factors. The written catchment investigation procedures shall detail how the permittee will further isolate and identify potential illicit discharges as indicated by field kit detections equal to or greater than the threshold values listed in subparagraph (d)(vi), above. The permittee is responsible for selecting key junction manholes in a manner such that the distance between key junction manholes is appropriate to ensure a thorough assessment of its system.

The manhole inspection methodology may either start from the outfall and work up the system or start from the upper parts of the catchment and work down the system or be a combination of both practices. Either method must, at a minimum, include an investigation of each key junction manhole within the MS4, even where no evidence of an illicit discharge is observed at the outfall. The Catchment Investigation Procedure must describe the method the permittee will use.

- a. Dry weather investigation

Key junction manholes shall be opened and inspected for visual and olfactory evidence of illicit connections (e.g. excrement, toilet paper, gray filamentous bacterial growth, or sanitary products present). If flow is observed, the permittee shall sample the flow at a minimum for ammonia, chlorine and surfactants and can use field kits for these analyses. Additional indicator sampling may assist in determining potential sources (e.g. bacteria for sanitary flows, conductivity to detect tidal backwater, etc.). Where sampling results or visual or olfactory evidence indicate potential illicit discharges or SSOs, the area draining to the junction manhole shall be flagged for further investigation, through upstream junction manhole investigation and/or isolation and confirmation of sources pursuant to subsection (e)(ii), above.

Manhole inspections in all areas shall also include identifying System Vulnerability Factors including common (twin invert) manholes, directly piped connections between storm drains and sanitary sewer infrastructure, common weir walls, sanitary sewer underdrain connections and other structural vulnerabilities where sanitary discharges could enter the storm drain system during wet weather. Where present, such System Vulnerability Factors shall be investigated pursuant to paragraph (b) below.

- b. Wet weather investigation

Where the review of mapping and historic plans and records and/or manhole inspections indicate the presence of one or more System Vulnerability Factors as listed in subsection (e)(i), above, the permittee shall also inspect and sample under wet weather conditions to the extent necessary to determine whether wet weather-induced high flows in sanitary sewers or high groundwater in areas served by septic

systems result in discharges of sanitary flow to the MS4. The permittee shall conduct at least one wet weather screening and sampling at the outfall for any catchment where one or more System Vulnerability Factors are present. This sampling can be done upon completion of any dry weather investigation but must be completed before catchment investigation is marked as complete. All data shall be recorded and reported in each annual report.

(iii) Isolation and Source Verification Procedures

The permittee shall develop procedures to be used to isolate and confirm sources where manhole investigations or other physical evidence or screening has identified MS4 alignments to be influenced by illicit discharges or SSOs. These shall include isolation of the drainage area for implementation of more detailed investigations, inspection of additional manholes along the alignment to refine the location of potential contaminant sources, and methods such as caulk damns, targeted internal plumbing inspections, dye testing, video inspections, or smoke testing to isolate and confirm the sources.

(f) Removal and Confirmation

When the source of an illicit discharge or SSO is identified and confirmed, the permittee shall exercise its authority as necessary to require its removal pursuant to subsections (2) or (3), above. For each confirmed source the permittee shall include in the annual report the following information: the location of the discharge and its source(s), a description of the discharge, the method of discovery, date of discovery, date of elimination, mitigation or enforcement action; and estimate of the volume of flow removed.

Within one year of removal of all identified illicit discharge and SSO sources within a catchment area, confirmatory outfall or interconnection screening shall be conducted. The confirmatory screening shall be conducted in dry weather unless System Vulnerability Factors have been identified in the catchment pursuant to subsection (e)(i), above, in which case both dry weather and wet weather confirmatory screening shall be conducted. If confirmatory screening indicates evidence of additional illicit discharges, the catchment shall be scheduled for additional investigation. Confirmatory screening is not required in catchments where no illicit discharges or system vulnerability factors have been identified and no previous screening indicated suspicious flows.

(g) Follow-up Screening

Upon completion of catchment investigation pursuant to subsection (e), above, and illicit discharge removal and confirmation (if necessary) pursuant to subsection (f), above, the catchment outfall or interconnection shall be scheduled for follow-up screening within five years, or sooner as determined by the permittee based on the catchment's illicit discharge priority. Follow-up screening shall consist of dry weather screening and sampling except that wet weather screening and sampling shall also be required in catchments where wet weather screening was required by subparagraph (e)(ii)b., above.

(h) Illicit Discharge Prevention Procedures

The permittee shall develop and implement mechanisms and procedures designed to prevent illicit discharges and SSOs, such as: spill response and prevention procedures including identification of spills, reporting procedures, containment procedures, and documentation;

public awareness (this may be a part of the education program required by subsection (2), above); reporting (hotlines) and training of public employees involved in the IDDE program on ways to identify potential illicit discharges and SSOs.

(8) IDDE Program Implementation Goals and Milestones

The permittee shall implement the IDDE Program to meet the following goals and milestones:

- (a) The permittee shall complete dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except Excluded and Problem Catchments) no later than three years from the permit effective date for existing 2004 MS4 permittees and by the end of the permit term for new MS4 permittees. Existing 2004 MS4 permittees may rely on screening conducted under the previous permit issued January 9, 2004, pursuant to an enforcement action, or by the Commissioner to the extent that it meets the requirements of subsection (7), above. New MS4 permittees shall complete dry weather screening and sampling of every MS4 outfall and interconnection (except Excluded and Problem Catchments) no later than the end of the permit term. All data shall be reported in each annual report. Permittees that have conducted substantially equivalent monitoring to that required by subsection (7)(d), above, as part of an enforcement action can request an exemption from the requirements of subsection (7)(d), above, by submitting a written request to the Commissioner and retaining exemption approval from the Commissioner as part of the Plan. Until the permittee receives formal written approval of the exemption from subsection (7)(d), above, from the Commissioner the permittee remains subject to all requirements of subsection (7)(d), above.
- (b) Existing 2004 MS4 permittees shall begin investigations using the procedure developed in accordance with subsection (7)(d), above, within three months of investigation procedure finalization and no later than 15 months (1 year and 3 months) from the effective date of the permit. New MS4 permittees shall begin these investigations no later than 2 years and 3 months from the effective date of the permit. All permittees shall make continued progress each year toward meeting the milestones of subsection (8)(c), below. The permittee shall continue investigation, including Problem Catchments, using its existing IDDE program until such time as the procedure under subsection (7)(e), above, is developed.
- (c) The permittee shall implement the Catchment Investigation Procedure in every catchment of the MS4, even where dry weather screening does not indicate evidence of illicit discharges. The permittee shall begin implementation of the procedure in Problem Catchments and those catchments with the highest ranking in the Assessment of Priority Catchments pursuant to subsection (7)(c), above. Implementation of the Catchment Investigation Procedure shall comply with the following milestones. For purposes of these milestones, a catchment investigation is considered complete if a permittee has completed all elements of subsection (7)(e), above.
  - i. The permittee shall complete the Catchment Investigation Procedure in a minimum of 80% of the MS4 area served by Problem Catchments within three years of the permit effective date and 100% of Problem Catchments within five years of the permit effective date.
  - ii. The permittee shall complete the Catchment Investigation Procedure in every catchment of the MS4 where information indicates sewer input including outfall/interconnection screening that indicates sewer input based on olfactory/visual evidence or sampling results (ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and bacteria levels greater than the water

quality criteria applicable to the receiving water; or ammonia  $\geq 0.5$  mg/l, surfactants  $\geq 0.25$  mg/l, and detectable levels of chlorine) within five (5) years of the permit effective date.

- iii. The permittee shall complete the Catchment Investigation Procedure in 40% of the area served by all MS4 catchments within five (5) years of the permit effective date, and in 100% of the area served by all MS4 catchments within ten (10) years of the permit effective date. The permittee may count the area of low priority catchments only if the Catchment Investigation has been started in all other MS4 catchments. For the purposes of this section, catchment investigations that have been started include those where provisions of subsections (7)(e)(i) and (ii), above, have been completed.
- d. Where catchments do not contain junction manholes, the dry weather screening and sampling shall be considered as meeting the manhole inspection requirement. In these catchments, dry weather screenings that indicate potential presence of illicit discharges shall be further investigated pursuant to subsection (7)(e)(iii), above. Investigations in these catchments may be considered complete where dry weather screening reveals no flow; no evidence of illicit discharges or SSOs is indicated through sampling results or visual or olfactory means; and no wet weather System Vulnerability Factors are identified.
- e. The permittee shall track progress towards these milestones in each annual report.

#### (9) Indicators of IDDE Program Progress

The permittee shall define or describe indicators for tracking program success. At a minimum, indicators shall include measures that demonstrate efforts to locate illicit discharges, the number of SSOs and illicit discharges identified and removed, the percent and area in acres of the catchment area served by the MS4 evaluated using the catchment investigation procedure, and volume of sewage removed. The permittee shall evaluate and report the overall effectiveness of the program based on the tracking indicators in the annual report.

#### (10) Training

The permittee shall, at a minimum, annually provide training to employees involved in IDDE program about the program, including how to recognize illicit discharges and SSOs. The permittee shall report on the frequency and type of employee training in the annual report.

## Appendix C

### AQUIFER PROTECTION AREAS AND OTHER GROUNDWATER DRINKING SUPPLY AREAS

#### GUIDANCE INFORMATION

The Stormwater Management Plan (“the Plan”) should consider measures to reduce or mitigate potential impacts to both ground water (aquifers) and surface waters, taking into consideration both quantity and quality of the runoff. The emphasis should be to minimize, to the extent possible, changes between pre-development and post-development runoff rates and volumes. Coordination and discussion with the local water company is strongly encouraged.

The basic stormwater principals for Aquifer Protection Areas (and other groundwater drinking supply areas) are to prevent inadvertent pollution discharges/releases to the ground, while encouraging recharge of stormwater where it does not endanger groundwater quality. The permittee should review Sections 19-13-B32(h) and (i) of the Regulations of Connecticut State Agencies for additional information. Measures include:

- prevent illicit discharges to storm water, including fuel/chemical pollution releases to the ground;
- minimize DCIA and disconnect large areas of DCIA with natural or landscape areas;
- direct paved surface runoff to aboveground type land treatment structures – sheet flow, surface swales, depressed grass islands, detention/retention and infiltration basins, and wet basins. These provide an opportunity for volatilization of volatile organic compounds to the extent possible before the stormwater can infiltrate into the ground;
- provide necessary impervious pavement in high potential pollutant release areas. These “storm water hot spots” include certain land use types or storage and loading areas, fueling areas, intensive parking areas and roadways (see table below);
- only use subsurface recharge structures such as dry wells, galleries, or leaching trenches, to directly infiltrate clean runoff such as rooftops, or other clean surfaces. These structures do not adequately allow for attenuation of salts, solvents, fuels or other soluble compounds in groundwater that may be contained in runoff; and
- restrict pavement deicing chemicals, or use an environmentally suitable substitute such as sand only, or alternative de-icing agents such as calcium chloride or calcium magnesium.

**Infiltration** of stormwater should be **restricted** under the following site conditions:

- ***Land Uses or Activities with Potential for Higher Pollutant Loads:*** Infiltration of stormwater from these land uses or activities (refer to Table 7-5 below), also referred to as stormwater “hotspots,” can contaminate public and private groundwater supplies. Infiltration of stormwater from these land uses or activities may be allowed by the review authority with appropriate pretreatment. Pretreatment could consist of one or a combination of the primary or secondary treatment practices described in the Stormwater Quality Manual provided that the treatment practice is designed to remove the stormwater contaminants of concern.
- ***Subsurface Contamination:*** Infiltration of stormwater in areas with soil or groundwater contamination such as brownfield sites and urban redevelopment areas can mobilize contaminants.
- ***Groundwater Supply and Wellhead Areas:*** Infiltration of stormwater can potentially contaminate groundwater drinking water supplies in immediate public drinking water wellhead areas.

**Land Uses or Activities with Potential for Higher Pollutant Loads  
Table 7-5 of the 2004 Stormwater Quality Manual**

Land Use/Activities	
<ul style="list-style-type: none"> <li>• Industrial facilities subject to the DEEP Industrial Stormwater General Permit or the U.S. EPA National Pollution Discharge Elimination System (NPDES) Stormwater Permit Program</li> <li>• Vehicle salvage yards and recycling facilities</li> <li>• Vehicle fueling facilities (gas stations and other facilities with on-site vehicle fueling)</li> <li>• Vehicle service, maintenance, and equipment cleaning facilities</li> <li>• Fleet storage areas (cars, buses, trucks, public works)</li> <li>• Commercial parking lots with high intensity use (shopping malls, fast food restaurants, convenience stores, supermarkets, etc.)</li> <li>• Public works storage areas</li> </ul>	<ul style="list-style-type: none"> <li>• Road salt storage facilities (if exposed to rainfall)</li> <li>• Commercial nurseries</li> <li>• Flat metal rooftops of industrial facilities</li> <li>• Facilities with outdoor storage and loading/unloading of hazardous substances or materials, regardless of the primary land use of the facility or development</li> <li>• Facilities subject to chemical inventory reporting under Section 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA), if materials or containers are exposed to rainfall</li> <li>• Marinas (service and maintenance)</li> <li>• Other land uses and activities as designated by the review authority</li> </ul>

For further information regarding the design of stormwater collection systems in Aquifer Protection Areas, contact the Aquifer Protection Area Program at (860) 424-3020 or visit [www.ct.gov/deep/aquiferprotection](http://www.ct.gov/deep/aquiferprotection).

**Appendix D – Impaired Waters Guidance**

Surface Waters and Associated Stormwater Pollutants of Concern			
Stormwater Pollutant of Concern	Waterbodies included within a TMDL or Waters Included in Pollution Control Strategy Developed by CT DEEP	Impaired waters without a TMDL	
		Impaired Designated Use	Cause
Phosphorus	Any water body subject to a TMDL pollutant load reduction for Phosphorus or any waterbody included in the Interim Phosphorus Reduction Strategy for Connecticut Freshwater Non-tidal Receiving Rivers and Streams Technical Support Document (2014 or as amended) , including but not limited to the Bantam River Watershed, Blackberry River Watershed, Factory Brook Watershed, Farmington River Watershed, Fivemile River Watershed, Hockanum River Watershed, Housatonic River Main Stem Watershed, Limekiln Brook Watershed, Naugatuck River Watershed, Norwalk River Watershed, Pequabuck River Watershed Pomperaug River Watershed, Pootatuck River Watershed, Quinebaug River Watershed, Quinnipiac River Watershed, Shetucket River Watershed or Willimantic River Watershed	Habitat for Fish, Other Aquatic Life and Wildlife or Recreation	Phosphorus, Nutrient/ Eutrophication Biological Indicators, Dissolved Oxygen, Chlorophyll-a, or Excess Algal Growth
Nitrogen	Any water body subject to a TMDL pollutant load reduction for Nitrogen, including but not limited to the Long Island Sound TMDL for Dissolved Oxygen (entire state of CT)	Habitat for Marine Fish, Other Aquatic Life and Wildlife	Dissolved oxygen saturation, Nitrogen (Total), Nutrient / Eutrophication Biological Indicators, Oxygen, Dissolved
Bacteria	Any water body subject to a TMDL pollutant load reduction for Total Coliform, Escherichia coli, Fecal coliform or Enterococci	Recreation, Existing or Proposed Drinking Water, Commercial Shellfish Harvesting Where Authorized or Shellfish Harvesting for Direct Consumption Where Authorized	Total Coliform, Escherichia coli, Fecal coliform or Enterococci
Mercury	Any water body subject to a TMDL pollutant load reduction for Mercury (Entire state of Connecticut)	Habitat for Fish, Other Aquatic Life and Wildlife or Fish Consumption	Mercury

**Water Quality Targets for Waters for Which Bacteria is a Stormwater Pollutant of Concern**

<b>Water Quality Classification</b>	<b>E. Coli (Freshwater Rec) (cols/100mls)</b>	<b>Enterococci (Marine Rec) (cols/100mls)</b>	<b>Fecal Coliform (Marine Shellfishing) (cols/100mls)</b>	<b>Total Coliform (Freshwater Drinking) (cols/100mls)</b>
AA	Instantaneous designated swimming 235 / Non designated Swimming 410 / All other Recreation 576 Geomean 126	N/A	N/A	Monthly Moving average <100 / Single Sample Maximum 500
A	Same as AA	N/A	N/A	N/A
B	Same as AA	N/A	N/A	N/A
SA (Direct Consumption)	N/A	Instantaneous Designated Swimming 104 / Instantaneous All other Uses 500 / Geomean 35	Geomean 14 / 90% of samples <31	N/A
SB (Indirect Consumption)	N/A	Same as SA waters	Geomean 88 / 90% of samples < 260	N/A

## **Appendix B**

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### General Permit Registration Form



Connecticut Department of  
 Energy & Environmental Protection  
 Bureau of Materials Management & Compliance Assurance  
 Water Permitting & Enforcement Division

# General Permit Registration Form for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4)

CPPU USE ONLY
App #: _____
Doc #: _____
Check #: _____
<b>Program: Stormwater Permits</b>

Please complete this form in accordance with the general permit ([DEEP-WPED-GP-021](#)) in order to ensure the proper handling of your registration. Please print or type unless otherwise noted. The Registration fee must be submitted with this registration.

## Part I: Registration Type

<p>1. This registration is for a (check one):</p> <p><input type="checkbox"/> <i>New</i> general permit registration</p> <p><input checked="" type="checkbox"/> <i>Renewal</i> of an existing registration</p> <p><input type="checkbox"/> A <i>modification</i> of an existing registration</p>	<p>For renewals or modifications:</p> <p>Existing permit number: GSM <b>000056 &amp; GSM000113</b></p>
<b>2. Registrant Type (check one):</b>	<b>Fees</b>
<input type="checkbox"/> state institution/agency	\$625.00 [513]
<input type="checkbox"/> federal institution/agency	\$625.00 [513]
<input checked="" type="checkbox"/> municipality	\$312.50 [513]
3. Municipality name or Municipality where institution is located: <u>Stonington</u>	
<p>The registration will not be processed without the fee. The fee shall be non-refundable and shall be paid by check or money order to the Department of Energy and Environmental Protection or by such other method as the commissioner may allow.</p>	

## Part II: Registrant Information

1. Registrant (Name of Municipality or State or Federal Institution/Agency): Town of Stonington	
Mailing Address: 152 Elm Street	
City/Town: Stonington	State: CT      Zip Code: 06378-0352
Business Phone: 860-535-5055	ext.:
Contact Person: Scot Deledda	Phone: 860-535-5076      ext.
*E-mail: sdeledda@stonington-ct.gov	
<p>*By providing this e-mail address you are agreeing to receive official correspondence from DEEP, at this electronic address, concerning the subject registration. Please remember to check your security settings to be sure you can receive e-mails from "ct.gov" addresses. Also, please notify DEEP if your e-mail address changes.</p>	

**Part II: Registrant Information (continued)**

**2. Billing contact, if different than the registrant.**

Name:  
Mailing Address:  
City/Town: State: Zip Code:  
Business Phone: ext.:  
Contact Person: Phone: ext.  
\*E-mail:

**3. Primary contact for departmental correspondence and inquiries, if different than the registrant.**

Name: **Town of Stonington**  
Mailing Address: 152 Elm Street  
City/Town: Stonington State: CT Zip Code: 06378-0352  
Business Phone: 860-535-5055 ext.:  
Contact Person: Scot Deledda Phone: 860-535-5076 ext.  
\*E-mail: sdeledda@stonington-ct.gov

**4. Attorney or other representative, if applicable:**

Firm Name:  
Mailing Address:  
City/Town: State: Zip Code:  
Business Phone: ext.:  
Attorney: Phone: ext.  
\*E-mail:

**5. Facility Operator, if different than the registrant:**

Name:  
Mailing Address:  
City/Town: State: Zip Code:  
Business Phone: ext.:  
Contact Person: Phone: ext.  
\*E-mail:

**7. Engineer(s) or other consultant(s) employed or retained to assist in preparing the registration or in designing or constructing the activity.**  Check here if additional sheets are necessary, and label and attach them to this sheet.

Name: **Fuss & O'Neill**  
Mailing Address: 146 Hartford Road  
City/Town: Manchester State: CT Zip Code: 06040-5992  
Business Phone: 860-646-2469 ext.:  
Contact Person: Jennifer Cavanaugh Phone: 860-286-2469 ext. 4202  
\*E-mail: JCavanaugh@fando.com  
Service Provided: **Plan preparation and certification**

**8.**  Check here if there are adjacent towns or other entities with which implementation of the Stormwater Management Plan is coordinated for a portion of the subject MS4. If so, provide the names of such towns or entities: Borough of Stonington

**Part III: Watershed Information**

**Provide the following information about the receiving water(s) that receive stormwater runoff from your MS4:**

The watershed ID and impaired waters status can be found on the CT ECO website: <http://ctecoapp1.uconn.edu/advancedviewer/>

<p>a) To what receiving stream, watershed or waterbody does your MS4 discharge?</p>	<p>b) What is your watershed ID (freshwater) or 305b ID (estuary)?</p>	<p>c.1) Is the receiving water identified as an impaired water?</p>	<p><i>If you answered yes to question c.1, then answer the question below.</i>  c.2) Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?  For more information, go to <a href="http://www.ct.gov/deep/tmdl">www.ct.gov/deep/tmdl</a></p>	<p><i>If you answered yes to question c.2, then answer the question below.</i>  If TMDL, identify the impairment</p>
Mystic River	2106-00	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Whitford Pond	2104-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Mystic Harbor	2106-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Stonington Harbor	CT-E1_005	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Midshore	CT-E3_001	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Inner Wequetequock Cove	CT-E1_003	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Inner Wequetequock Cove	CT-E1_003	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Recreation – enterococcus (bacteria)
Wequetequock Pond	2101-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Wequetequock River	2101-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Wequetequock Cove	CT-E2_001	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Pawcatuck River	1000-00	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Recreation – E.coli (bacteria)
Quanaduck Cove	CT-E1_005	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Outer Quiambog Cove	CT-E2_003	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Wilcox Cove	CT-E2_004	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Copps Brook	2102-00	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

Check here if there are more receiving watersheds and attach an additional sheet listing them with the required information requested above.

**Part III: Watershed Information**

<p align="center"><b>Provide the following information about the receiving water(s) that receive stormwater runoff from your MS4:</b></p> <p align="center">The watershed ID and impaired waters status can be found on the CT ECO website: <a href="http://ctecoapp1.uconn.edu/advancedviewer/">http://ctecoapp1.uconn.edu/advancedviewer/</a></p>					
a) To what receiving stream, watershed or waterbody does your MS4 discharge?	b) What is your watershed ID (freshwater) or 305b ID (estuary)?	c.1) Is the receiving water identified as an impaired water?	<p><i>If you answered yes to question c.1, then answer the question below.</i></p> <p align="center">c.2)</p> <p><b>Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?</b></p> <p>For more information, go to <a href="http://www.ct.gov/deep/tmdl">www.ct.gov/deep/tmdl</a></p>	<p><i>If you answered yes to question c.2, then answer the question below.</i></p> <p><b>If TMDL, identify the impairment</b></p>	
Whitford Brook	2104-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Hyde Pond	2104-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Stony Pond	2104-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Lampheres Brook	2104-03	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Copps Brook Pond No. 1	2102-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Copps Brook Pond No. 2	2102-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Palmer Reservoir	2102-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Copps Brook Pond No. 3	2102-03	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
East Branch Copps Brook	2102-01	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Wheeler Brook	2101-01	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Anguilla Brook	2101-00	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Inner Quiambaug Cove	CT-E1_006	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)	
Stony Brook	2000-06	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Silvias Pond	2000-06	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Vagus Pond	2000-06	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO		
<input type="checkbox"/> Check here if there are more receiving watersheds and attach an additional sheet listing them with the required information requested above.					

**Part III: Watershed Information**

**Provide the following information about the receiving water(s) that receive stormwater runoff from your MS4:**

The watershed ID and impaired waters status can be found on the CT ECO website: <http://ctecoapp1.uconn.edu/advancedviewer/>

a) To what receiving stream, watershed or waterbody does your MS4 discharge?	b) What is your watershed ID (freshwater) or 305b ID (estuary)?	c.1) Is the receiving water identified as an impaired water?	If you answered yes to question c.1, then answer the question below.  c.2) Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?  For more information, go to <a href="http://www.ct.gov/deep/tmdl">www.ct.gov/deep/tmdl</a>	If you answered yes to question c.2, then answer the question below.  If TMDL, identify the impairment
Donahue Brook	2101-03	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Silvias Pond Lower	2000-04	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Silvias Brook Pond	2000-04	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Manor Inn Pond	2000-04	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Chesebro Ice Pond	2000-07	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Collins Road Pond	2000-07	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Pequotsepos Brook	2000-14	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Mouth Mystic River	CT-E2_005	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Midshore (Groton, Mystic River)	CT-E3_003	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Shellfish Consumption – fecal coliform (bacteria)
Pawcatuck River Estuary	CT-E1_001	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Aquatic Life – dissolved oxygen saturation, nutrient/eutrophication, biological indicators (phosphorus/nitrogen)
Pawcatuck River Estuary	CT-E1_002	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Recreation – Enterococcus; Commercial Shellfish Harvesting – fecal coliform (bacteria)
		<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	

## Part IV: MS4 Information

1. Name of Municipality or State or Federal Institution/Agency : **Town and Borough of Stonington**

Primary Address or Location Description: **152 Elm Street**

City/Town: **Stonington**

State: **CT**

Zip Code: **06378-0352**

2. **INDIAN LANDS:** Is there any activity included in, or proposed to be implemented by, your Stormwater Management Plan that will be located on federally recognized Indian lands?  Yes  No

3. **COASTAL BOUNDARY:** Is there any *new* activity included in, or proposed to be implemented by, your Stormwater Management Plan that will be located within the coastal boundary as delineated on DEEP approved coastal boundary maps?

Yes  No

If yes, and this registration is for a new authorization or a modification of an existing authorization where the physical footprint of the subject activity is modified, your Stormwater Management Plan must contain provisions to assure compliance with [Connecticut's Coastal Management Act \(CCMA\)](#), sections 22a-90 through 22a-112 of the Connecticut General Statutes (CGS), as amended.

Information on the coastal boundary is available at [www.cteco.uconn.edu/map\\_catalog.asp](http://www.cteco.uconn.edu/map_catalog.asp) (Select the town and then select coastal boundary. If the town is not within the coastal boundary you will not be able to select the coastal boundary map.) or the local town hall or on the "Coastal Boundary Map" available at DEEP Maps and Publications (860-424-3555).

4. **ENDANGERED OR THREATENED SPECIES:** According to the most current "State and Federal Listed Species and Natural Communities Map", is there any *new* activity included in, or proposed to be implemented by, your Stormwater Management Plan, that will be located within an area identified as a habitat for endangered, threatened or special concern species?

Yes  No Date of Map:

If yes, your Stormwater Management Plan must contain provisions to assure compliance with the [State Endangered Species Act CGS section 26-310\(a\)](#).

For more information visit the DEEP website at [www.ct.gov/deep/nddbrequest](http://www.ct.gov/deep/nddbrequest) or call the NDDB at 860-424-3011.

5. **AQUIFER PROTECTION AREAS:** Is the MS4 or any portion of the MS4 located within a mapped Level A or Level B [Aquifer Protection Area](#), as defined in CGS section 22a-354a through 22a-354bb?

Yes  No

If yes, your Stormwater Management Plan must contain provisions to assure compliance with the Aquifer Protection Regulations (section 22a-354i(1)-(10) of the Regulations of Connecticut State Agencies).

For more information on the Aquifer Protection Area Program visit the DEEP website at [www.ct.gov/deep/aquiferprotection](http://www.ct.gov/deep/aquiferprotection) or contact the program at 860-424-3020.

6. **CONSERVATION OR PRESERVATION RESTRICTION:** Is there any *new* activity included in, or proposed to be implemented by, your Stormwater Management Plan that will be located within a conservation or preservation restriction area?

Yes  No

If Yes, your Stormwater Management Plan must contain provisions to assure compliance with CGS section 47-42d where proof of written notice of this registration to the holder of such restriction or a letter from the holder of such restriction verifying that this registration is in compliance with the terms of the restriction, must be-kept on site.

#### Part IV: MS4 Information (Continued)

7. **STATE AND FEDERAL HISTORIC PRESERVATION:** Is there any activity included in, or proposed to be implemented by, your Stormwater Management Plan that may result in impacts or potential effects on historic properties?  Yes  No

If Yes, your Stormwater Management Plan must contain provisions to assure consistency with the [state Historic Preservation statutes, regulations, and policies](#) including identification of any potential impacts on property listed or eligible for listing on the Connecticut Register of Historic Places. A review conducted for an Army Corps of Engineers Section 404 wetland permit would meet this qualification.

8. **DISCHARGE TO IMPAIRED WATERS:** Is there any activity included in, or proposed to be implemented by, your Stormwater Management Plan that will result in a **new or increased** discharge from the MS4 to waters listed as impaired in the most recent [Connecticut Integrated Water Quality Report](#) pursuant to Clean Water Act section 303(d) and 305(b)?

Yes  No

If Yes, your Stormwater Management Plan must demonstrate that there is no net increase in loading to the impaired water of the pollutant for which the waterbody is impaired.

9. **DISCHARGE TO HIGH QUALITY WATERS:** Any **new or increased** stormwater discharge to high quality waters shall be discharged in accordance with the Connecticut Anti-Degradation Implementation Policy in the [Water Quality Standards](#).

#### Part V: Supporting Documentation

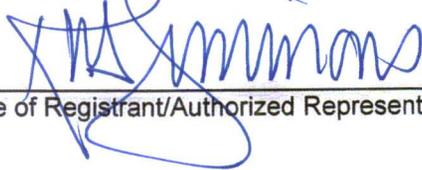
Check the applicable box below for each attachment being submitted with this registration form. When submitting any supporting documents, please label the documents as indicated in this part (e.g., Attachment A, etc.) and be sure to include the registrant's name as indicated on this registration form.

- Attachment A: Stormwater Management Plan: **(REQUIRED for ALL registrants)**  
 Provide URL: <http://www.stonington-ct.gov/engineering/pages/phase-2-stormwater-permitting>  
**or**  
 submit an electronic copy to the web address indicated at the end of this form.
- Attachment B: An 8 1/2" X 11" copy of the relevant portion or a full-sized original of a USGS Quadrangle Map indicating the exact location of the MS4/Institution/Agency. Indicate the quadrangle name on the map. **(REQUIRED for ALL registrants)**
- Attachment C: Best Management Practices Table (attached to this form) **(REQUIRED for ALL registrants)**

**Part VI: Registrant Certification**

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered insufficient unless *all* required signatures are provided **and are the proper signatory authority**. (If the registrant is the preparer, please mark N/A in the spaces provided for the preparer.)

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), submitted to the commissioner by Robert Ruhl for an activity located at or within Town of Stonington, and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b)(8)(B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of section 22a-430b of Connecticut General Statutes. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."



03/30/2017.

Signature of Registrant/Authorized Representative

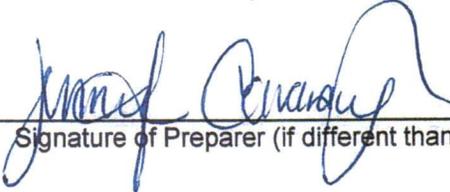
Date

Robert Ruhl *Simmons*

Town First Selectman

Printed Name of Registrant/Authorized Representative

Title (if applicable)



03/30/2017

Signature of Preparer (if different than above)

Date

Jennifer Cavanaugh

Project Manager

Printed Name of Preparer

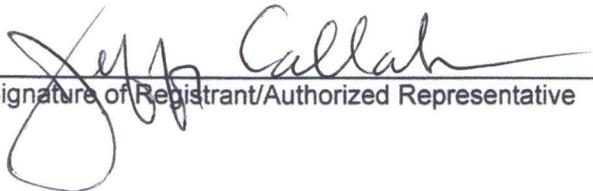
Title (if applicable)

Check here if additional signatures are required. If so, please reproduce this sheet and attach signed copies to this sheet. Signatures of any person preparing any report or parts thereof required in this registration (i.e., professional engineers, surveyors, soil scientists, consultants, etc.) must be included.

**Part VI: Registrant Certification**

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered insufficient unless *all* required signatures are provided **and are the proper signatory authority**. (If the registrant is the preparer, please mark N/A in the spaces provided for the preparer.)

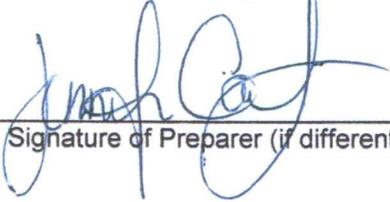
"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), submitted to the commissioner by Jeffrey Callahan for an activity located at or within Borough of Stonington, and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b)(8)(B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of section 22a-430b of Connecticut General Statutes. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

  
 \_\_\_\_\_  
 Signature of Registrant/Authorized Representative

03/30/2017  
 \_\_\_\_\_  
 Date

Jeffrey Callahan  
 \_\_\_\_\_  
 Printed Name of Registrant/Authorized Representative

Warden  
 \_\_\_\_\_  
 Title (if applicable)

  
 \_\_\_\_\_  
 Signature of Preparer (if different than above)

03/30/2017  
 \_\_\_\_\_  
 Date

Jennifer Cavanaugh  
 \_\_\_\_\_  
 Printed Name of Preparer

Project Manager  
 \_\_\_\_\_  
 Title (if applicable)

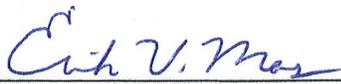
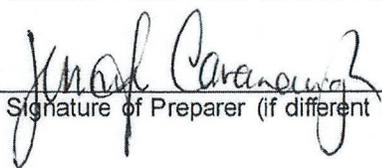
Check here if additional signatures are required. If so, please reproduce this sheet and attach signed copies to this sheet. Signatures of any person preparing any report or parts thereof required in this registration (i.e., professional engineers, surveyors, soil scientists, consultants, etc.) must be included.

**Part VII: Qualified Professional Certification**

The qualified professional, as defined in the subject general permit, must sign this part. A registration will be considered insufficient unless *all* required signatures are provided **and are the proper signatory authority.**

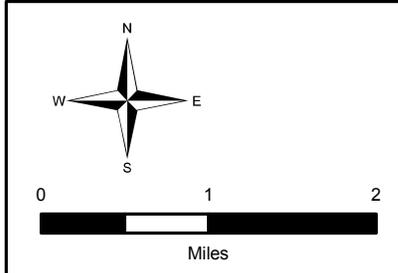
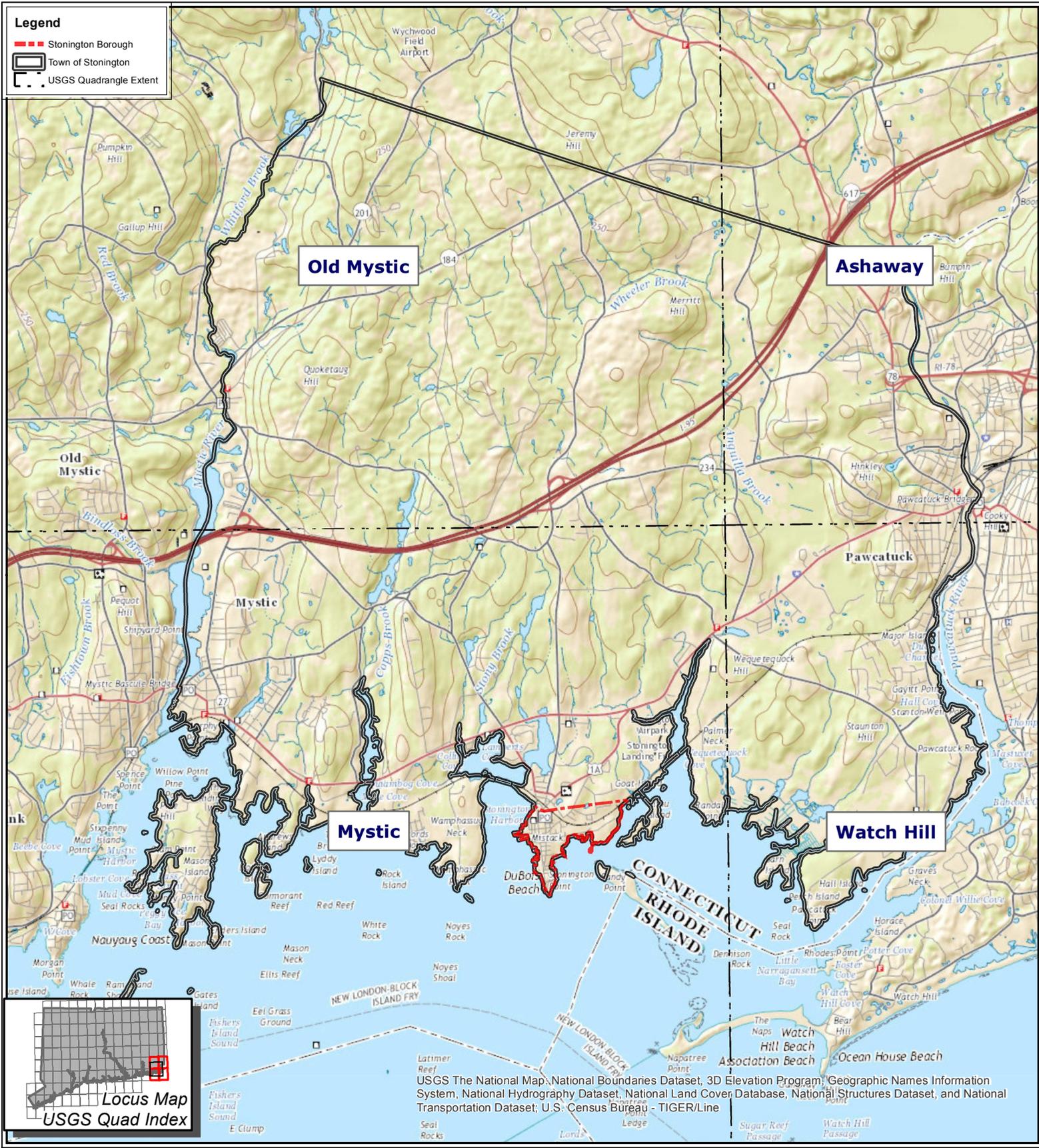
"I hereby certify that I am a qualified professional engineer, as defined in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems. I am making this certification in connection with a registration under such general permit, submitted to the Commissioner by Erik V. Mas, PE for an activity located at or within Town of Stonington. I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(9)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3(b)(9)(A) of such general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Section 3(b)(9)(B) of this general permit. I understand that this certification is part of a registration submitted in accordance with section 22a-430b of Connecticut General Statutes and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Nothing in this section shall be construed to authorize a professional engineer or a landscape architect to engage in any profession or occupation requiring a license under any other provision of the general statutes without such license.

	03/30/2017
Signature of Qualified Professional	Date
Erik V. Mas, PE	Vice President
Printed Name of Qualified Professional	Title (if applicable)
20615	
Qualified Professional License Number	
	03/30/2017
Signature of Preparer (if different than above)	Date
Jennifer Cavanaugh	Project Manager
Printed Name of Preparer	Title (if applicable)
<input type="checkbox"/> Check here if additional signatures are required. If so, please reproduce this sheet and attach signed copies to this sheet. Signatures of any person preparing any report or parts thereof required in this registration (i.e., professional engineers, surveyors, soil scientists, consultants, etc.) must be included.	

All completed and supporting materials (along with the fee) are to be submitted to:  
 CENTRAL PERMIT PROCESSING UNIT  
 DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION  
 79 ELM STREET  
 HARTFORD, CT 06106-5127

An electronic copy must also be sent to [DEEP.StormwaterStaff@ct.gov](mailto:DEEP.StormwaterStaff@ct.gov)



Note: The Municipal Separate Storm Sewer System (MS4) is located throughout the community, with the exception of areas served by private drainage systems, state or federal

**USGS Quad Name**

Labels indicate USGS Quadrangle Names

**USGS QUADRANGLE MAP**

STONINGTON CONNECTICUT

**FUSS & O'NEILL**  
 146 Hartford Road  
 Manchester, CT 06040  
 860.646.2469 | www.fando.com

PROJ. No.  
 DATE: FEBRUARY 2017

**FIGURE A**



	<b>MCM(2) Public Involvement/Participation</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
2-1 Cont.	Comply with public notice requirements for the Stormwater Management Plan and Annual Reports	Town Engineer, Borough Warden	D. Make final Annual Report available electronically on the Town/Borough website(s).	Annually
2-2	Work with area organizations and groups	Town First Selectman/Board of Selectman, Board of Warden & Burgesses  Stormwater Task Force	A. Reconvene/reinstate Stonington Stormwater Task Force  B. Conduct regular meetings of the Stonington Stormwater Task Force  C. Work with local organizations (CUSH, Stonington Public Schools, etc.) to identify public involvement opportunities and assist with plan implementation.	7/2017
	<b>MCM(3) Illicit Discharge Detection &amp; Elimination</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
3-1	Develop written IDDE program	Engineering, Borough Warden	A. Prepare joint IDDE Plan for the Town and Borough	6/2018
3-2	Develop list and maps of all MS4 stormwater outfalls in urbanized and priority areas	Engineering, Planning	A. Update GIS storm system mapping to include required elements listed on page 24 of 50 and on pages 3 & 4 in Appendix B of the General Permit, including catchment delineations.  B. Develop a list (database or spreadsheet) of stormwater outfalls in priority areas.	6/2019
3-3	Develop citizen reporting program	Engineering, Borough Warden	A. Establish a citizen reporting 'hotline' and advertise it on the Town and Borough websites and in municipal offices.	6/2018
3-4	Establish legal authority to prohibit illicit discharges	Planning	A. Review Town's existing Illicit Discharge and Illegal Connection Ordinance and revise, as necessary.	6/2018
3-5	Develop record keeping system for IDDE tracking	Engineering, Borough Warden	A. Develop IDDE tracking recordkeeping system.	6/2018
3-6	Address IDDE in areas with pollutants of concern	Sanitarian, Engineering	A. Identify areas with high potential for septic system failure.	6/2018
3-7	Conduct SSO inventory	WPCA, Sanitation Department	A. Review Town and Borough records to identify any known locations where SSOs have discharged to the MS4 within the previous 5 years.	10/2017

<b>MCM(3) Illicit Discharge Detection &amp; Elimination</b>		<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
3-8	Assess and prepare a priority ranking of catchments	Engineering, Public Works	A. Classify each catchment within priority areas into an excluded, problem, high priority, or low priority catchment.  B. Rank catchments within each category (except excluded catchments) based on screening factors found on page 6 & 7 in Appendix B of the General Permit.	6/2019
3-9	Conduct outfall and interconnection screening and sampling	Engineering, Public Works	A. Conduct dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except for excluded and Problem Catchments)	6/2019
3-10	Conduct catchment investigations and remove illicit discharges	Engineering, Public Works	A. Evaluate catchments for System Vulnerability Factors and begin catchment investigations.  B. Where System Vulnerability Factors are present, conduct manhole inspections. Isolate and verify sources. Remove identified illicit discharges and conduct confirmatory outfall screening. Schedule for completion: a. 80% Problem Catchments b. 100% Problem Catchments c. Indication of Sewer Inputs d. 40% of Area Served by All Catchments	6/2018      6/2020 6/2022 6/2022 6/2022
<b>MCM(4) Construction Site Runoff Control</b>		<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
4-1	Implement, upgrade (as necessary) and enforce land use regs or other legal authority to meet requirements of MS4 general permit	Town & Borough Land Use Agencies	A. Review and update, as necessary, existing land use regulations and implementation policies for compliance with the MS4 General Permit construction site stormwater runoff control requirements.	9/2019
4-2	Develop/implement plan for interdepartmental coordination in site plan review and approval	Town & Borough Land Use Agencies	A. Implement interdepartmental coordination procedures as described in Section 5.2 of this Plan.	7/2017
4-3	Review site plans for stormwater quality concerns	Town & Borough Land Use Agencies	A. Complete site plan reviews for all projects subject to the land use regulations listed in item 4-1.	7/2017

<b>MCM(4) Construction Site Runoff Control</b>		<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
4-4	Conduct site inspections	Town & Borough Land Use Agencies	A. Conduct inspections and enforcement to assess and ensure the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures.	7/2017
4-5	Implement procedure to allow public comment on site development	Town & Borough Land Use Agencies	A. Post notices of Stonington's 'hotline' for stormwater related comments on the municipal stormwater websites.	7/2017
4-6	Implement procedure to notify developers about DEEP construction stormwater permit	Town & Borough Land Use Agencies	A. Continue to inform developers/contractors of their potential obligation to register under the DEEP construction general permit and to provide a copy of the Storm Water Pollution Control Plan to Stonington upon request.	7/2017
<b>MCM(5) Post-Construction Stormwater Management</b>		<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
5-1	Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Town Planning & Zoning Commission, Borough Planning & Zoning Commission, Engineering	A. Review and update, as necessary, existing land use regulations and implementation policies (including Technical Standards) for compliance with the General Permit post-construction stormwater management requirements.	6/2021
5-2	Enforce LID/runoff reduction requirements for development and redevelopment projects	Town Planning & Zoning Commission, Borough Planning & Zoning Commission, Engineering	A. Review and update, as necessary, current regulations to identify, reduce, or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices. B. Complete plan reviews and ensure compliance for all projects subject to the legal authority and/or guidelines listed in item 5-1.	6/2021
5-3	Implement long-term maintenance plan for stormwater basins and treatment structures	Town Planning & Zoning Commission, Borough Planning & Zoning Commission, Engineering	A. Develop a long-term maintenance plan for retention/detention basins and stormwater treatment structures.	6/2018
		Engineering, Public Works, Planning Department	B. Implement maintenance plan including annual inspection of retention / detention basins and stormwater treatment structures and removal of accumulated sediment and pollutants.	6/2019

<b>MCM(5) Post-Construction Stormwater Management</b>		<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
5-4	DCIA mapping	Engineering, Planning	A. Calculate the Directly Connected Impervious Area (DCIA) of outfall catchment areas using guidance provided by DEEP & UConn CLEAR.  B. Revise DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA.	6/2020  6/2021
5-5	Address post-construction issues in areas with pollutants of concern	Engineering, Public Works, Planning	A. Address erosion and sediment problems noted during inspections conducted under Item 5-3 through the retrofit program developed under Item 6-7.	6/2020
<b>MCM(6) Pollution Prevention/Good Housekeeping</b>		<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
6-1	Develop/implement formal employee training program	Town Public Works, Borough Highway Department	A. Implement joint training program for Town and Borough employees, building on the Town's current program (see topics listed in Section 7.2).	7/2017
6-2	Implement MS4 property and operations maintenance	Town Public Works, Borough Highway Department  Public Works, Stormwater Task Force  Town Public Works, Borough Highway Department  Town Public Works, Borough Highway Department  Town Public Works, Borough Highway Department  Town Public Works, Borough Highway Department	A. Implement turf/fertilizer management BMPs for parks and open space  B. Implement pet waste education program and install additional signage, baggies, and disposal receptacles, as needed, in areas where pet walking is common  C. Implement waterfowl management BMPs in targeted areas  D. Evaluate municipal buildings and facilities for spill prevention and pollution prevention practices and implement additional BMPs as necessary  E. Evaluate and modify, as necessary, municipal vehicle and equipment parking, fueling, and maintenance practices  F. Continue current leaf management program	7/2017

	<b>MCM(6) Pollution Prevention/Good Housekeeping</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
6-3	Implement coordination with interconnected MS4s	Town Public Works, Borough Highway Department	A. Coordinate with neighboring municipalities, institutions, and DOT regarding stormwater management program activities associated with the adjacent MS4s.	7/2017
6-4	Develop/implement program to control other sources of pollutants to the MS4	Stormwater Task Force	A. Control through IDDE program, water quality monitoring, the Town's Illicit Discharge and Illegal Connection Ordinance, and targeted education and outreach to commercial, industrial, municipal, institutional facilities owners/operators (see BMP 1-1).	7/2017
6-5	Evaluate additional measures for discharges to impaired waters	Town Public Works, Borough Highway Department	A. Implement the measures and procedures described in Section 7.2 including those measures to address stormwater pollutants of concern	7/2017
6-6	Track projects that disconnect DCIA	Town Engineering, Planning	A. Annually track total acreage of DCIA that is disconnected as a result of redevelopment or retrofits (see BMPs 5-4 and 6-7)	7/2017
6-7	Develop/implement infrastructure repair/rehab program	Engineering, Public Works	A. Repair, rehabilitate, or retrofit MS4 infrastructure (e.g., conveyances, structures, outfalls) as needed in a timely manner.	7/2017
6-8	Develop/implement plan to identify/prioritize retrofit projects	Engineering, Stormwater Task Force	A. Develop retrofit plan and list of priority sites  B. Disconnect 1% per year of Stonington's DCIA from the MS4	6/2020  6/2021
6-9	Develop/implement street sweeping program	Town Public Works, Borough Highway Department	A. Continue to inspect and sweep all municipally-owned or -operated streets and parking lots Schedule for completion: a. Priority Areas – annually in spring following the cessation of winter maintenance activities (i.e., sanding, deicing, etc. b. Outside Priority Areas (inc. rural uncurbed streets and parking lots with no catch basins) –in spring or develop and implement an inspection, documentation, and targeted sweeping plan	7/2017

	<b>MCM(6) Pollution Prevention/Good Housekeeping</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
6-9 Cont.	Develop/implement street sweeping program	Town Public Works, Engineering, Borough Highway Departmen	B. Evaluate runoff reduction measures such as permeable pavement or other measures to promote sheet flow of stormwater for all new and redeveloped municipal parking lots	7/2017
6-10	Develop/implement catch basin cleaning program	Town Public Works, Borough Highway Department	A. Inspect and clean catch basins as necessary Inspection Schedule: a. 100% within Priority Areas b. 100% of MS4 B. Develop a plan for optimizing catch basin cleaning (i.e., reduced frequency in certain areas) based on inspection findings, such that no catch basin is more than 50% full	6/2020 6/2022 6/2019
6-11	Develop/implement snow management practices	Town Public Works, Borough Highway Department	A. Implement practices for deicing material management and snow and ice control	7/2017

	<b>Monitoring Requirements</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Month/Year of Implementation</b>
S-1	Outfall screening	Town Public Works, Borough Highway Department	A. Screen all outfalls discharging to impaired waters once during the permit term.	7/2017
S-2	Inventory and mapping of discharges to impaired waters	Engineering	A. Create an inventory of all outfalls discharging to impaired waters using the mapping developed in BMP 3-3.	6/2019
S-3	Follow-up investigations of drainage areas	Engineering	A. Investigate activities within the drainage area potentially contributing to the related stream impairment.  B. Implement a BMP program focusing on the impaired waters	6/2019
S-4	Annual monitoring of priority outfalls	Engineering	A. Select six (6) of the highest contributors of any pollutant of concern  B. Conduct prioritized outfall monitoring for the appropriate pollutant of concern	7/2021

## Appendix C

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### Stormwater Management Plan Summary Tables (by MCM and Chronologically by Implementation Date)

**TABLE C-1**  
**Minimum Control Measure #1 – Public Education and Outreach**

Stormwater Management Plan Summary  
 Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
1-1	Implement public education program	A. Update and maintain Town and Borough websites to include educational materials identified in <b>Table 3</b> and/or available on the CLEAR and CT NEMO MS4 Guide website, CUSH website, or listed in the Connecticut Nonpoint Source Management Program Plan.	Number of clicks on the stormwater websites	Stormwater Task Force	X	X	X	X	X
		B. Distribute educational materials.	Types, sources, number of, and methods by which materials disseminated	Stormwater Task Force	X	X	X	X	X
1-2	Address education/outreach for pollutants of concern	A. Select educational materials appropriate for impaired waters and stormwater pollutants of concern (see <b>Tables 2 and 3</b> ).	Types, sources, number of, and methods by which materials disseminated	Stormwater Task Force	X				

**TABLE C-2**  
**Minimum Control Measure #2 – Public Involvement/Participation**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
2-1	<b>Comply with public notice requirements<sup>3</sup> of the Stormwater Management Plan and Annual Reports</b>	A. Make draft Stormwater Management Plan available electronically on the Town/Borough website(s) and paper copies available in Town and Borough office by April 1, 2017. Publish notice of availability on website(s) or local newspaper.	Copy of website notice of availability and draft Stormwater Management Plan	Town Engineer, Borough Warden	X				
		B. Make final Stormwater Management Plan available electronically on the Town/Borough website(s) and paper copies available in Town Hall and Borough Hall.	Final Stormwater Management Plan on website(s)	Town Engineer, Borough Warden	X				
		C. Make draft Annual Report available electronically on the Town/Borough website(s) and paper copies available in Town Hall and Borough Hall. Publish notice of availability on website(s) or local newspaper.	Copy of website notice of availability and draft Annual Report	Town Engineer, Borough Warden		X	X	X	X
		D. Make final Annual Report available electronically on the Town/Borough website(s).	Annual Report on website(s)	Town Engineer, Borough Warden		X	X	X	X

<sup>3</sup> Public notice shall include contact name (with phone number, address, and email) to whom the public can send comments and a publicly accessible location and/or URL where the Plan or Annual Report is available for public review.

**TABLE C-2**  
**Minimum Control Measure #2 – Public Involvement/Participation**

Stormwater Management Plan Summary  
 Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
2-2	<b>Work with area organizations and groups</b>	A. Reconvene/reinstate Stonington Stormwater Task Force	List of Stormwater Task Force members	Town First Selectman/Board of Selectman, Board of Warden & Burgesses	X				
		B. Conduct regular meetings of the Stonington Stormwater Task Force	Number of meetings held	Stormwater Task Force	X	X	X	X	X
		C. Work with local organizations (CUSH, etc.) to identify public involvement opportunities and assist with plan implementation.	Number of meetings and public involvement events conducted	Stormwater Task Force	X	X	X	X	X

**TABLE C-3**  
**Minimum Control Measure #3 – Illicit Discharge Detection and Elimination<sup>4</sup>**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
3-1	<b>Develop written IDDE program</b>	A. Prepare joint IDDE Plan for the Town and Borough.	Website link to IDDE Plan and date completed	Engineering, Borough Warden	X				
3-2	<b>Conduct SSO inventory</b>	A. Review Town and Borough records to identify any known locations where SSOs have discharged to the MS4 within the previous 5 years.	For any identified SSOs, items listed on page 2 in Appendix B of the General Permit.	WPCA, Sanitation Department	X (120 days)				
3-3	<b>Develop list and map of all MS4 stormwater outfalls in priority areas</b>	A. Update GIS storm system mapping to include required elements listed on page 24 of 50 and on pages 3 & 4 in Appendix B of the General Permit, including catchment delineations.	Progress on updated mapping. Date completed.	Engineering, Planning		X			
		B. Develop a list (database or spreadsheet) of stormwater outfalls in priority areas.	Progress on outfall list. Date completed.						
3-4	<b>Develop citizen reporting program</b>	A. Continue to support a citizen reporting 'hotline' and advertise it on the Town and Borough websites and in municipal offices.	Number of citizen reports. Response to those reports.	Engineering, Borough Warden	X				
3-5	<b>Establish legal authority to prohibit illicit discharges</b>	A. Review Town's existing Illicit Discharge and Illegal Connection Ordinance and revise, as necessary.	Date completed.	Planning	X				
3-6	<b>Develop recordkeeping system for IDDE tracking</b>	A. Develop IDDE tracking recordkeeping system.	Location (address of latitude and longitude), description, date(s) of inspection, sampling data (if applicable), action(s) taken, date of removal or repair, responsible party(ies)	Engineering, Borough Warden	X				

<sup>4</sup> Minimum Control Measure #3 applies, at a minimum, to 'Priority Areas'.

**TABLE C-3**  
**Minimum Control Measure #3 – Illicit Discharge Detection and Elimination<sup>4</sup>**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
3-7	<b>Address IDDE in areas with pollutants of concern</b>	A. Identify areas with high potential for septic system failure.	Mapped areas and actions taken to respond to and address failures.	Sanitarian, Engineering		X			
3-8	<b>Assess and prepare a priority ranking of catchments</b>	A. Classify each catchment within priority areas into an excluded, problem, high priority, or low priority catchment.  B. Rank catchments within each category (except excluded catchments) based on screening factors found on page 6 & 7 in Appendix B of the General Permit.	Assessment results, including listing of catchments and catchment rankings within each category	Engineering, Public Works		X (initial)	X (rev.)	X (rev.)	X (rev.)
3-9	<b>Conduct outfall and interconnection screening and sampling</b>	A. Conduct dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except for excluded and Problem Catchments)	Screening results	Engineering, Public Works		X	X		

**TABLE C-3**  
**Minimum Control Measure #3 – Illicit Discharge Detection and Elimination<sup>4</sup>**

Stormwater Management Plan Summary  
 Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
3-10	<b>Conduct catchment investigations and remove illicit discharges</b>	A. Evaluate catchments for System Vulnerability Factors and begin catchment investigations.	Presence or absence of SVFs for each catchment	Engineering, Public Works	X				
		B. Where System Vulnerability Factors are present, conduct manhole inspections. Isolate and verify sources. Remove identified illicit discharges and conduct confirmatory outfall screening. Schedule for completion: a. 80% Problem Catchments b. 100% Problem Catchments c. Indication of Sewer Inputs d. 40% of Area Served by All Catchments	Catchment investigation results	Engineering, Public Works			X		X X X

**TABLE C-4**  
**Minimum Control Measure #4 – Construction Site Stormwater Runoff Control**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
4-1	<b>Implement, upgrade (as necessary) and enforce land use regulations or other legal authority to meet requirements of MS4 general permit</b>	A. Review and update, as necessary, existing land use regulations and implementation policies for compliance with the MS4 General Permit construction site stormwater runoff control requirements.	Updated regulations. Date completed.	Town & Borough Land Use Agencies		X			
4-2	<b>Implement plan for interdepartmental coordination in site plan review and approval</b>	A. Implement interdepartmental coordination procedures as described in <b>Section 5.2</b> of this Plan.	N/A (within <b>Section 5.2</b> )	Town & Borough Land Use Agencies	X				
4-3	<b>Review site plans for stormwater quality concerns</b>	A. Complete site plan reviews for all projects subject to the land use regulations listed in BMP 4-1.	Number of plans reviewed.	Town & Borough Land Use Agencies	X	X	X	X	X
4-4	<b>Conduct site inspections</b>	A. Conduct inspections and enforcement to assess and ensure the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures.	Number of sites inspected. Number of enforcement actions taken. Resolution of violations.	Town & Borough Land Use Agencies	X	X	X	X	X
4-5	<b>Implement procedure to allow public comment on site development</b>	A. Continue to post notices of Stonington's "hotline" for stormwater related comments on the municipal stormwater websites.	Number of comments received and response to those comments.	Town & Borough Land Use Agencies	X				

**TABLE C-4**  
**Minimum Control Measure #4 – Construction Site Stormwater Runoff Control**

Stormwater Management Plan Summary  
 Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
4-6	<b>Implement procedure to notify developers about DEEP construction stormwater permit</b>	A. Continue to inform developers/contractors of their potential obligation to register under the DEEP construction general permit and to provide a copy of the Storm Water Pollution Control Plan to Stonington upon request.	Number of developer/contractors notified	Town & Borough Land Use Agencies	X	X	X	X	X

**TABLE C-5**  
**Minimum Control Measure #5 – Post-construction Stormwater Management in New Development or Redevelopment**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
5-1	<b>Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning</b>	A. Review and update, as necessary, existing land use regulations and implementation policies (including Technical Standards) for compliance with the General Permit post-construction stormwater management requirements.	Updated regulations. Date completed.	Town Planning & Zoning Commission, Borough Planning & Zoning Commission, Engineering				X	
5-2	<b>Enforce LID/runoff reduction requirements for development and redevelopment projects</b>	A. Review and update, as necessary, current regulations to identify, reduce, or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices.	Updated regulations. Date completed.	Town Planning Department, Borough Planning & Zoning Commission, Engineering				X	
		B. Complete plan reviews and ensure compliance for all projects subject to the legal authority and/or guidelines listed in BMP 5-1.	Number of plans reviewed.	Town Planning Department, Borough Planning & Zoning Commission, Engineering	X	X	X	X	X
5-3	<b>Implement long-term maintenance plan for stormwater basins and treatment structures</b>	A. Develop a long-term maintenance plan for retention/detention basins and stormwater treatment structures.	Written plan. Date completed.	Town Planning Department, Borough Planning & Zoning Commission, Engineering	X				
		B. Implement maintenance plan including annual inspection of retention / detention basins and stormwater treatment structures and removal of accumulated sediment and pollutants.	Number of structures inspected, number of structures maintained.	Engineering, Public Works, Planning Department		X	X	X	X

**TABLE C-5**  
**Minimum Control Measure #5 – Post-construction Stormwater Management in New Development or Redevelopment**

Stormwater Management Plan Summary  
 Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
5-4	Estimate DCIA	A. Calculate the Directly Connected Impervious Area (DCIA) of outfall catchment areas using guidance provided by DEEP and UConn CLEAR.	Number of catchments where DCIA has been calculated. Methodology and assumptions made.	Engineering, Planning			X		
		B. Revise DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA.	Project-specific information to support calculation of net change in DCIA (see BMP 6-6).	Engineering, Planning				X	X
5-5	Address post-construction issues in areas with pollutants of concern	A. Address erosion and sediment problems noted during inspections conducted under BMP 5-3 through the retrofit program developed under BMP 6-7.	Problem areas retrofitted, cost of retrofit, anticipated amount of pollutant reduction.	Engineering, Public Works, Planning			X		

**TABLE C-6**  
**Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
6-1	<b>Implement employee training program</b>	A. Implement joint training program for Town and Borough employees, building on the Town's current program (see topics listed in <b>Section 7.2</b> ).	Dates of training, names of those trained, topics reviewed	Town Public Works, Borough Highway Department	X	X	X	X	X
6-2	<b>Implement MS4 property and operations maintenance</b>	A. Implement <b>turf/fertilizer management</b> BMPs for parks and open space	Management measures implemented	Town Public Works, Borough Highway Department	X	X	X	X	X
		B. Implement <b>pet waste</b> education program and install additional signage, baggies, and disposal receptacles, as needed, in areas where pet walking is common	Educational messages delivered, signage installed	Public Works, Stormwater Task Force	X	X	X	X	X
		C. Implement <b>waterfowl management</b> BMPs in targeted areas as needed	Management measures implemented	Town Public Works, Borough Highway Department	X	X	X	X	X
		D. Evaluate <b>municipal buildings and facilities</b> for spill prevention and pollution prevention practices and implement additional BMPs as necessary	Evaluation findings and new or updated SWPPPs and SPCC Plans	Town Public Works, Borough Highway Department	X				
		E. Evaluate and modify, as necessary, municipal <b>vehicle and equipment parking, fueling, and maintenance</b> practices	Evaluation findings and new or updated practices	Town Public Works, Borough Highway Department	X				
		F. Continue current leaf management program	Approximate quantity of leaves picked up annually	Town Public Works, Borough Highway Department	X	X	X	X	X

**TABLE C-6**  
**Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
6-3	<b>Coordinate with interconnected MS4s</b>	A. Coordinate with neighboring municipalities, institutions, and DOT regarding stormwater management program activities associated with the adjacent MS4s.	Municipalities contacted, actions taken	Town Public Works, Borough Highway Department	X	X	X	X	X
6-4	<b>Control contribution of pollutants to the MS4 from facilities not authorized under a CTDEEP stormwater permit</b>	A. Control through IDDE program, water quality monitoring, the Town's Illicit Discharge and Illegal Connection Ordinance, and targeted education and outreach to commercial, industrial, municipal, institutional facilities owners/operators (see BMP 1-1).	Sources identified and mitigated  Types, sources, number of, and methods by which materials disseminated	Stormwater Task Force	X	X	X	X	X
6-5	<b>Evaluate additional measures for discharges to impaired waters</b>	A. Implement the measures and procedures described in <b>Section 7.2</b> including those measures to address stormwater pollutants of concern	Nitrogen/Phosphorus: actions taken, estimate of fertilizer reduction.  Bacteria: problem areas for retrofit or source management program, location of closest outfall monitored, cost of retrofit or program, anticipated pollutant reduction. Actions taken to manage waterfowl.	Town Public Works, Borough Highway Department	X	X	X	X	X
6-6	<b>Implement ongoing infrastructure repair/rehab program</b>	A. Repair, rehabilitate, or retrofit MS4 infrastructure (e.g., conveyances, structures, outfalls) as needed in a timely manner.	Repairs/retrofits completed.	Engineering, Public Works	X	X	X	X	X

**TABLE C-6**  
**Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
6-7	<b>Develop and implement retrofit plan</b>	A. Develop retrofit plan and list of priority sites	Retrofit Plan including list of priority sites, identification and prioritization process, a rationale for the selection of projects to be implemented, total acres of DCIA to be disconnected	Engineering, Stormwater Task Force			X		
		B. Disconnect 1% per year of Stonington's DCIA from the MS4	Retrofits completed, impervious area disconnected	Engineering, Public Works, Stormwater Task Force				X	X
6-8	<b>Track projects that disconnect DCIA</b>	A. Annually track total acreage of DCIA that is disconnected as a result of redevelopment or retrofits (see BMPs 5-4 and 6-7)	See BMPs 5-4 and 6-7	Town Engineering, Planning	X	X	X	X	X
6-9	<b>Implement pavement sweeping program</b>	A. Continue to inspect and sweep all municipally-owned or -operated streets and parking lots Schedule for completion: <ol style="list-style-type: none"> <li>a. Priority Areas – annually in spring following the cessation of winter maintenance activities (i.e., sanding, deicing, etc.</li> <li>b. Outside Priority Areas (inc. rural uncurbed streets and parking lots with no catch basins) – in spring or develop and implement an</li> </ol>	Summary of inspection results, curb miles swept, dates of cleaning, volume or mass of material collected, method of reuse or disposal. Alternate sweeping plan	Town Public Works, Borough Highway Department	X (alt sweeping plan)	X	X	X	X

**TABLE C-6**  
**Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping**

Stormwater Management Plan Summary  
Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
		inspection, documentation, and targeted sweeping plan							
		B. Evaluate runoff reduction measures such as permeable pavement or other measures to promote sheet flow of stormwater for all new and redeveloped municipal parking lots	Runoff reduction measures implemented	Town Public Works, Engineering, Borough Highway Department	X	X	X	X	X
6-10	Implement catch basin cleaning program	A. Inspect and clean catch basins as necessary Inspection Schedule: a. 100% within Priority Areas b. 100% of MS4	Total number of catch basins. Log including basins inspected, basins cleaned, total volume or mass of material removed from all catch basins and the mass of material removed from catch basins draining to impaired waters (if possible), Measures taken to abate sources of excess sediment loading.	Town Public Works  Borough Highway Department			X		X
		B. Develop a plan for optimizing catch basin cleaning (i.e., reduced frequency in certain areas) based on inspection findings, such that	Written optimization plan	Town Public Works  Borough Highway Department		X			

**TABLE C-6**  
**Minimum Control Measure #6 – Pollution Prevention/Good Housekeeping**

Stormwater Management Plan Summary  
 Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
		no catch basin is more than 50% full							
6-11	<b>Implement snow management practices</b>	A. Implement practices for deicing material management and snow and ice control	Types of deicing materials used, lane-miles treated, total amount of each deicing material used, type(s) of deicing equipment used, any changes to deicing practices, snow disposal methods. Type of staff training conducted, dates of trainings, names of those trained	Town Public Works  Borough Highway Department	X	X	X	X	X

**TABLE C-7**  
**Stormwater Monitoring Requirements**  
**Stormwater Management Plan Summary**  
**Town and Borough of Stonington**

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
S-1	<b>Outfall screening</b>	A. Screen all outfalls <sup>5</sup> discharging to impaired waters once during the permit term.	List of outfalls screened, number of outfalls identified for follow-up investigation	Town Public Works, Borough Highway Department	X	X	X (50%)	X	X (100%)
S-2	<b>Inventory and mapping of discharges to impaired waters</b>	A. Create an inventory of all outfalls discharging to impaired waters using the mapping developed in BMP 3-3.	Outfall map and inventory	Engineering		X			
S-3	<b>Follow-up investigations of drainage areas</b>	A. Investigate activities within the drainage area potentially contributing to the related stream impairment.	Progress of drainage area investigations, description of control measure(s) implemented, identification of 6 outfalls to be monitored annually	Engineering		X			
		B. Implement a BMP program focusing on the impaired waters							
S-4	<b>Annual monitoring of priority outfalls</b>	A. Select six (6) of the highest contributors of any pollutant of concern <sup>6</sup>	Priority outfall list	Engineering			X		
		B. Conduct prioritized outfall monitoring for the appropriate pollutant of concern	Results of annual monitoring (date, temperature, time of the start of discharge, time of sample, magnitude of the rain event).	Engineering				X	X

<sup>5</sup> Except those with available wet weather sampling data such as those sampled during the 2004 General Permit term.

<sup>6</sup> May be less than six but no more than six outfalls based on screening results

## Chronologically by Implementation Date

## Stormwater Management Plan Summary

### Town and Borough of Stonington

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
1-1	<b>Implement public education program</b>	A. Update and maintain Town and Borough websites to include educational materials identified in <b>Table 3</b> and/or available on the CLEAR and CT NEMO MS4 Guide website, CUSH website, or listed in the Connecticut Nonpoint Source Management Program Plan.	Number of clicks on the stormwater websites	Stormwater Task Force	X	X	X	X	X
		B. Distribute educational materials.	Types, sources, number of, and methods by which materials disseminated	Stormwater Task Force	X	X	X	X	X
1-2	<b>Address education/outreach for pollutants of concern</b>	A. Select educational materials appropriate for impaired waters and stormwater pollutants of concern (see <b>Tables 2 and 3</b> ).	Types, sources, number of, and methods by which materials disseminated	Stormwater Task Force	X				
2-1	<b>Comply with public notice requirements<sup>7</sup> of the Stormwater Management Plan and Annual Reports</b>	A. Make draft Stormwater Management Plan available electronically on the Town/Borough website(s) and paper copies available in Town and Borough office by April 1, 2017. Publish notice of availability on website(s) or local newspaper.	Copy of website notice of availability and draft Stormwater Management Plan	Town Engineer, Borough Warden	X				
		B. Make final Stormwater Management Plan available electronically on the Town/Borough website(s) and paper copies available in Town Hall and Borough Hall.	Final Stormwater Management Plan on website(s)	Town Engineer, Borough Warden	X				

<sup>7</sup> Public notice shall include contact name (with phone number, address, and email) to whom the public can send comments and a publicly accessible location and/or URL where the Plan or Annual Report is available for public review.

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
3-2	<b>Conduct SSO inventory</b>	A. Review Town and Borough records to identify any known locations where SSOs have discharged to the MS4 within the previous 5 years.	For any identified SSOs, items listed on page 2 in Appendix B of the General Permit.	WPCA, Sanitation Department	X (120 days)				
3-1	<b>Develop written IDDE program</b>	A. Prepare joint IDDE Plan for the Town and Borough.	Website link to IDDE Plan and date completed	Engineering, Borough Warden	X				
3-4	<b>Develop citizen reporting program</b>	A. Continue to support a citizen reporting "hotline" and advertise it on the Town and Borough websites and in municipal offices.	Number of citizen reports. Response to those reports.	Engineering, Borough Warden	X				
3-5	<b>Establish legal authority to prohibit illicit discharges</b>	A. Review Town's existing Illicit Discharge and Illegal Connection Ordinance and revise, as necessary.	Date completed.	Planning	X				
3-6	<b>Develop recordkeeping system for IDDE tracking</b>	A. Develop IDDE tracking recordkeeping system.	Location (address of latitude and longitude), description, date(s) of inspection, sampling data (if applicable), action(s) taken, date of removal or repair, responsible party(ies)	Engineering, Borough Warden	X				
3-10	<b>Conduct catchment investigations and remove illicit discharges</b>	A. Evaluate catchments for System Vulnerability Factors and begin catchment investigations.	Presence or absence of SVFs for each catchment	Engineering, Public Works	X				
4-2	<b>Implement plan for interdepartmental coordination in site plan review and approval</b>	A. Implement interdepartmental coordination procedures as described in <b>Section 5.2</b> of this Plan.	N/A (within <b>Section 5.2</b> )	Town & Borough Land Use Agencies	X				
4-3	<b>Review site plans for stormwater quality concerns</b>	A. Complete site plan reviews for all projects subject to the land use regulations listed in BMP 4-1.	Number of plans reviewed.	Town & Borough Land Use Agencies	X	X	X	X	X

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
4-4	<b>Conduct site inspections</b>	A. Conduct inspections and enforcement to assess and ensure the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures.	Number of sites inspected. Number of enforcement actions taken. Resolution of violations.	Town & Borough Land Use Agencies	X	X	X	X	X
4-5	<b>Implement procedure to allow public comment on site development</b>	A. Continue to post notices of Stonington's "hotline" for stormwater related comments on the municipal stormwater websites.	Number of comments received and response to those comments.	Town & Borough Land Use Agencies	X				
4-6	<b>Implement procedure to notify developers about DEEP construction stormwater permit</b>	A. Continue to inform developers/contractors of their potential obligation to register under the DEEP construction general permit and to provide a copy of the Storm Water Pollution Control Plan to Stonington upon request.	Number of developer/contractors notified	Town & Borough Land Use Agencies	X	X	X	X	X
5-3	<b>Implement long-term maintenance plan for stormwater basins and treatment structures</b>	A. Develop a long-term maintenance plan for retention/detention basins and stormwater treatment structures.	Written plan. Date completed.	Town Planning Department, Borough Planning & Zoning Department, Engineering	X				
6-1	<b>Implement employee training program</b>	A. Implement joint training program for Town and Borough employees, building on the Town's current program (see topics listed in <b>Section 7.2</b> ).	Dates of training, names of those trained, topics reviewed	Town Public Works, Borough Highway Department	X	X	X	X	X
6-2	<b>Implement MS4 property and operations maintenance</b>	A. Implement <b>turf/fertilizer management</b> BMPs for parks and open space	Management measures implemented	Town Public Works, Borough Highway Department	X	X	X	X	X
		B. Implement <b>pet waste</b> education program and install additional signage, baggies, and disposal receptacles, as needed, in areas where pet walking is common	Educational messages delivered, signage installed	Public Works, Stormwater Task Force	X	X	X	X	X

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
		C. Implement <b>waterfowl management</b> BMPs in targeted areas as needed	Management measures implemented	Town Public Works, Borough Highway Department	X	X	X	X	X
		D. Evaluate <b>municipal buildings and facilities</b> for spill prevention and pollution prevention practices and implement additional BMPs as necessary	Evaluation findings and new or updated SWPPPs and SPCC Plans	Town Public Works, Borough Highway Department	X				
		E. Evaluate and modify, as necessary, municipal <b>vehicle and equipment parking, fueling, and maintenance</b> practices	Evaluation findings and new or updated practices	Town Public Works, Borough Highway Department	X				
		F. Continue current leaf management program	Approximate quantity of leaves picked up annually	Town Public Works, Borough Highway Department	X	X	X	X	X
<b>6-3</b>	<b>Coordinate with interconnected MS4s</b>	A. Coordinate with neighboring municipalities, institutions, and DOT regarding stormwater management program activities associated with the adjacent MS4s.	Municipalities contacted, actions taken	Town Public Works, Borough Highway Department	X	X	X	X	X
<b>6-4</b>	<b>Control contribution of pollutants to the MS4 from facilities not authorized under a CTDEEP stormwater permit</b>	A. Control through IDDE program, water quality monitoring, the Town's Illicit Discharge and Illegal Connection Ordinance, and targeted education and outreach to commercial, industrial, municipal, institutional facilities owners/operators (see BMP 1-1).	Sources identified and mitigated  Types, sources, number of, and methods by which materials disseminated	Stormwater Task Force	X	X	X	X	X

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
6-5	<b>Evaluate additional measures for discharges to impaired waters</b>	A. Implement the measures and procedures described in <b>Section 7.2</b> including those measures to address stormwater pollutants of concern	Nitrogen/Phosphorus: actions taken, estimate of fertilizer reduction.  Bacteria: problem areas for retrofit or source management program, location of closest outfall monitored, cost of retrofit or program, anticipated pollutant reduction. Actions taken to manage waterfowl.	Town Public Works, Borough Highway Department	X	X	X	X	X
6-6	<b>Implement ongoing infrastructure repair/rehab program</b>	A. Repair, rehabilitate, or retrofit MS4 infrastructure (e.g., conveyances, structures, outfalls) as needed in a timely manner.	Repairs/retrofits completed.	Engineering, Public Works	X	X	X	X	X
6-8	<b>Track projects that disconnect DCIA</b>	A. Annually track total acreage of DCIA that is disconnected as a result of redevelopment or retrofits (see BMPs 5-4 and 6-7)	See BMPs 5-4 and 6-7	Town Engineering, Planning	X	X	X	X	X
6-9	<b>Implement pavement sweeping program</b>	A. Continue to inspect and sweep all municipally-owned or -operated streets and parking lots Schedule for completion: <ul style="list-style-type: none"> <li>a. Priority Areas – annually in spring following the cessation of winter maintenance activities (i.e., sanding, deicing, etc.</li> <li>b. Outside Priority Areas (inc. rural uncurbed streets and parking lots with no catch basins) –in spring or develop and implement an inspection, documentation, and targeted sweeping plan</li> </ul>	Summary of inspection results, curb miles swept, dates of cleaning, volume or mass of material collected, method of reuse or disposal. Alternate sweeping plan	Town Public Works, Borough Highway Department	X (alt sweeping plan)	X	X	X	X

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
		B. Evaluate runoff reduction measures such as permeable pavement or other measures to promote sheet flow of stormwater for all new and redeveloped municipal parking lots	Runoff reduction measures implemented	Town Public Works, Engineering, Borough Highway Department	X	X	X	X	X
<b>6-11</b>	<b>Implement snow management practices</b>	A. Implement practices for deicing material management and snow and ice control	Types of deicing materials used, lane-miles treated, total amount of each deicing material used, type(s) of deicing equipment used, any changes to deicing practices, snow disposal methods. Type of staff training conducted, dates of trainings, names of those trained	Town Public Works  Borough Highway Department	X	X	X	X	X
<b>S-1</b>	<b>Outfall screening</b>	B. Screen all outfalls <sup>8</sup> discharging to impaired waters once during the permit term.	List of outfalls screened, number of outfalls identified for follow-up investigation	Town Public Works, Borough Highway Department	X	X	X (50%)	X	X (100%)
<b>2-1</b>	<b>Comply with public notice requirements<sup>9</sup> of the Stormwater Management Plan and Annual Reports</b>	A. Make draft Annual Report available electronically on the Town/Borough website(s) and paper copies available in Town Hall and Borough Hall. Publish notice of availability on website(s) or local newspaper.	Copy of website notice of availability and draft Annual Report	Town Engineer, Borough Warden		X	X	X	X

<sup>8</sup> Except those with available wet weather sampling data such as those sampled during the 2004 General Permit term.

<sup>9</sup> Public notice shall include contact name (with phone number, address, and email) to whom the public can send comments and a publicly accessible location and/or URL where the Plan or Annual Report is available for public review.

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
		B. Make final Annual Report available electronically on the Town/Borough website(s).	Annual Report on website(s)	Town Engineer, Borough Warden		X	X	X	X
3-3	<b>Develop list and map of all MS4 stormwater outfalls in priority areas</b>	A. Update GIS storm system mapping to include required elements listed on page 24 of 50 and on pages 3 & 4 in Appendix B of the General Permit, including catchment delineations.	Progress on updated mapping. Date completed.	Engineering, Planning		X			
		B. Develop a list (database or spreadsheet) of stormwater outfalls in priority areas.	Progress on outfall list. Date completed.						
3-7	<b>Address IDDE in areas with pollutants of concern</b>	A. Identify areas with high potential for septic system failure.	Mapped areas and actions taken to respond to and address failures.	Sanitarian, Engineering		X			
3-8	<b>Assess and prepare a priority ranking of catchments</b>	A. Classify each catchment within priority areas into an excluded, problem, high priority, or low priority catchment. B. Rank catchments within each category (except excluded catchments) based on screening factors found on page 6 & 7 in Appendix B of the General Permit.	Assessment results, including listing of catchments and catchment rankings within each category	Engineering, Public Works		X (initial)	X (rev.)	X (rev.)	X (rev.)
3-9	<b>Conduct outfall and interconnection screening and sampling</b>	A. Conduct dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except for excluded and Problem Catchments)	Screening results	Engineering, Public Works		X	X		

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
4-1	<b>Implement, upgrade (as necessary) and enforce land use regulations or other legal authority to meet requirements of MS4 general permit</b>	A. Review and update, as necessary, existing land use regulations and implementation policies for compliance with the MS4 General Permit construction site stormwater runoff control requirements.	Updated regulations. Date completed.	Town & Borough Land Use Agencies		X			
5-3	<b>Implement long-term maintenance plan for stormwater basins and treatment structures</b>	B. Implement maintenance plan including annual inspection of retention / detention basins and stormwater treatment structures and removal of accumulated sediment and pollutants.	Number of structures inspected, number of structures maintained.	Engineering, Public Works, Planning Department		X	X	X	X
6-10	<b>Implement catch basin cleaning program</b>	C. Develop a plan for optimizing catch basin cleaning (i.e., reduced frequency in certain areas) based on inspection findings, such that no catch basin is more than 50% full	Written optimization plan	Town Public Works  Borough Highway Department		X			
5-2	<b>Inventory and mapping of discharges to impaired waters</b>	A. Create an inventory of all outfalls discharging to impaired waters using the mapping developed in BMP 3-3.	Outfall map and inventory	Engineering		X			
S-3	<b>Follow-up investigations of drainage areas</b>	A. Investigate activities within the drainage area potentially contributing to the related stream impairment.	Progress of drainage area investigations, description of control measure(s) implemented, identification of 6 outfalls to be monitored annually	Engineering		X			
		B. Implement a BMP program focusing on the impaired waters							

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
3-10	<b>Conduct catchment investigations and remove illicit discharges</b>	B. Where System Vulnerability Factors are present, conduct manhole inspections. Isolate and verify sources. Remove identified illicit discharges and conduct confirmatory outfall screening. Schedule for completion: a. 80% Problem Catchments b. 100% Problem Catchments c. Indication of Sewer Inputs d. 40% of Area Served by All Catchments	Catchment investigation results	Engineering, Public Works			X		X X X
5-4	<b>Estimate DCIA</b>	A. Calculate the Directly Connected Impervious Area (DCIA) of outfall catchment areas using guidance provided by DEEP and UConn CLEAR.	Number of catchments where DCIA has been calculated. Methodology and assumptions made.	Engineering, Planning			X		
5-5	<b>Address post-construction issues in areas with pollutants of concern</b>	A. Address erosion and sediment problems noted during inspections conducted under BMP 5-3 through the retrofit program developed under BMP 6-7.	Problem areas retrofitted, cost of retrofit, anticipated amount of pollutant reduction.	Engineering, Public Works, Planning			X		
6-7	<b>Develop and implement retrofit plan</b>	A. Develop retrofit plan and list of priority sites	Retrofit Plan including list of priority sites, identification and prioritization process, a rationale for the selection of projects to be implemented, total acres of DCIA to be disconnected	Engineering, Stormwater Task Force			X		

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
6-10	<b>Implement catch basin cleaning program</b>	A. Inspect and clean catch basins as necessary Inspection Schedule: c. 100% within Priority Areas d. 100% of MS4	Total number of catch basins. Log including basins inspected, basins cleaned, total volume or mass of material removed from all catch basins and the mass of material removed from catch basins draining to impaired waters (if possible), Measures taken to abate sources of excess sediment loading.	Town Public Works  Borough Highway Department			X		X
5-4	<b>Annual monitoring of priority outfalls</b>	A. Select six (6) of the highest contributors of any pollutant of concern <sup>10</sup>	Priority outfall list	Engineering			X		
5-1	<b>Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning</b>	A. Review and update, as necessary, existing land use regulations and implementation policies (including Technical Standards) for compliance with the General Permit post-construction stormwater management requirements.	Updated regulations. Date completed.	Town Planning & Zoning Commission, Borough Planning & Zoning Commission, Engineering				X	
5-2	<b>Enforce LID/runoff reduction requirements for development and redevelopment projects</b>	A. Review and update, as necessary, current regulations to identify, reduce, or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices.	Updated regulations. Date completed.	Town Planning Department, Borough Planning & Zoning Commission, Engineering				X	
		B. Complete plan reviews and ensure compliance for all projects subject to the legal authority and/or guidelines listed in BMP 5-1.	Number of plans reviewed.	Town Planning Department, Borough Planning & Zoning Department, Engineering	X	X	X	X	X

<sup>10</sup> May be less than six but no more than six outfalls based on screening results

BMP ID	Best Management Practice	Action Item/Measurable Goal	Required Recordkeeping/ Data Collection	Responsible Department/Parties	Implementation Schedule				
					Year 1 FY18	Year 2 FY19	Year 3 FY20	Year 4 FY21	Year 5 FY22
5-4	<b>Estimate DCIA</b>	B. Revise DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA.	Project-specific information to support calculation of net change in DCIA (see BMP 6-6).	Engineering, Planning				X	X
6-7	<b>Develop and implement retrofit plan</b>	B. Disconnect 1% per year of Stonington's DCIA from the MS4	Retrofits completed, impervious area disconnected	Engineering, Public Works, Stormwater Task Force				X	X
S-4	<b>Annual monitoring of priority outfalls</b>	B. Conduct prioritized outfall monitoring for the appropriate pollutant of concern	Results of annual monitoring (date, temperature, time of the start of discharge, time of sample, magnitude of the rain event).	Engineering				X	X