

# **Town of Oxford**

**GENERAL PERMIT FOR THE DISCHARGE OF  
STORMWATER FROM SMALL MUNICIPAL  
SEPARATE STORM SEWER SYSTEMS (MS4)**

**2016**

**Annual Report**

**Permit No. GSM000008**

**December 21, 2016  
NYE PROJECT # 2009-005**



**NAFIS & YOUNG**

Civil/Environmental Engineering & Surveying

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## **Introduction**

The Town of Oxford submits the following 2016 Annual Report updating the status and compliance with the Town's Stormwater Management Plan. This report meets the State of Connecticut Department of Energy & Environmental Protection (CTDEEP) requirements as outlined in the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), section (i) Reporting and Record Keeping Requirements.

Any individuals that wish to comment on this annual report or the Town of Oxford's Stormwater Management Plan may contact Mr. Lawrence Secor at Nafis & Young Engineers, Inc at (203) 484-2148 or by email at [larry.secor@nafisandyoung.com](mailto:larry.secor@nafisandyoung.com).

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## 1.0 History

The Town of Oxford began working on a stormwater plan during the winter of 2002/2003 to meet a projected implementation date of April 2003. The Town worked with Nafis & Young Engineers, Inc. (NYE) in developing and writing this plan. The Town completed a draft plan after receiving a final copy of the CTDEEP general permit requirements on January 9, 2004. The "State of Connecticut Department of Transportation Draft Stormwater Management Plan" was used as an outline for the Town's plan. The new General Permit was issued January 20, 2016, effective July 1, 2017 and the new registration for this General Permit including an update of the Town's Stormwater Management Plan is required to be completed by April 1, 2017.

In 2004 the written plan was then given to the appropriate personnel within the Town of Oxford's Conservation Commission/ Inland Wetlands Agency, Planning & Zoning Commission and Public Works, the town posted a legal notice in both the Town Hall and the Public Library to inform the public that a copy of the plan was available in the Town Library for review by residents. The town did not receive any comments from the public.

In early 2005 the final draft of the plan was completed and is now available at the both the Town Hall and Public Library. In 2005 the Council of Governments of the Central Naugatuck Valley (COGNAV) arranged with TeleMedia Cable to air an EPA video on local public access television entitled "*After the Rain*" on two nights in December. A brochure created in conjunction with the Oxford Conservation Commission/Inland Wetlands Agency that details the importance of storm water quality and the impact on the environment was distributed at the Town Hall and the Town Library. The Town also posted a poster in the Public Works garage and Town Hall to promote public awareness best management practices of storm water management during construction.

NYE has conducted thirteen (13) annual stormwater sampling events starting in the summer of 2004. Samples of six representative outfalls, two industrial, two commercial and two residential were taken on July 23, 2004, June 28, 2005, August 15, 2006, May 16, 2007, April 28, 2008, September 11, 2009, November 04, 2010, May 04, 2011, July 18, 2012, August 13, 2013, June 19, 2014, April 12, 2016 (2015 sample) and November 29, 2016.

The Town purchased a handheld GPS/PDA system for mapping its stormwater outfalls and the required software to manage the collected data. This equipment and software was partially funded through a CTDEEP grant with the COGNAV. The Town Engineer's department is currently mapping the town outfalls and will turn over to the GPS/PDA and software to the Town's Public Works Department for future use and maintenance in the near future. A map of the town's outfalls (mapped to date) is posted in the Conservation Commission/Inland Wetlands Agency Office.

The Town's Inland Wetland Secretary initiated the storm drain-marking program with the initial labels being provided by the CTDEEP Office of Long Island Sound Programs. The town intends to move forward with volunteers assisting in labeling all the remaining

catch basins. Two articles appeared in the local Waterbury Republican American Newspaper (November 16, 2006) and the Voices Newspaper (November 22, 2006) discussing this storm drain-marking program. Approximately 20% of the Town's catch basins have been marked.

The Town is actively involved in the CTDEEP Aquifer Protection Area (APA) program. In 2009 the Town adopted its APA regulations and in 2010 updated the regulations.

In 2011, the Town re-registered the Public Works Garage and Transfer Station for the revised CTDEEP General Permit for the Discharge of Stormwater Associated with Industrial Activity. The Town has since performed the required stormwater outfall sampling in the most recent permit cycle October 1, 2011 through September 30, 2016. According to the laboratory analysis results for four consecutive biannual outfall samples all the General Permit benchmarks were achieved for all of the test parameters in 2013. The sampling is now complete until the new cycle starts on September 30, 2017.

The Town of Oxford participated in the "Household Hazardous Waste Collection Central Naugatuck Valley Planning Region" three collections April 2016, June 2016 and October 2016. Seventy-Four (74) Oxford households participated in these collections that disposed of 810 pounds of household hazardous wastes and paints. This was approximately a 67% decrease over the Oxford household amounts disposed of in 2015.

From July 1, 2015 through June 30, 2016 the Town of Oxford recycled approximately 199 tons of scrap metal, 326 tons of commingled wastes (bottles/cans/paper), 3,985 gallons of waste oil, 180 C.Y. of tires and 11.9 tons of electronics.

At this time, the town is awaiting any comments from the DEP concerning the Town's Draft Stormwater Management Plan. This annual report is based upon the draft plan comments by the DEEP will be reflected in subsequent annual reports.

## **2.0 Compliance**

Many of the Town's goals for the ninth year of this permit were to continue to build a foundation for further implementation of the Stormwater Management Plan. The Town's commission's such as Planning and Zoning and Inland Wetland enforcement inspections is already following many procedures. Construction plan reviews have included reviewing stormwater management and erosion controls and the town will continue these procedures while looking at ways to improve their effectiveness. A large share of the effort was directed towards the education of Town officials and employees with regards to their role within the General Permit. The Best Management Practices (BMPs) chosen by the Town are addressed below:

### **Section 1: Public Education and Outreach**

#### **1. Brochures / Fact Sheets**

**Goal:** Display and Distribute Brochures

The finished brochure was distributed at a Conservation Commission /Inland Wetlands Agency meeting in early 2005. It was approved for publication and was distributed at the Town Hall and the Library. It continues to be available to the public.

## 2. Alternative Information Sources

**Goal:** Develop web site, display poster for Town, and Public Service Announcement (PSA) for local television

The web site is active and information is posted. The poster has been displayed at the Town Hall and the Public Works Garage. In December of 2005, the local cable company aired an EPA video entitled *After the Rain* on two nights.

In 2011 two USEPA brochures were included in the report's appendices "Make your home The Solution to Stormwater Pollution!, A Homeowners Guide to Healthy Habits for Clean Water" and "After the Storm, A Citizen's Guide to Understanding Stormwater". These were posted on the Town's website as included in the 2011 Annual report.

## 3. Library of Educational Materials

**Goal:** Make information available to town employees and the community

A library of educational materials is being developed and maintained at the CTDOT headquarters. As these materials are made available to the various towns in the state, materials will be procured for the various town departments as a reference for stormwater management issues.

Information on Internet websites (USEPA, CTDEEP) has also been used for reference and ideas.

## 4. Storm Drain / Marking Stenciling

**Goal:** The Town applied to CTDEEP for the drain-marking kit and received some labels for this purpose. The storm drain marking was started in 2006. Brochures were distributed to the local street residences as the labeling occurred on their respective streets.

Since 2006 approximately 20% of the catch basins were marked. This program has ceased due to lack of resources and will be reviewed in 2016 under the re-issuance of the new General Permit.

## 5. Watercourse Signage

**Goal:** Determine what watercourses and how best to expand CTDOT tributary signage program

The CTDOT already maintains signage for certain watercourses within the Town. Officials from the Town are currently looking for areas within the Town to expand this program.

## Section 2: Public Involvement / Participation

### 1. Presentation of Draft SWMP

**Goal:** SWMP

The final SWMP was completed in February 2005 and was made available to certain officials within the Town. It was also made available for review by the public after the posting of a public notice in the local newspaper.

This plan was updated in early 2009. The Town assigned Commissions (Conservation/Inland Wetlands and Planning & Zoning Commission) as well as the Public Works Department have taken ownership of their respective parts of the Plans and are implementing them as required.

### 2. Public Information Meetings

**Goal:** Brochures distributed

A brochure has been created and distributed by the Conservation Commission/Inland Wetlands Agency and is available at the Town Hall and Public Library.

### 3. Storm Drain / Marking Stenciling

**Goal:** The Town implemented this program in late 2006 and is still working toward lining up volunteers and funding to continue this program. Due to a lack of resources/volunteers the process has slowed. It will be pushed again in 2017.

### 4. Lake and Watershed Associations / Authorities

**Goal:** Identify all local watershed Associations / Authorities and meet with representatives of all local groups

Associations have been contacted and discussions continue on how to best involve the resources of these groups.



## 5. Household Hazardous Waste

**Goal:** Participate in the local collection of household hazardous waste.

The Town of Oxford participated in the “Household Hazardous Waste Collection Central Naugatuck Valley Planning Region” three collections April 2016, June 2016 and October 2016. Seventy-Four (74) Oxford households participated in these collections that disposed of 810 pounds of household hazardous wastes and paints. This was approximately a 67% decrease over the Oxford household amounts disposed of in 2015.

### Section 3: Illicit Discharge Detection and Elimination

#### 1. Town Policy Regarding Non-Stormwater Discharges

**Goal:** Implement Policy

The town’s Board of Selectmen passed an Illicit Discharge and Connection Stormwater Ordinance in 2008 and assigned responsibility for enforcement to the Town’s Planning & Zoning Commission.

In 2014 the Town checked catch basins and outfall mapping on seventeen (17) roads and checked twenty-six (26) outfalls for illicit discharges. No illicit discharges were observed during this round of inspections. The town completed more inspections in 2016 as required under the General Permit.

#### 2. Storm Sewer Map(s)

**Goal:** Mapping outfalls

The Town, using its Global Positioning System (GPS), PDA and associated software mapped all outfalls 10” or greater in the “urbanized” areas of the Town in 2005.

In 2006 through 2007 outfalls 10” or greater the mapping has expanded and will be continued until all outfalls are mapped town wide.

In 2014 the outfall mapping was revised based on the illicit discharge inspections.

#### 3. Illicit Discharge and Elimination Program

**Goal:** Continue sampling of six selected outfalls. Start sampling outfalls for ecoli to determine TMDL contribution from other outfalls.

Working with NYE, the Town selected six outfalls (two residential, two industrial, and two commercial) to be sampled and tested. These six outfalls



were not sampled during the 2015 season and will be sampled on the next compliant rainfall event.

The Town did not sample any additional outfalls for ecoli to determine TMDL in 2015 but will review again in 2016.

#### 4. Future Illicit Discharge Detection and Elimination

**Goal:** Address and enforce future non-stormwater discharges

The Town reviews each outfall during the mapping process and collects data on the condition of the stormwater discharges as observed. This information is being reviewed and the Town will investigate any suspect reports of illicit discharges.

The Town has written an Illicit Discharge Detection and Elimination Manual for distribution and training purposes. The Town will continue to inspect outfalls for illicit discharges in 2016.

### Section 4: Construction Site Stormwater Runoff Control

#### 1. Requirements and Guidelines for Erosion and Sediment Controls

**Goal:** Implement and enforce the ordinance.

In 2008 the Town's Board of Selectmen passed a "Stormwater Management Ordinance" and assigned responsibility for enforcement to the Town's Planning & Zoning Commission, its agents and the Town Engineer.

The Town has stepped up both its initial review of any new or purposed construction projects and continues enforcement inspections of active projects to ensure erosion and sediment controls are in accordance with all local, state and federal regulations.

#### 2. Procedures for Notifying Construction Site Developers and Operators of Requirements for Registration

**Goal:** Implement Town forms and makes the proper registration a condition of agency approvals for sites exceeding the 1- acre threshold

The Town continues to comply with all requirements of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities.

#### 3. Requirements for Construction Site Operators to Implement Appropriate Erosion and Sediment Control Best Management Practices

**Goal:** Continue requirements for construction site operators to implement appropriate erosion and sediment control best management practices

Planning & Zoning and Inland Wetland Agency enforcement inspections continue to ensure that all applicable regulations concerning the use of erosion and sediment control measures are followed.

Site inspection and enforcement of control measures are utilized on all of the Town's projects. Under the new ordinance there are three levels of Town enforcement. Initially the inspector issues a "Notice of Inspection" for corrections to any deficiencies. This is followed with a "Notice of Deficiency" with set time requirements for correction of any issues. This may be used up to two times. Sites which continue to be noncompliant are issued a "Cease and Desist Order" with penalty and must stop work and bring the site into compliance before proceeding.

4. Requirements for Construction Site Operators to Control Waste at the Site

**Goal:** Continue requirements for construction site operators to control waste at the site

Planning & Zoning and Inland Wetland Agency enforcement inspections currently ensure that all applicable regulations concerning waste control are followed.

5. Procedures for Site Plan Review

**Goal:** Continue site plan review procedures

The Town Engineer reviews all site plans for conformance to the Town's, state and federal requirements relating to construction site runoff control.

6. Future Illicit Discharge Detection and Elimination

**Goal:** Detect and address future non-stormwater discharges

The Town during the mapping process reviews each outfall and collects data on the condition of the stormwater discharges as observed. This information is being reviewed and the Town will investigate any suspect reports of illicit discharges.

7. Requirements and Guidelines for Erosion and Sediment Controls

**Goal:** To protect the town's surface water resources during construction activities greater than 1 acre in size.

The Town has stepped up both its initial review of any new or purposed construction projects and continues enforcement inspections of active projects to ensure erosion and sediment controls are in accordance with all local, state and federal regulations.

8. Procedures for Notifying Construction Site Developers and Operators of Requirements for Registration

**Goal:** Implement registration requirements for all projects exceeding the 1-acre threshold

The Town currently complies with all requirements of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities.

9. Requirements for Construction Site Operators to Implement Appropriate Erosion and Sediment Control Best Management Practices

**Goal:** Continue requirements for construction site operators to implement appropriate erosion and sediment control best management practices

Planning & Zoning and Inland Wetland Agency enforcement inspections currently ensure that all applicable regulations concerning the use of erosion and sediment control measures are followed.

10. Requirements for Construction Site Operators to Control Waste at the Site

**Goal:** Continue requirements for construction site operators to control waste at the site

Planning & Zoning and Inland Wetland Agency enforcement inspections currently ensure that all applicable regulations concerning waste control are followed.

11. Procedures for Site Plan Review

**Goal:** Continue site plan review procedures

The Town Engineer reviews all site plans for conformance to the Town's, state and federal requirements relating to construction site runoff control.

12. Procedures for Receipt and Consideration of Information Submitted by the Public

**Goal:** Continue procedures for receipt and consideration of information submitted by the public.

Information submitted by the public is forwarded to the appropriate Town department for consideration.

### 13. Procedures for Site Inspection and Enforcement of Control Measures

**Goal:** Continue site inspection and enforcement of control measures

Site inspection and enforcement of control measures are utilized on all of the Town's projects.

## **Section 5: Post Construction Site Runoff Control**

### 1. Requirements for Structural and Non-Structural BMPs

**Goal:** Continue implementation of BMPs including projects with greater than or equal to 1- acre in disturbance area

The Town Engineer currently reviews plans to evaluate stormwater discharges and the methods that may be used for the treatment of stormwater before it reaches an outlet.

### 2. Procedures for Addressing Post Construction Runoff from Construction and Reconstruction Projects

**Goal:** Continue procedures for addressing post construction runoff from construction and reconstruction projects with greater than or equal to 1-acre in disturbance area

An internal memorandum issued to all Town departments requires stormwater management BMPs for all projects.

### 3. Ensuring Long Term Operation and Maintenance of Best Management Practices

**Goal:** Continue operation and maintenance of BMPs

The Public Works Department is responsible for the long-term operation and maintenance of the Town's facilities.

## **Section 6: Pollution Prevention / Good Housekeeping**

### 1. Operation and Maintenance Program

**Goal:** Implement operation and maintenance requirements

The Town is continuing to identify the specifics of the training, record keeping, internal reporting, and maintenance that will be required as part of operation and maintenance plan related to stormwater management.

## 2. Employee Training Program

**Goal:** Develop employee-training curriculum

The Town's Public Works Department completed an annual training requirement on November 02, 2016 for both the MS4 and Industrial Activity General Permits.

## 3. Street Sweeping Program

**Goal:** Implement street sweeping requirements.

The Public Works Department swept 100% of its roadways, approximately 120 miles, parking lots and facilities during 2016.

## 4. Catch Basin Maintenance Program

**Goal:** Implement catch basin maintenance requirements

The Town cleaned one thousand (1000) or thirty-eight percent (38%) of the Town's two thousand six hundred (2,600) catch basins in 2016. The Town's Public Works Department also continued using a comprehensive spreadsheet for tracking this information.

The Town installed new pavement on Hogsback Rd., Governor's Hill Rd., Shelton Rd., Still Rd., Carriage Dr., Pope Rd., Hurley Rd. and Christian St. in 2016. No new catch basins or stormwater pipe were installed in 2016.

## 5. Preventative Maintenance Program

**Goal:** Implement preventative maintenance requirements

The Town conducts inspections as a part of new construction /reconstruction projects to identify existing drainage facilities that may be in need of repair or inadequate.

### 3.0 Monitoring Data

The town's PWG/Transfer station met its benchmarks after four semiannual sampling events and is no longer required to take samples until the General Permit is reissued in October 2018

#### **4.0 Summary of Planned Stormwater Activities During the Next Reporting Cycle**

Continued growth within the Town is being undertaken with an eye towards improving stormwater management. Developers who are working in areas where the existing stormwater infrastructure is not able to meet the needs of their planned construction are required to install or upgrade the stormwater infrastructure as part of their development.

The Public Works Department will continue its Preventative Maintenance Program. The Public Works Department and the Town Engineer will continue to map of the remainder of the Town's outfalls. The implemented ordinances and any changes in the re-issued General Permit will be review by the appropriate Town's Commission.

Continued training will be performed within the appropriate Town Departments and Commissions.

#### **5.0 Changes in Any Identified Measurable Goals or Implementation Dates**

The Town will continue to work towards meeting all of the deadlines as specified in the updated Stormwater Management Plan. Any delays in meeting the requirements of the plan will be identified and fixed within the constraints of the workloads of the various Town Departments and the Town budget.

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.

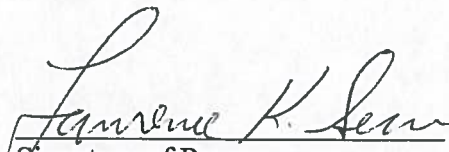
  
Signature of CEO/PEO or designee

Date: 12/22/2016

George R. Temple  
Name of CEO/PEO or designee

First Selectman  
Title

Prepared By:  
Nafis and Young Engineers, Inc.

  
Signature of Preparer

Date: 12/21/2016

Lawrence K. Secor, CHMM  
Name of Preparer

Senior Environmental Project Manager  
Title



**APPENDIX I**

**STORMWATER MONITORING REPORTS**



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>
Contact Person: <u>Wayne Watt</u> Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u> Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.46575 N, -73.15460 W (I-1)</u>
Please check the appropriate area description: <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential
Receiving Water (name, basin): <u>Little River, 6920</u>
Time of Start of Discharge: <u>06:50 AM</u>
Date/Time Collected: <u>04/12/2016, 09:44</u> Water Temperature: <u>15.5 C</u>
Person Collecting Sample: <u>David Seitlinger</u>
Storm Magnitude (inches): <u>0.27</u> Storm Duration (hours): <u>5.0</u>
Date of Previous Storm Event: <u>04/07/2016</u>

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.7 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH 20	4.35 (S.U.)	FIELD
Hardness	2340 B	22 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	91 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	19 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	183 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	139 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.22 (mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.11 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	0.59 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.3 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	300 (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

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

Authorized Official: George R. Temple, First Selectman  
(Print Name)

Signature: [Signature] Date: 5/2/16



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

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BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.46111 N, -73.13723 (I-2)</u>	
Please check the appropriate area description: <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>06:50 AM</u>	
Date/Time Collected: <u>04/12/2016, 09:54</u>	Water Temperature: <u>15.4 C</u>
Person Collecting Sample: <u>David Seitlinger</u>	
Storm Magnitude (inches): <u>0.27"</u>	Storm Duration (hours): <u>5.0</u>
Date of Previous Storm Event: <u>04/07/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	7.3 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH 20	4.35 (S.U.)	FIELD
Hardness	2340 B	7 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	126 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	25 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	32.8 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	20 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.08 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.09 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	0.51 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.1 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>George R. Temple, First Selectman</u>	
Signature: <u>[Signature]</u>	Date: <u>5/2/16</u>



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

## Stormwater Monitoring Report Form

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BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.42426 N, -73.09372 W (R-1)</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>06:50 AM</u>	
Date/Time Collected: <u>04/12/2016, 09:08</u>	Water Temperature: <u>13.8 C</u>
Person Collecting Sample: <u>David Seitlinger</u>	
Storm Magnitude (inches): <u>0.27</u>	Storm Duration (hours): <u>5.0</u>
Date of Previous Storm Event: <u>04/07/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.4 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	Cp pH20	4.35 (S.U.)	FIELD
Hardness	2340 B	4 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	156 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	35 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	29.1 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	18 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.09 (mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.09 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	0.66 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.3 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>George R. Temple, First Selectman</u>	
Signature: <u>[Signature]</u>	Date: <u>5/2/16</u>



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.42279 N, -73.12618 W (R-2)</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>06:50 AM</u>	
Date/Time Collected: <u>04/12/2016, 09:30</u>	Water Temperature: <u>14.2 C</u>
Person Collecting Sample: <u>David Seitlinger</u>	
Storm Magnitude (inches): <u>0.27</u>	Storm Duration (hours): <u>5.0</u>
Date of Previous Storm Event: <u>4/07/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.1 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH20	4.35 (S.U.)	FIELD
Hardness	2340 B	33 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	521 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	9 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	3.4 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	5 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.02 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	ND (<0.05 mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	0.31 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.8 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	100 (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>George R. Temple, First Selectman</u>	
(Print Name)	
Signature: <u>[Signature]</u>	Date: <u>5/2/16</u>



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.42039 N, -73.10469 W (C-1)</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>06:50 AM</u>	
Date/Time Collected: <u>04/12/2016, 08:54</u>	Water Temperature: <u>14.1 C</u>
Person Collecting Sample: <u>David Seitlinger</u>	
Storm Magnitude (inches): <u>0.27</u>	Storm Duration (hours): <u>5.0</u>
Date of Previous Storm Event: <u>04/07/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.6 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH20	4.35 (S.U.)	FIELD
Hardness	2340 B	8 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	228 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	59 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	50.2 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	64 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.13 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.26 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	0.80 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.3 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	1,800 (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>George R. Temple, First Selectman</u>	
(Print Name)	
Signature: <u>[Signature]</u>	Date: <u>5/2/16</u>



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: Oxford

Mailing Address: 21 Great Oak Rd. Oxford, CT 06478

Contact Person: Wayne Watt

Title: Road Foreman

Phone: 203.888.7716

Permit Registration #GSM: 0000008

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): 41.40573 N, -73.03926 W (C-2)

Please check the appropriate area description: ☐ Industrial ☒ Commercial ☐ Residential

Receiving Water (name, basin): Little River, 6920

Time of Start of Discharge: 06:50

Date/Time Collected: 04/12/2016, 09:21

Water Temperature: 15.4 C

Person Collecting Sample: Larry Secor

Storm Magnitude (inches): 0.27

Storm Duration (hours): 5.0

Date of Previous Storm Event: 04/07/2016

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.2 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH20	4.35 (S.U.)	FIELD
Hardness	2340 B	40 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	194 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	28 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	37.9 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	43 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.09 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.23 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	1.20 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	2.8 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: George R. Temple, First Selectman  
(Print Name)

Signature: \_\_\_\_\_

Date: 5/2/16





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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: Oxford

Mailing Address: 21 Great Oak Rd. Oxford, CT 06478

Contact Person: Wayne Watt

Title: Road Foreman

Phone: 203.888.7716

Permit Registration #GSM: 0000008

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): 41.42039 N, -73.10469 W (C-1)

Please check the appropriate area description: ☐ Industrial ☒ Commercial ☐ Residential

Receiving Water (name, basin): Little River, 6920

Time of Start of Discharge: 08:15 AM

Date/Time Collected: 11/29/2016, 10:47am

Water Temperature: 14.0 C

Person Collecting Sample: Larry Secor/ David Seitlinger

Storm Magnitude (inches): 0.30

Storm Duration (hours): 8.0

Date of Previous Storm Event: 11/20/2016

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.9 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH20	6.47 (S.U.)	FIELD
Hardness	2340 B	88 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	162 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	142 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	56.1 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	70 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.15 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.50 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	2.18 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.9 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

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

Authorized Official: George R. Temple, First Selectman  
(Print Name)

Signature: \_\_\_\_\_ Date: 12/22/2016



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: Oxford

Mailing Address: 21 Great Oak Rd. Oxford, CT 06478

Contact Person: Wayne Watt

Title: Road Foreman

Phone: 203.888.7716

Permit Registration #GSM: 0000008

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): 41.40573 N, -73.03926 W (C-2)

Please check the appropriate area description: ☐ Industrial ☒ Commercial ☐ Residential

Receiving Water (name, basin): Little River, 6920

Time of Start of Discharge: 08:15am

Date/Time Collected: 11/29/2016, 11:13am

Water Temperature: 16.5 C

Person Collecting Sample: Larry Secor/ David Seitlinger

Storm Magnitude (inches): 0.30

Storm Duration (hours): 8.0

Date of Previous Storm Event: 11/20/2016

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	7.2 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH20	6.93 (S.U.)	FIELD
Hardness	2340 B	64 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	343 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	124 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	44.2 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	107 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	1.48 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	4.33 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	6.22 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.6 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	600 (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

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Authorized Official: George R. Temple, First Selectman  
(Print Name)

Signature: \_\_\_\_\_ Date: 12/22/2016



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

## Stormwater Monitoring Report Form

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

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.46575 N, -73.15460 W (I-1)</u>	
Please check the appropriate area description: <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>08:15 AM</u>	
Date/Time Collected: <u>11/29/2016, 11:40am</u>	Water Temperature: <u>14.2 C</u>
Person Collecting Sample: <u>Larry Secor/ David Seitlinger</u>	
Storm Magnitude (inches): <u>0.30</u>	Storm Duration (hours): <u>8.0</u>
Date of Previous Storm Event: <u>11/20/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	7.0 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH 20	6.74 (S.U.)	FIELD
Hardness	2340 B	60 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	432 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	118 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	152 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	182 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.27 (mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.38 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	2.63 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.9 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	500 (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

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

Authorized Official: George R. Temple, First Selectman  
(Print Name)

Signature: \_\_\_\_\_ Date: 12/22/2016



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.46111 N, -73.13723 (I-2)</u>	
Please check the appropriate area description: <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>08:15 AM</u>	
Date/Time Collected: <u>11/29/2016, 11:50am</u>	Water Temperature: <u>15.7 C</u>
Person Collecting Sample: <u>David Seitlinger</u>	
Storm Magnitude (inches): <u>0.30"</u>	Storm Duration (hours): <u>8.0</u>
Date of Previous Storm Event: <u>11/20/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.9 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH 20	6.62 (S.U.)	FIELD
Hardness	2340 B	60 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	372 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	58 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	31.4 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	25 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.19 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.31 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	1.31 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	0.2 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>George R. Temple, First Selectman</u>	
(Print Name)	
Signature: _____	Date: <u>12/22/2016</u>



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: <u>Oxford</u>	
Mailing Address: <u>21 Great Oak Rd. Oxford, CT 06478</u>	
Contact Person: <u>Wayne Watt</u>	Title: <u>Road Foreman</u>
Phone: <u>203.888.7716</u>	Permit Registration #GSM: <u>0000008</u>

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): <u>41.42426 N, -73.09372 W (R-1)</u>	
Please check the appropriate area description: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	
Receiving Water (name, basin): <u>Little River, 6920</u>	
Time of Start of Discharge: <u>08:15 AM</u>	
Date/Time Collected: <u>11/29/2016, 11:03am</u>	Water Temperature: <u>15.6 C</u>
Person Collecting Sample: <u>Larry Secor/ David Seitlinger</u>	
Storm Magnitude (inches): <u>0.30</u>	Storm Duration (hours): <u>8.0</u>
Date of Previous Storm Event: <u>11/20/2016</u>	

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	6.7 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	Cp pH20	6.42 (S.U.)	FIELD
Hardness	2340 B	64 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	199 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	36 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	8.3 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	12 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.22 (mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	0.09 (mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	1.21 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	ND (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.	
Authorized Official: <u>George R. Temple, First Selectman</u>	
(Print Name)	
Signature: _____	Date: <u>12/22/2016</u>



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

## Stormwater Monitoring Report Form

Please send completed form to: STORMWATER GROUP  
BUREAU OF MATERIALS MANAGEMENT & COMPLIANCE ASSURANCE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

### PERMITTEE INFORMATION

Town: Oxford

Mailing Address: 21 Great Oak Rd. Oxford, CT 06478

Contact Person: Wayne Watt

Title: Road Foreman

Phone: 203.888.7716

Permit Registration #GSM: 0000008

### SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): 41.42279 N, -73.12618 W (R-2)

Please check the appropriate area description: ☐ Industrial ☐ Commercial ☒ Residential

Receiving Water (name, basin): Little River, 6920

Time of Start of Discharge: 08:15 AM

Date/Time Collected: 11/29/2016, 11:26am

Water Temperature: 17.2 C

Person Collecting Sample: Larry Secor/ David Seitlinger

Storm Magnitude (inches): 0.30

Storm Duration (hours): 8.0

Date of Previous Storm Event: 11/20/2016

### MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM 5400-H+ B	3.7 (S.U.)	CT TESTING LABORATORIES, INC.
Rain pH	CP pH20	3.43 (S.U.)	FIELD
Hardness	2340 B	116 (mg/L)	CT TESTING LABORATORIES, INC.
Conductivity	2510B	733 (µmhos/cm)	CT TESTING LABORATORIES, INC.
Oil & Grease	1664 A	ND (<5.0 mg/L)	CT TESTING LABORATORIES, INC.
COD	410.4	30 (mg/L)	CT TESTING LABORATORIES, INC.
Turbidity	180.1	3.9 (NTU)	CT TESTING LABORATORIES, INC.
TSS	2504D	7 (mg/L)	CT TESTING LABORATORIES, INC.
TP	365.3	0.10 mg/L)	CT TESTING LABORATORIES, INC.
Ammonia	350.1	ND (<0.05 mg/L)	CT TESTING LABORATORIES, INC.
TKN	351.2	0.46 (mg/L)	CT TESTING LABORATORIES, INC.
NO <sub>3</sub> +NO <sub>2</sub>	4500-NO3 F	1.1 (mg/L)	CT TESTING LABORATORIES, INC.
E. coli	9222B/9222G	ND (/100ml)	CT TESTING LABORATORIES, INC.

### STATEMENT OF ACKNOWLEDGMENT

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

Authorized Official: George R. Temple, First Selectman  
(Print Name)

Signature: \_\_\_\_\_ Date: 12/22/2016

**APPENDIX II**

**STORMWATER BMPS,  
OUTREACH EXAMPLES and REPORTS**





## **Factsheet: Town of Oxford Water Quality and Stormwater Summary**

This document was created for each town that has submitted monitoring data under the current Small Municipal Separate Storm Sewer System (MS4) General Permit. What follows is information on how stormwater can affect water quality in streams and rivers and a summary of data submitted by your town. This factsheet is intended to help you interpret your monitoring results and assist you in compliance with the MS4 program.

### **Water Quality in Connecticut**

Surface waters are important resources that support numerous uses, including water supply, recreation, fishing, shellfishing and sustaining aquatic life. Water quality conditions needed to support these uses are identified within the Connecticut Water Quality Standards (WQS). In order to protect and restore these uses, we need acceptable environmental conditions (physical, chemical and biological) to be present within surface waters.

To assess and track water quality conditions, CT DEEP conducts monitoring across the State. The data is synthesized into a biennial state water quality report called the Integrated Water Quality Report. Currently, specific water quality monitoring in the state encompasses about 50% of rivers, 47% of lakes, and 100% of estuary/coastline. In addition, CT DEEP may have information about certain land uses or discharges which could indicate a potential for water quality to be impacted, even if the waterbody has not been fully monitored and assessed.

To find more detailed information on water quality in your town, please see the Integrated Water Quality Report (IWQR) on the CT DEEP website at [www.ct.gov/deep/iwqr](http://www.ct.gov/deep/iwqr). Information on water quality within your town is also presented on the maps included in this fact sheet.

### **Impacts of Impervious Cover on Water Quality**

Impervious cover (IC) refers to hard surfaces across the landscape such as roads, sidewalks, parking lots and roofs. Studies have focused on the amount of hard surfaces to evaluate the impacts of stormwater runoff from these hard surfaces on water quality and found that IC affects both the quantity and quality of stormwater. IC forces rain to runoff the land, carrying pollutants quickly and directly to lakes and streams instead of soaking into the ground and being filtered by the soil. For more information on impervious cover, please see the CT DEEP web page [www.ct.gov/deep/imperviouscoverstudies](http://www.ct.gov/deep/imperviouscoverstudies) and EPA's web page [www.epa.gov/caddis/ssr\\_urb\\_isl.html](http://www.epa.gov/caddis/ssr_urb_isl.html).

In general, the higher the percentage of IC in a watershed, the poorer the surface water quality. Research in Connecticut strongly suggests that aquatic life will be harmed when the IC within a

watershed exceeds 12%. Stormwater pollution from IC is a likely cause of impairment for these waterbodies.

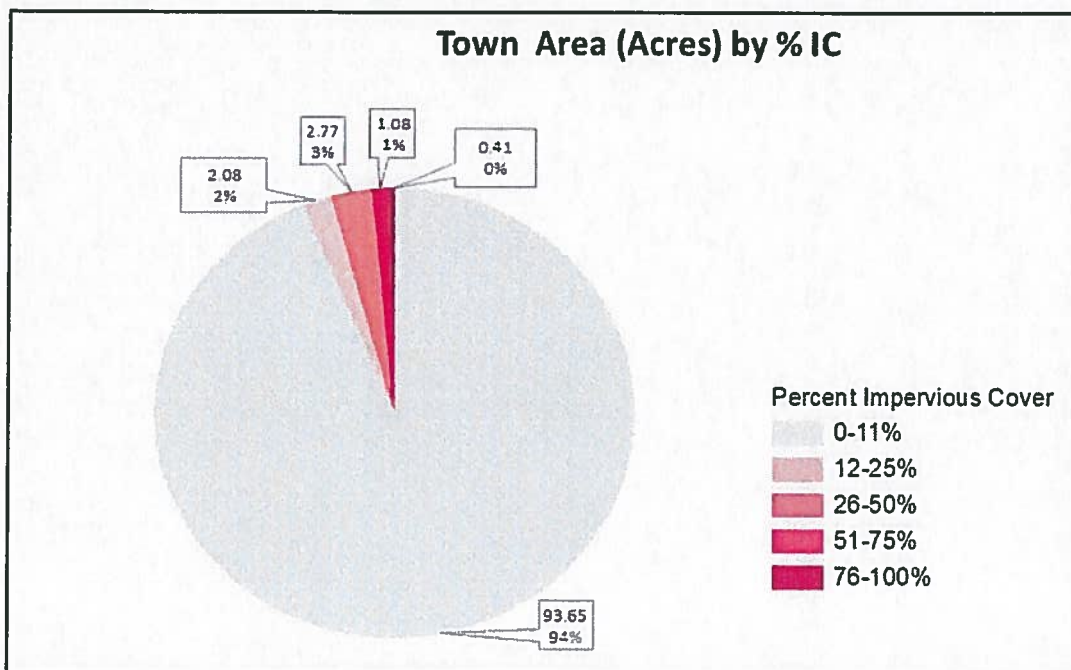
#### Town of Oxford: Impervious Cover Data

This chart shows the amount of area within your town that contains IC. Data is grouped by acres and percent IC. While all levels of IC can contribute stormwater to streams, it is important to note that land with IC greater than 12% in town is likely to be contributing enough stormwater to streams to have a negative impact on water quality.

Towns should aim to make stormwater improvements in areas with IC greater than 12% in an effort to reduce the amount of stormwater pollution reaching surface waters which will protect and improve water quality.

For more information on areas of impervious cover within your town, please see the maps at the back of this factsheet.

Amounts of Impervious Cover within the Town of Oxford



#### Pollution Reduction

Waterbodies often can handle a certain amount of pollutants and still maintain good water quality. However, impaired waterbodies have too much pollution impacting their water quality and therefore the streams do not support all uses for the waterbody. Total Maximum Daily Loads (TMDLs) are pollution reduction budgets developed for impaired waterbodies in order to meet water quality. If the pollution budget is achieved through the recommended pollution reduction

measures, then the waterbody is expected to meet water quality. CT DEEP also supports impaired waters restoration through watershed based plans ([www.ct.gov/deep/watershed](http://www.ct.gov/deep/watershed)) which provide more specific non-point source pollution control measures. The following TMDLs or pollution reduction strategies have been developed and apply to areas within your town.

**TMDLs or Strategies Applicable to the Town of Oxford**

<b>Name of TMDL or Strategy</b>	<b>Pollutant</b>	<b>Waterbody Name</b>	<b>Link</b>
Statewide Bacteria TMDL	Bacteria	Housatonic River / Lake Zoar / Lake Housatonic / Curtiss Brook	<a href="http://www.ct.gov/deep/lib/deep/water/tmdl/statewidebacteria/housatonicriver6000.pdf">www.ct.gov/deep/lib/deep/water/tmdl/statewidebacteria/housatonicriver6000.pdf</a>
A TMDL Analysis for Recreational Uses of the Naugatuck River Regional Basin	Bacteria	Naugatuck River / Steele Brook / Great Brook / Mad River / Hop Brook / Long Meadow Pond Brook	<a href="http://www.ct.gov/deep/lib/deep/water/tmdl/tmdl_final/naugatucktmdl_final.pdf">www.ct.gov/deep/lib/deep/water/tmdl/tmdl_final/naugatucktmdl_final.pdf</a>
Statewide Bacteria TMDL	Bacteria	Naugatuck River / Hockanum Brook	<a href="http://www.ct.gov/deep/lib/deep/water/tmdl/statewidebacteria/naugatuckriverhockanumbrook6900.pdf">www.ct.gov/deep/lib/deep/water/tmdl/statewidebacteria/naugatuckriverhockanumbrook6900.pdf</a>
A TMDL Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound	Nitrogen	Long Island Sound and contributing watersheds	<a href="http://www.ct.gov/deep/lib/deep/water/lis_water_quality/nitrogen_control_program/tmdl.pdf">www.ct.gov/deep/lib/deep/water/lis_water_quality/nitrogen_control_program/tmdl.pdf</a>
Northeast Regional Mercury TMDL	Mercury	All CT Inland waters	<a href="http://www.ct.gov/deep/lib/deep/water/tmdl/tmdl_final/ne_hg_tmdl.pdf">www.ct.gov/deep/lib/deep/water/tmdl/tmdl_final/ne_hg_tmdl.pdf</a>
Interim Phosphorus Reduction Strategy	Phosphorus	Certain CT Inland waters	<a href="http://www.ct.gov/deep/lib/deep/water/water_quality_standards/p/interimmgntphosstrat_042614.pdf">www.ct.gov/deep/lib/deep/water/water_quality_standards/p/interimmgntphosstrat_042614.pdf</a>

For more information on these TMDLs or strategies please go to our website [www.ct.gov/deep/tmdl](http://www.ct.gov/deep/tmdl).

### Stormwater Quality Monitoring

Regular monitoring for targeted pollutants in stormwater provides an indication of potential for water quality impacts and helps identify sources and unlawful discharges. Annual monitoring at 6 locations from different areas of town has been a requirement of the MS4 permit since 2004. CT DEEP uses that information to evaluate the quality of stormwater and the potential for impacts to surface waters as well as to make sure that stormwater is managed properly.

Below are 5 graphs tracking stormwater results submitted by your town for 5 parameters reported under the current MS4 General Permit. The results of each stormwater test submitted to CT DEEP by your town is shown. Individual sample results are shown in grey while the average of the samples collected on a particular day is shown in blue, with a line connecting the averages for the various sample dates. The bars show the statistical range of samples for each day with the red squares showing results which are considered to be outliers, that is, very different from the other samples collected on that day. The chart on the graph lists the sample dates and some basic statistics:

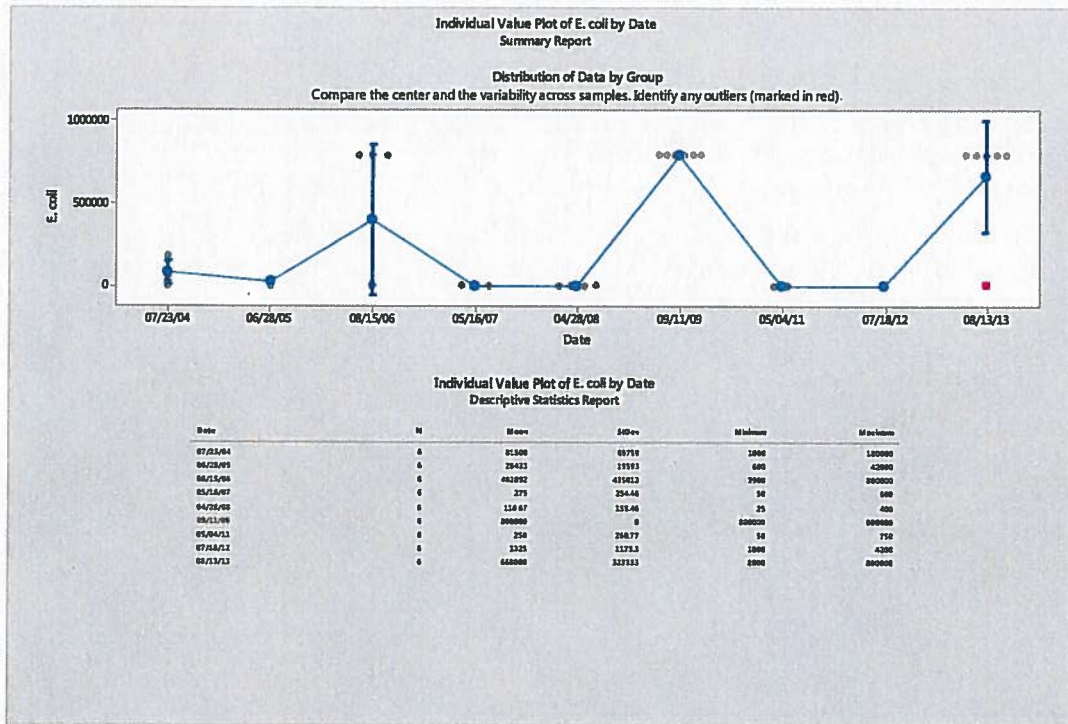
Statistic	Description
N	Number of stormwater samples collected on that date
Mean	Average of the results reported for that sample date
Standard Deviation (StdDev)	A measure of the variability of the results for the sample date
Minimum	The lowest sample result for the sample date
Maximum	The highest sample result for the sample date

### Bacteria

*Escherichia coli* (*E. coli*) is a bacteria that lives in the intestines of humans and other warm-blooded animals and is used to indicate the presence of fecal matter in surface waters. Some strains of *E. coli* and other pathogens found in fecal material cause serious illness in people coming in contact with it. For this reason, high amounts of bacteria will cause authorities to close beaches for swimming. Bacteria is measured as the number of colony forming units, or CFU, per 100 ml of water. Any result that was reported as "too numerous to count" is included on the chart as 800,000 CFU/100 mL.



**Results of annual stormwater monitoring under MS4 permit for *E.coli* (CFU/ 100 mL of sample)**  
**Town of Oxford**

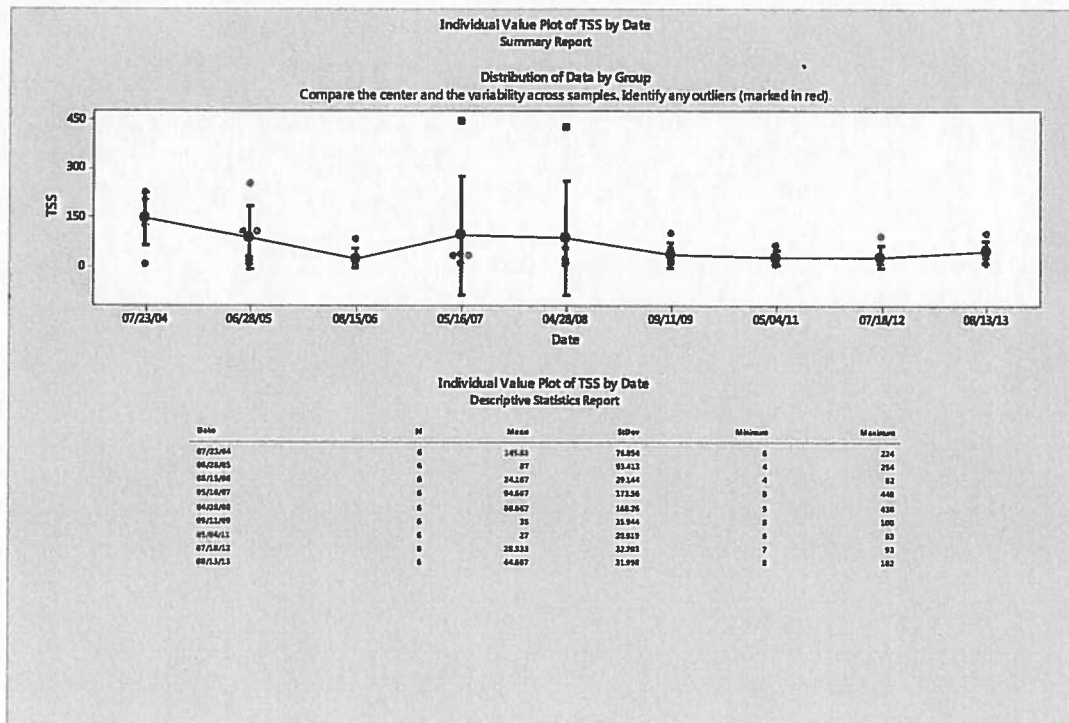


To support recreational uses of surface waters, the CT DEEP Water Quality Standards indicate that the average amount of *E. coli* found in a freshwater water body should be less than 126 CFU/100 mL and that a single sample tested for *E. coli* should be less than 235 CFU/100 mL at a designated swimming area and less than 410 CFU/100 mL in other areas. Monitoring for *E. coli* is currently required in the MS4 permit. Enterococci is another bacteria used to indicate the presence of fecal material in salt water environments. For recreation in salt water the Water Quality Standards indicate that average amount of Enterococci should be less than 35 CFU/100 mL in a designated swimming area and that a single sample tested for Enterococci should be less than 104 CFU/100 mL and in all other areas less than 500 CFU/100 mL. These targets have been included in the statewide bacteria TMDLs. In the Draft MS4 permit, *E.coli* results higher than 235 CFU/100 mL at a designated swimming area or greater than 410 CFU/100 mL in other areas requires a follow-up investigation. Individual stormwater sample results that exceed the applicable single sample maximum value for bacteria could impact water quality, so the associated outfalls should be evaluated for additional stormwater management.

## Total Suspended Solids

Total Suspended Solids (TSS) is a measurement of the amount of solids (including sand and silt) found in the stormwater sample. High concentrations of TSS can lower water quality in the receiving stream by transporting various pollutants to the waterbody where they can directly affect aquatic life or affect aquatic life by absorbing light, reducing photosynthesis, and by making the water warmer. TSS can also clog fish gills and smother fish eggs and suffocate the organisms that fish eat. TSS comes from erosion and is found in agricultural, urban and industrial runoff. TSS can be reduced by protecting land from erosion and allowing stormwater time to settle before discharging to surface waters.

### Results of annual stormwater monitoring under the MS4 general permit for TSS (mg/L) Town of Oxford

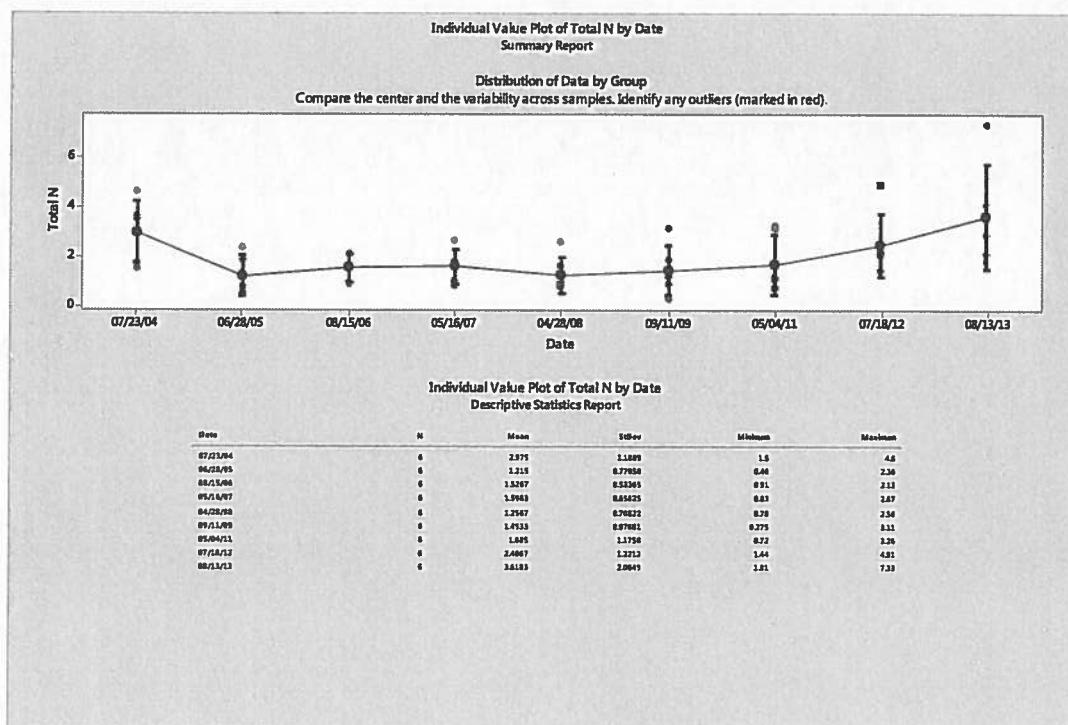


Currently, there is not a water quality based target for TSS in stormwater but TSS is a general indicator of water quality and, lower amounts of TSS are better. For comparison purposes, the average MS4 stormwater result reported for TSS by all towns covered by this permit is 48 mg/L. Areas within your town which have elevated TSS may be places to consider additional stormwater management efforts.

## Total Nitrogen

Nitrogen is an important nutrient in marine and estuarine waters such as Long Island Sound, as well as a concern in fresh water lakes and rivers. High amounts of nitrogen can lead to excessive growth of water plants and algae which then reduces the amount of oxygen available to living things in these waters. Unlawful discharges, animal waste, failing septic systems, leaves, litter and fertilizers are common sources of high nitrogen in stormwater. Responsible use of fertilizers, maintaining septic systems and proper disposal of pet waste will help reduce nitrogen in stormwater.

### Results of annual stormwater monitoring under MS4 general permit for total nitrogen (Total N mg/L) Town of Oxford



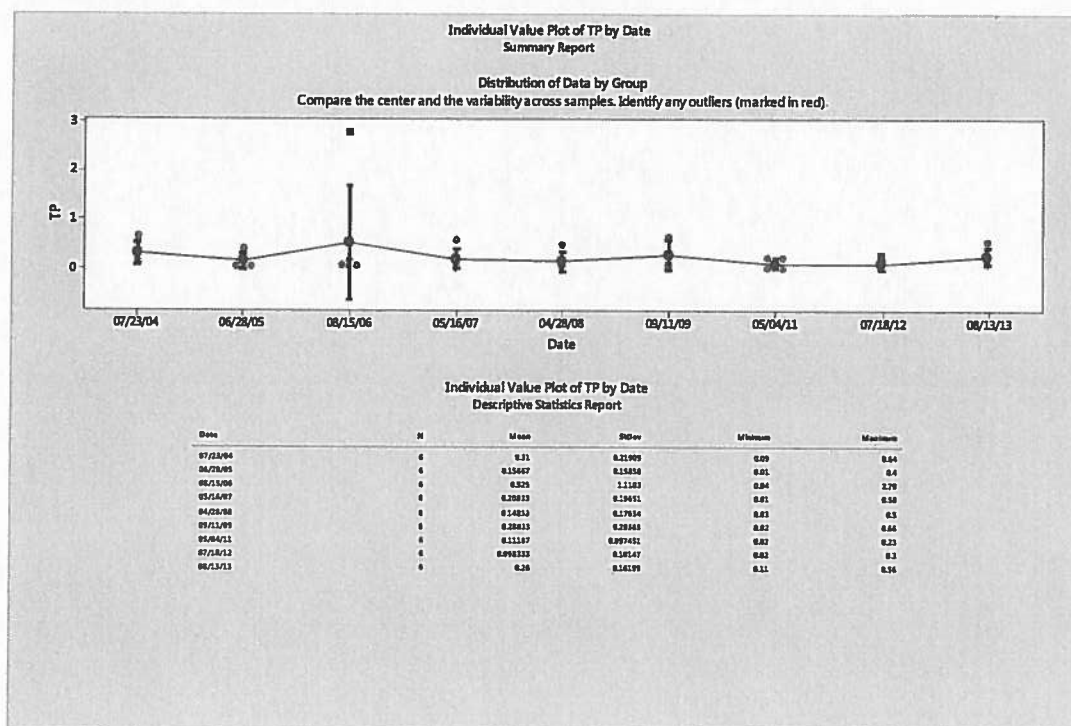
The TMDL for Long Island Sound requires a 10% reduction of nitrogen in stormwater discharges to prevent low oxygen conditions in Long Island Sound. Each town should be working to reduce the amount of nitrogen in their stormwater to address this issue. Under the current draft MS4 permit, any result for total nitrogen greater than 2.5 mg/L will require a follow-up investigation. Areas within your town which have elevated nitrogen may be places to consider additional stormwater management activities.



## Total Phosphorus

Phosphorus is an important nutrient necessary for growth in plants and animals in freshwater. Too much phosphorus in the water can throw off the balance of aquatic ecosystems causing excessive growth of water plants and algae blooms, which reduces the amount of oxygen in the water, potentially harming the fish. Sometimes these algae blooms can contain toxic forms of algae which are harmful to people and animals that come into contact with it. Sources of high phosphorus can be unlawful discharges, fertilizers, litter, leaves, erosion and animal waste.

### Results of annual stormwater monitoring under MS4 permit for total phosphorus (mg/L) Town of Oxford

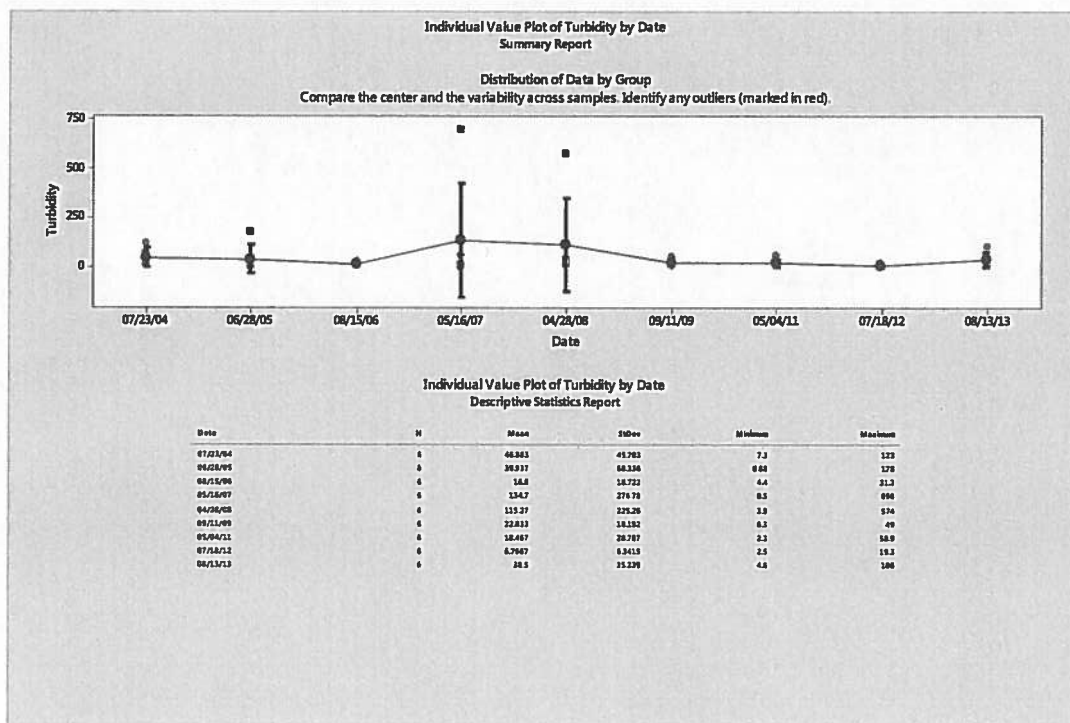


CT DEEP is actively working with many towns to reduce the amount of phosphorus reaching Connecticut's streams and rivers. Under the current draft MS4 permit, a total phosphorus result greater than 0.3 mg/L will require a follow-up investigation. Areas of your town that have elevated levels of phosphorus in the stormwater are good places to develop additional stormwater controls.

## Turbidity

Turbidity measures the clarity of the stormwater sample. It measures how much material (soil, algae, pollution, microbes etc.) is suspended in the sample. High turbidity lowers the water quality of a surface water by blocking sunlight for the plants and makes food harder for the fish to find and may be an indication of a higher amounts of other pollution in the water. Surface waters with high turbidity are visually less appealing for recreational use. High turbidity can be caused by erosion, failing septic systems, decaying plants or animals, and excessive algae growth. Turbidity is reported in Nephelometric Turbidity Units (NTU) which is related to how easily light passes through the water sample.

### Results of annual stormwater monitoring under MS4 permit for turbidity (NTU) Town of Oxford



The Water Quality Standards have a criterion that indicates turbidity should not to exceed 5 NTU above ambient levels. In the draft MS4 permit, a turbidity result greater than 5 NTU over in-stream conditions will require a follow-up investigation. While there is not a fixed statewide criterion for turbidity, lower results are better for the health of the surface waters in town. Areas with higher levels of turbidity in stormwater would be a good place to develop additional stormwater controls.

### Town Maps

The following maps were created to show the impervious cover (IC) in your town as well as the water quality in the rivers, streams, lakes and estuaries in and around your town.

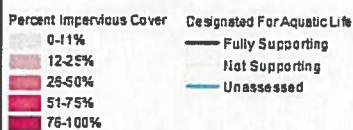
#### *Impervious Cover on the Town Maps*

IC is shown in red on the maps. Dark red areas indicate a higher percentage of IC, lighter red areas have less IC, while the grey areas indicate very little or no IC.

#### *Water Quality on the Town Maps*

Separate maps are provided for the different uses of the waterbodies such as Aquatic Life Uses, Recreation, and Shellfishing (in coastal towns). The waterbodies are colored to show the health of the waterbody. Green means that the waterbody meets the water quality requirements to fully support the specified use. Yellow means that water quality is poor and that the specified use is not met. Blue means that there is not enough information to know whether or not water quality is good or bad to support the specified use. Additionally, a small map is provided on the left side of each larger map to show which watersheds are within your town.

# **Waters Designated For Aquatic Life in the Town of Oxford**



## **Subregional Basins**



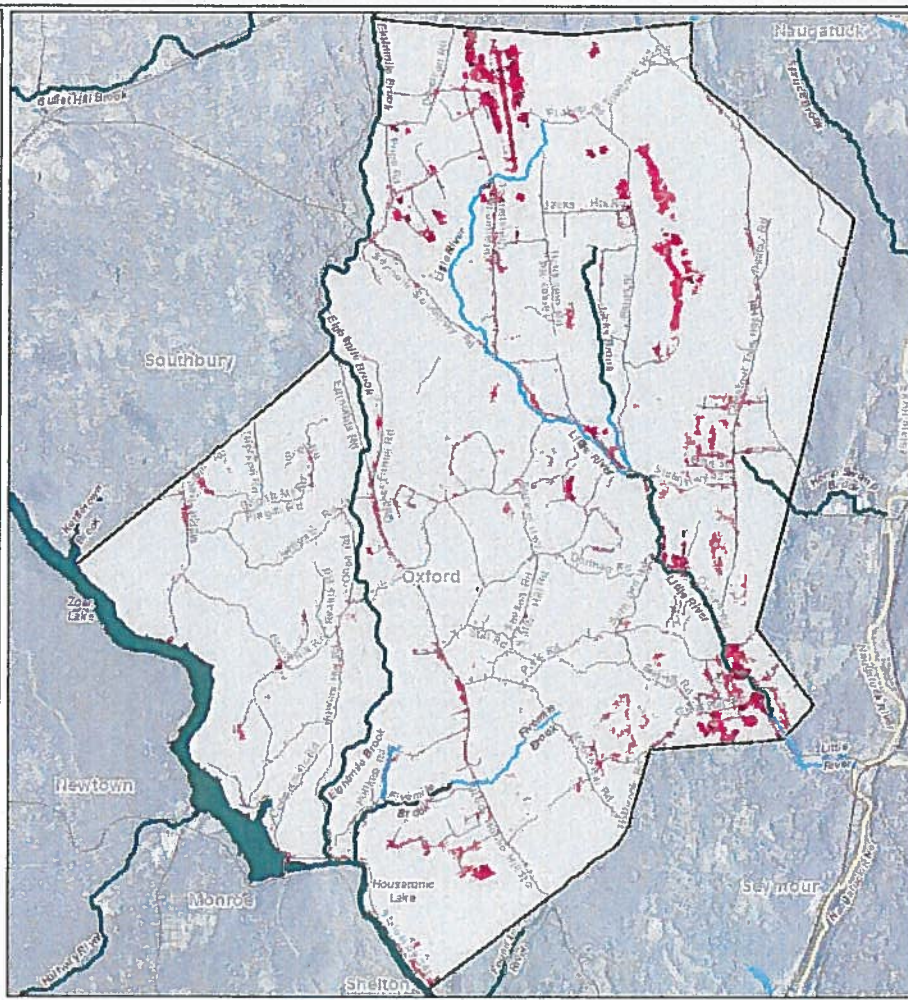
0 0.5 1 Miles

These maps were created using the National Land Cover Database (NLCD) 2011 Impervious Cover Percent Data. For more detail please review the metadata document.

Impervious cover (IC) refers to hard surfaces across the landscape such as pavement or buildings. These hard surfaces do not absorb water and prevent rain from soaking in to the ground. As a result, runoff occurs and easily carries pollutants to nearby lakes and streams.

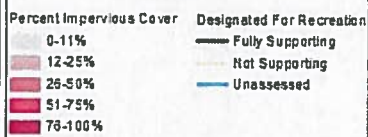


STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WATER QUALITY DIVISION  
MARCH 2015





# **Waters Designated For Recreation in the Town of Oxford**



## **Subregional Basins**



0 0.5 1 Miles

These maps were created using the National Land Cover Database (NLCD) 2011 Impervious Cover Percent Data. For more detail please review the metadata document.

Impervious cover (IC) refers to hard surfaces across the landscape such as pavement or buildings. These hard surfaces do not absorb water and prevent rain from soaking in to the ground. As a result, runoff occurs and easily carries pollutants to nearby lakes and streams.

