

TOWN OF SOUTH WINDSOR



MS4 General Permit 2021 Annual Report

Existing MS4 Permittee

Permit No. GSM 000081

January 1, 2021 – December 31, 2021

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INTRODUCTION

This Stormwater Management Plan (SWMP) and Annual Report was developed by the Town of South Windsor for the purpose of establishing, implementing and enforcing a stormwater management program to reduce the discharge of pollutants from the Town's roadways and facilities to the maximum extent practicable, to protect water quality, and to satisfy the appropriate requirements of the Clean Water Act.

The SWMP covers all of the Town's roadways and facilities including public buildings and parks/grounds. Individual facilities such as the Public Works Facility (including the salt shed) and the Sewage Treatment Plant are covered under separate general permits (Phase 1 - Industrial) with the Connecticut Department of Energy & Environmental Protection (DEEP). Information on both the MS4 (Phase 2) and the Industrial (Phase 1) permits can be found on the Town website.

The U.S. Environmental Protection Agency (EPA) published the regulation entitled "National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges", on December 8, 1999 as required by Section 402(p) of the Clean Water Act (CWA). This is commonly referred to as the National Pollution Discharge Elimination System (NPDES) Phase II program.

This SWMP also directly addresses the requirements of the NPDES Phase II program as implemented and administered by the DEEP as the regulatory authority for the State of Connecticut. The NPDES Phase II program is implemented by the DEEP through the use of the General Permit for the Discharge of Stormwater from Small Municipal Storm Sewer Systems (MS4), which was originally issued in January 2004.

The DEEP reissued the MS4 General Permit with an effective date of July 1, 2017. The reissuance of this permit builds on the six areas of responsibility (Minimum Control Measures) for each municipality. The new MS4 General Permit provides significantly more detail on the requirements and implementation of the six Minimum Control Measures as well as expanding on certain requirements.

The Town currently has many practices and programs in place relating to stormwater management and pollution prevention. This plan coordinates and incorporates these programs, policies, guidelines and practices into the SWMP document by reference.

The plan outlines a program of best management practices (BMP's) and measurable goals for the following six minimum control measures:

- Public Education and Outreach
- Public Participation / Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post Construction Stormwater Management
- Pollution Prevention / Good Housekeeping

For each minimum control measure, the Town has defined appropriate BMP's, designated a person(s) and job title responsible for each BMP, defined a time frame for implementation for each BMP, and defined measurable goals for each BMP.

Plan Development Process

As part of the development of the SWMP, a working committee has been established with representatives from several Town Departments/Divisions to provide input and guidance. The committee meets on a regular basis to review the SWMP and to discuss measures and modifications to the BMP's as needed. A list of the members of the current working committee is provided below.

Stormwater Committee

Jeff Doolittle	Engineering
Michele Lipe	Planning
Jeff Folger	Planning / Inland Wetlands
Vincent Stetson	Public Works / Street Services
Joseph Perna	Engineering
Jason Scott	Engineering
John Caldwell	Parks and Grounds
Thad Dymkowski	Engineering / GIS
Anthony Manfre	Pollution Control
Heather Oatis	Town Sanitarian

Description of Municipality

The operator of the MS4 is the Town of South Windsor. The Town of South Windsor is a public entity located in the county of Hartford, State of Connecticut. The Town of South Windsor covers an area of approximately twenty-nine (29) square miles, located in northeastern Connecticut. The Connecticut Department of Transportation (DOT) operates an MS4 on state highways located in the Town of South Windsor. This system is regulated under the CT DOT's MS4 permit. Implementation of the BMPs identified in this plan will be coordinated between the Town of South Windsor and CT DOT.

Annual Report – 2021

This report documents the Town of South Windsor's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2021 to December 31, 2021. This Annual Report has also be made available to the public in compliance with the Public Involvement section of this plan.

The Town is utilizing MS4Front software to generate the Stormwater Management Plan and Annual Reports. Information is added to the SWMP as BMP activities in the annual report.

Record Keeping

The Town of South Windsor shall 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 Stormwater Management Plan and Annual Reports shall be available to the public at reasonable times during regular business hours.

Impaired Waters

In preparing the SWMP, the CT DEEP's Water Quality Standards were reviewed in order to determine the Surface Water Quality Classifications for each watercourse in town. Certain BMP's address the watersheds containing watercourses designated as "impaired" by the CT DEEP. Table 1 shows the water quality classification for each watershed. Table 2 summarizes the water bodies within or that run through the municipality that are listed on the 2020 List of Connecticut Water Bodies not meeting water quality standards and are designated as "impaired".

TABLE 1 Water Quality Surface Classifications South Windsor, CT			
Drainage Basin Number	Name	Surface Water Quality Classification	Impaired per Water Quality Standards
4500-09	Avery Brook	A	No
4000-19	Bancroft Brook	A	No
4004-05	Burnham Brook	A	No
4500-03	Campbell's Brook	A	No
4004-03	Cemetery Brook	A	No
4000-00	Connecticut River	B	Yes*
4500-10	Dart (aka Wells) Brook	A	No
4200-28	Dry Brook	A	Yes
4004-02	Farm Brook	A	Yes**
4500-00	Hockanum River	B	Yes*
4207-00	Ketch Brook	A	No
4500-07	Muzzy Brook	A	No
4000-21	Newberry Brook	A	No
4004-01	Plum Gully Brook	A	No
4004-00	Podunk River	A	No
4004-04	Quarry (aka Whaples) Brook	A	No
4200-00	Scantic River	B	Yes
4000-18	Stoughton's Brook	A	No

TABLE 2
South Windsor Impaired Waterbody

Waterbody ID	Water Segment Description	Water Segment Length (miles)	Impaired Use	Pollutant	Cause/Potential Source
Connecticut River * CT4000-00-03	From confluence with Scantic River to point 7000 feet south of Bissell Bridge	6.63	Fish Consumption	Polychlorinated biphenyls (not a stormwater pollutant)	Potential sources include industrial discharges, municipal discharges, landfills, illicit discharges, remediation sites, groundwater impacts
			Recreation	Escherichia coli (bacteria)	CT Statewide Bacteria TMDL
Dry Brook CT4200-28-01	From confluence with Scantic River to HW upstream of Griffin Road crossing near Vintage Road	4.70	Recreation	Escherichia coli (bacteria)	Potential sources include stormwater, insufficient on-site treatment-septic systems, agricultural activities
Hockanum River * CT4500-00-04a	From inlet to Union Pond, Manchester, upstream to confluence with Tankerhoosen River, Vernon	1.44	Habitat for Fish, Other Aquatic Life and Wildlife	Cause Unknown	Potential sources include industrial discharges, municipal discharges, illicit discharges, remediation sites, groundwater impacts
			Recreation	Escherichia coli (bacteria)	CT Statewide Bacteria TMDL
Scantic River CT4200-00-01	From mouth at Connecticut River, upstream approximately 2.8 miles to Town Line	2.88	Habitat for Fish, Other Aquatic Life and Wildlife	Cause Unknown	Potential sources include stormwater, industrial discharges, municipal discharges, salt storage facilities, remediation sites, groundwater impacts
			Recreation	Escherichia coli (bacteria)	Potential sources include stormwater, insufficient on-site treatment-septic systems, agricultural activities
Farm Brook** CT4004-02-01	From confluence with Plum Gulley Brook to HW south of Tallwood Drive	1.61	Habitat for Fish, Other Aquatic Life and Wildlife	Cause Unknown	Potential sources include stormwater, insufficient on-site treatment-septic systems, agricultural activities
				Other pollutant of concern	

* There are no direct discharges to this waterbody from the Town of South Windsor's MS4.

** Farm Brook was added to the list of Impaired Waterbody's by DEEP in 2018.

A map of the Town of South Windsor's impaired waterbodies is included in this report (see Appendix C).

The surface water classifications currently assigned to South Windsor watercourses are defined below.

Class A

Surface water is known or presumed to meet Water Quality Criteria which support designated uses, which may include potential drinking water supply; fish and wildlife habitat; recreational use; agricultural, industrial supply and other legitimate uses, including navigation.

Class B

Designated uses include fish and wildlife habitat, recreational use including navigation (may be restricted), agricultural and industrial supply.

Based on the DEEP Surface Water Quality Classifications, Farm Brook, Dry Brook and the Scantic River are identified as the surface waters that should take the highest priority in the Town of South Windsor's efforts to address stormwater impacts. There are no direct discharges to the Connecticut River or Hockanum River from the Town of South Windsor's MS4, although there are several local drainage basins that discharge to those regional basins (see Appendix B – Subregional Drainage Basin Map). This was taken into consideration as the BMPs were developed.

Part I: Control Measures Summary Report

1. Public Education and Outreach (Section 6 (a)(1) / page 19)

Control Measure
(1) Public Education and Outreach
Description: This minimum control measure outlines a program to communicate common sources of stormwater pollution and the impacts of polluted stormwater to the public. This will be done through distributing educational materials to the community and conducting outreach activities. The following BMPs and implementation schedule serve as The Town of South Windsor's MS4 Public Education Program.
Measurable Goals: 1. Raise public awareness that polluted stormwater runoff is the most significant source of water quality problems; 2. Motivate residents to use Best Management Practices (BMPs) that reduce polluted stormwater runoff; and 3. Reduce polluted stormwater runoff in town as a result of increased awareness and utilization of BMPs.
Was the Implementation Schedule for Year 5 met? Yes Year 5 Evaluation Summary: The Town of South Windsor continues to develop and implement various activities to raise public awareness and motivate residents to use Best Management Practices.

BMP	Staff Responsible	Target Completion Date	Measurable Goal
1.1 Implement public education program	Stormwater Committee	7/1/2022	Review public education program
1.2 Address education and outreach for pollutants of concern	Stormwater Committee	7/1/2022	Distribute information on pollutants of concern
1.3 Acquire / Display Education Materials	Stormwater Committee	7/1/2022	Collect and distribute stormwater educational materials
1.4 Web Based MS4 Library	Engineering Department	7/1/2022	Develop web based MS4 library
1.5 Educational Displays	Public Works	7/1/2022	Educate students and the public on common stormwater topics
1.6 Proper Disposal of Household Hazardous Wastes	Public Works	7/1/2022	Educate public on proper disposal of hazardous wastes
1.7 Tributary Signage	Public Works	7/1/2022	Increase public awareness of receiving waterbodies located in town

BMP Name - 1.1 Implement public education program
Staff Responsible: Stormwater Committee
Description: The Stormwater Committee will develop and implement a public education program that identifies sources of stormwater pollution and the impacts of polluted stormwater to the public. Best Management Practices (BMP's) that will be utilized include distribution of educational materials to the public through printed and web based material, and conducting outreach activities to various community organizations. The Stormwater Committee will review the various BMP's utilized on an annual basis to determine their effectiveness and make modifications as required.
Measurable Goals: Review public education program

Implementation Plan and Schedule Comments: Implementation date 7/1/2017. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 3. Quarterly stormwater committee meeting	
Description: The Stormwater Committee did not meet in 2021 due to the COVID-19 pandemic and staffing constraints.	
Has the activity been completed?: No	
Start Date: 1/1/2021	End Date: 12/31/2021

BMP Name - 1.2 Address education and outreach for pollutants of concern
Staff Responsible: Stormwater Committee
<p>Description: The Stormwater Committee will identify locations in town where the MS4 discharges into impaired waters and provide educational outreach specific to the sources of that impairment. Targeted outreach efforts may include K-12 students, agricultural areas, commercial businesses, developers, homeowners, etc.</p> <p>The Stormwater Committee will distribute information on common sources of phosphorus, nitrogen, bacteria, and mercury pollution and how to prevent or reduce the amount reaching the MS4 and discharging into waterways as needed.</p> <p>The following specific topics may be covered to address the phosphorus, nitrogen, bacteria, and mercury impairments that may potentially exist in South Windsor:</p> <p>Phosphorus: Septic Systems; Fertilizer Use; Grass clippings and leaves management; Discharge of sediment; Other erosive surfaces</p> <p>Nitrogen: Septic Systems; Fertilizer use</p> <p>Bacteria: Septic systems; Sanitary cross connections; Waterfowl; Pet Waste; Manure piles</p> <p>Mercury: Thermometers; Thermostats; Fluorescent lights; Button Cell Batteries</p>
Measurable Goals: Distribute information on pollutants of concern
Implementation Plan and Schedule Comments: Implementation date 7/1/2018. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Address education and outreach for pollutants of concern	
Description: The stormwater committee discussed using the distribution of flyers through mass mailings to neighborhoods located within the MS4 that discharge to identified impaired waterways as a way to communicate sources of pollution to the public. The committee also suggested utilizing the Town's web page as a resource to provide information to the general public. No progress was made in 2021 due to the COVID-19 pandemic and staffing constraints.	
Has the activity been completed?: No	
Start Date: 7/1/2018	End Date: 7/1/2022

BMP Name - 1.3 Acquire / Display Education Materials
Staff Responsible: Stormwater Committee
Description: The Stormwater Committee will collect and distribute stormwater educational materials that at a minimum, address the impacts of the following on water quality: septic systems, application of fertilizers/pesticides/herbicides, grass clippings & leaf management, detergent use, waterfowl, pet waste, and illicit discharges and improper disposal of wastes into the MS4.
Materials will be reviewed annually and updated as needed. Topics on Phosphorous, Nitrogen, Bacteria, and Mercury will be addressed based on what impairments have been found in the town's waterways.
Measurable Goals: Collect and distribute stormwater educational materials
Implementation Plan and Schedule Comments: Implementation date 7/1/2017. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Collect and distribute stormwater educational materials	
Description: The EPA's informational brochure entitled "Step by Step: a citizen's guide to curbing polluted runoff" has been on display for distribution at the Town Hall and the Public Library. Also on display and available for distribution is a coloring book entitled "Stormwater", which is made available by the University of Kentucky Cooperative Extension Service and targets a younger audience.	
The stormwater committee discussed looking at various resources for additional stormwater educational materials. Potential resources include the CTDEEP website and UCONN CLEAR website. No progress was made in 2021 due to the COVID-19 pandemic and staffing constraints.	
Evaluation: Topics on Phosphorous, Nitrogen, Bacteria, and Mercury need to be added to the Town's library of stormwater educational material.	
Has the activity been completed?: No	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Name - 1.4 Web Based MS4 Library
Staff Responsible: Engineering Department
Description: The Town of South Windsor will maintain their own web based MS4 library or link to UConn NEMO's comprehensive online library of stormwater educational material. The Town of South Windsor website (URL) would link directly to this web-based library and promote the availability of these materials. Links to additional web sites including CTDEEP, EPA and other stormwater resources may also be incorporated into the web site.
Materials on the website will be tailored to the various pollutants found within the town's MS4 and also provide municipal specific education materials where applicable.
The Stormwater Committee will look at all available sources of material and ways to promote the availability of these materials.
Measurable Goals: Develop web based MS4 library
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2020. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Development of web based MS4 library	
Description: The Engineering Department has developed a stormwater web page that is posted on the Town's website. The stormwater committee discussed utilizing the web page to develop a MS4 library. One suggestion was to develop a "Frequently Asked Questions" section that the public can refer to for information on the stormwater program.	
Evaluation: More information needs to be added to the MS4 library.	
Has the activity been completed?: In Progress	
Start Date: 7/1/2020	End Date: 7/1/2022

BMP Activity - 2. Cont'd development of web based MS4 library	
Description: The Engineering Department is currently in the process of updating and improving the stormwater web page that is posted on the Town's website. The Planning Department has also added an educational link with information on low impact development (LID) under the department's web page under "General Education Resources - Land Use".	
Evaluation: The stormwater web page needs to be improved to become more "user friendly" and more information needs to be provided.	
Has the activity been completed?: In Progress	
Start Date: 7/1/2018	End Date: 7/1/2022

BMP Name - 1.5 Educational Displays
Staff Responsible: Public Works
<p>Description: The Town of South Windsor Public Works Department currently sponsors an annual Public Works Day event, which targets elementary age school children. The Department has constructed a three-dimensional "Stormwater Cycle" display, which is presented during the event, and it has proven to be very popular with the children and teachers. Posters depicting the water cycle and pamphlets regarding public action to reduce pollutants in stormwater runoff are also distributed at the display. In addition, the Public Works Department has presented the "Stormwater Cycle" display at other public events such as the Annual Wapping Fair, Family Awareness Day, The South Windsor Strawberry Festival, and Annual Heritage Day.</p> <p>In October of 2007, the South Windsor Public Works Department received an award from the Connecticut Transportation Institute for innovation in educational displays with the construction of the "Stormwater Cycle" display.</p> <p>The Public Works Department will continue to display the "Stormwater Cycle" at annual public events. The Stormwater Committee and Town staff will evaluate the program annually and implement modifications to enhance the program as needed.</p>
Measurable Goals: Educate students and the public on common stormwater topics
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 4. Annual Public Works Day - 2021
Description: The annual Public Works Day was held virtually in 2021, due to the COVID-19 pandemic. As such, the three-dimensional "Stormwater Cycle" display originally constructed by the Public Works Department was not on display.
Evaluation: The display was popular with the students and teachers at previous Public Works Days and will be utilized for future in-person events.

Has the activity been completed?: Ongoing	
Start Date: 1/1/2021	End Date: 12/31/2021

BMP Name - 1.6 Proper Disposal of Household Hazardous Wastes
Staff Responsible: Public Works
<p>Description: In past years, household hazardous wastes (HHW) were collected and safely disposed of through a regional cooperation effort sponsored by the Metropolitan District (MDC). Recently, the MDC chose to limit this program to MDC member towns. Consequently, the Town of South Windsor entered into an agreement with the Capital Regional East Operating Committee (CREOC) for collection and proper disposal of HHW starting in July 2013. CREOC membership includes the towns of Glastonbury, Hebron, Manchester, Marlborough, Somers, Stafford, Vernon, and South Windsor.</p> <p>Manchester is now the home of a regional center for HHW collection. This center, built with grant funding from the DEEP, is operated by CREOC and is located adjacent to the Manchester Landfill on Olcott Street.</p> <p>The South Windsor Public Works Department distributes a Hazardous Household Waste flyer which provides information on household hazardous wastes and collection dates with locations. This information is also available on the Town's website.</p> <p>In addition to the hazardous waste program, the Town of South Windsor also operates the town wide Recycling Program. The South Windsor Public Works Department distributes a recycling flyer annually. As part of the recycling program, waste oil, antifreeze, and used oil filters are collected. Information on the Town's recycling program is also available on the town's website.</p> <p>Since year 2011, the Town runs a program to collect and recycle electronic wastes. The program provides a site at the Town Hall for residents to drop off electronic devices free of charge and collection events are scheduled quarterly each year.</p> <p>The South Windsor Public Works Department will continue to administer the Hazardous Waste Collection and Recycling Programs. The Stormwater Committee and the Public Works Department will evaluate the programs on an annual basis and implement changes as needed or required.</p>
Measurable Goals: Educate public on proper disposal of hazardous wastes
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 5. Hazardous waste and recycling program - 2021	
Description: Hazardous waste collection days sponsored by CREOC were held on 4/3, 5/1, 6/5, 8/28, 9/25, and 10/30 in year 2021. Residents were again able to participate in the PaintCare take back program also sponsored by CREOC. The Town also continued with its Electronic Recycling Program with scheduled collection events on 1/9, 3/6, 5/1, 7/10, 9/11, and 11/6 in year 2021.	
Evaluation: The Town's hazardous waste and recycling program continues to be a success in educating the public on proper disposal of hazardous wastes.	
Has the activity been completed?: Yes	
Start Date: 1/1/2021	End Date: 12/31/2021

BMP Name - 1.7 Tributary Signage
Staff Responsible: Public Works
Description: A Tributary Signage Program has been developed by Town staff in which a total of 32 roadway crossings have been identified throughout the town for placement of signage identifying the particular waterbody being crossed, to increase public awareness. Working in conjunction with the Department of Public Works, Town Staff developed a list of the locations of the crossings as an inventory. To date, all of the signage has been fabricated and installed for all 32 roadway crossings by Public Works personnel.
The Department of Public Works will inspect the sign inventory on an annual basis and replace any missing or damaged signs as necessary.
Measurable Goals: Increase public awareness of receiving waterbodies located in town
Implementation Partnership:
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017. Continues until permit expires.
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Continuation of Tributary Signage Program	
Description: The Town's Public Works Department inspected all of the tributary signs located in town and replaced any signs that were missing or damaged.	
Evaluation: This program continues to be successful in identifying the particular waterbody being crossed, increasing public awareness.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

2. Public Involvement/Participation (Section 6(a)(2) / page 21)

Control Measure
(2) Public Involvement and Participation
<p>Description: To satisfy this minimum control measure, the operator of a regulated small MS4 must:</p> <ol style="list-style-type: none"> 1. Comply with applicable State, Tribal, and local public notice requirements; and 2. Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure. <p>EPA believes that the public can provide valuable input and assistance to a regulated small MS4's municipal storm water management program and, therefore, suggests that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for:</p> <ol style="list-style-type: none"> 1. Broader public support since citizens who participate in the development and decision making process are partially responsible for the program and, therefore, may be less likely to raise legal challenges to the program and more likely to take an active role in its implementation; 2. Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of citizen volunteers; 3. A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and 4. A conduit to other programs as citizens involved in the storm water program development process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program on a watershed basis, as encouraged by EPA.

Measurable Goals: 1. Involve the community in planning and implementing the town's stormwater management activities.

2. Provide a minimum 30 day notice to the public for this plan and annual reports.

Was the Implementation Schedule for Year 5 met? Yes

Year 5 Evaluation Summary: The Town of South Windsor has complied with the public notice requirements of the General Permit for the Stormwater Management Plan and Annual Report. As of this date, there have been no reports or comments generated by the public regarding the SWMP and Annual Report.

The Town will also look to continue outreach activities with various community organizations as they become available - see BMP's 2.3 and 2.4 for information on current public participation efforts.

BMP	Staff Responsible	Target Completion Date	Measurable Goal
2.1 Comply with public notice requirements for the Stormwater Management Plan and Annual Reports	Engineering Department	7/1/2022	Comply with public notice requirements
2.2 Implement Public Involvement / Participation Program	Stormwater Committee	7/1/2022	Review BMP's that will possibly be utilized.
2.3 Storm Drain Marking / Stenciling	Environmental Planner	7/1/2022	Demonstrate direct link between storm sewer system and surface waters
2.4 Wetland & Riparian Buffer Plantings	Environmental Planner	7/1/2022	Increased participation and awareness by the general public

BMP Name - 2.1 Comply with public notice requirements for the Stormwater Management Plan and Annual Reports

Staff Responsible: Engineering Department

Description: The Town of South Windsor will publish a public notice on its website (www.southwindsor.org), and in the newspaper. The notice will provide a contact name, phone number, address, and email to whom the public can send comments. Additionally, the SWMP and the Annual Reports will be publicly accessible on the website and in The Town of South Windsor Town Hall and/or library. The public notice will allow for a 30-day comment period, at a minimum.

Measurable Goals: Comply with public notice requirements

Implementation Partnership:

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017. Continues until permit expires.

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 1. Availability of Town's SWMP announced to public

Description: A draft of the Town's Stormwater Management Plan was made available to the public on April 1, 2017. A hard copy of the plan was available in the office of the Engineering Department at the Town Hall. In addition, a digital copy of the plan was published electronically on the Town's web page under Departments - Engineering - Storm Water Management Program - Storm Water Annual Reports.

Evaluation: BMP activity has been completed.

Has the activity been completed?: Yes

Attachment: <https://www.southwindsor-ct.gov/engineering/storm-water-management-program/pages/storm-water-annual-reports>

Start Date: 4/1/2017

End Date: 7/1/2022

BMP Activity - 4. Availability of the Town's 2020 Annual Report announced to public

Description: A draft of the Town's 2020 Annual report was made available to the public in April 2021. A hard copy of the report is available in the office of the Engineering Department at the Town Hall. In addition, a digital copy of the report has been published electronically on the Town's web page under Departments - Engineering - Storm Water Management Program - Storm Water Annual Reports.

Evaluation: BMP is complete

Has the activity been completed?: Yes

Attachments: <https://www.southwindsor-ct.gov/engineering/storm-water-management-program/pages/storm-water-annual-reports>

Start Date: 4/1/2020

End Date: 4/1/2021

BMP Name - 2.2 Implement Public Involvement / Participation Program

Staff Responsible: Stormwater Committee

Description: The Stormwater Committee will develop and implement a public involvement/participation program that encourages the public to have an active role in the Town's Stormwater Management Program.

Best Management Practices (BMP's) that will possibly be utilized include Storm Drain Marking/Stenciling, Wetland & Riparian Buffer Plantings, and other outreach activities to various community organizations that may become available.

The Stormwater Committee will review the various BMP's utilized on an annual basis to determine their effectiveness and make modifications as required.

Measurable Goals: Review BMP's that will possibly be utilized.

Implementation Plan and Schedule Comments: Implementation Date 7/1/2018. Continues until permit expires.

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Name - 2.3 Storm Drain Marking / Stenciling

Staff Responsible: Environmental Planner

Description: A priority system will be developed to determine which areas in town should be targeted for the program first.

Measurable Goals: Demonstrate direct link between storm sewer system and surface waters

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2019.

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 2. Storm Drain Marking / Stenciling

Description: The Town's Environmental Planner reported that there was money available in the Open Space Fund to purchase Storm Drain Markers. He is currently looking at various markers available to purchase on-line and will look to coordinate with local scout troops and other civic groups to organize a public project. The Stormwater Committee has identified the Farnham Estates neighborhood in the northeast section of town,

which discharges stormwater to impaired waters as a top priority. No progress was made in 2021 due to the COVID-19 pandemic and staffing constraints.	
Has the activity been completed?: No	
Start Date: 7/1/2019	End Date: 7/1/2022

BMP Name - 2.4 Wetland & Riparian Buffer Plantings
Staff Responsible: Environmental Planner
Description: The Stormwater Committee will continue to sponsor annual volunteer activities as determined by availability of funding and which areas in town should be targeted for the program.
Measurable Goals: Increased participation and awareness by the general public
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2019
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

3. Illicit Discharge Detection and Elimination (Section 6(a)(3) and Appendix B / page 22)

Control Measure
(3) Illicit Discharge Detection and Elimination
Description: This minimum control measure outlines a program to detect and eliminate current illicit discharges to the MS4 and prevent further illicit discharges in the future. All activities for this measure will be completed in The Town of South Windsor's priority areas (urbanized area, catchment areas with directly connected impervious area (DCIA) > 11%, and outfalls that discharge to impaired waters).
Measurable Goals: 1. Find the source of any illicit discharges; eliminate those illicit discharges; and ensure ongoing screening and tracking to prevent and eliminate future illicit discharges.
Was the Implementation Schedule for Year 5 met? Yes Year 5 Evaluation Summary: The Town of South Windsor continues to make progress on several of the BMP's associated with IDDE. A final draft of the Town's IDDE Program has been completed and the program requirements have begun to be implemented. Town Staff has completed GIS base mapping of the MS4 in areas that discharge to impaired waters on the north side of Town.

BMP	Staff Responsible	Target Completion Date	Measurable Goal
3.1 Develop written IDDE plan	Engineering Department	7/1/2019	Develop written plan of IDDE program
3.2 Develop list and map of all MS4 outfalls and interconnections in the town	Engineering Department	7/1/2019	Develop database of all outfalls located within the town.
3.3 Develop citizen reporting program	Stormwater Committee	7/1/2019	Develop citizen reporting program
3.4 Establish legal authority to prohibit illicit discharges	Stormwater Committee	7/1/2019	Establish Town illicit discharge ordinance
3.5 Develop record keeping system for IDDE tracking	Stormwater Committee	7/1/2019	Develop record keeping system for IDDE tracking
3.6 Address IDDE in areas with pollutants of concern	Stormwater Committee	7/1/2019	Perform assessment of on-site sanitary systems located in town

3.7 Detailed MS4 infrastructure mapping	Engineering Department	7/1/2019	Develop detailed map of Town's MS4 within priority areas
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BMP Name - 3.1 Develop written IDDE plan			
Staff Responsible: Engineering Department			
Description: The Town of South Windsor will develop a written IDDE plan to detect, locate and eliminate illicit discharges (to the maximum extent practicable) from the MS4 within The Town of South Windsor'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 discharge of pollutants. Also, the IDDE plan will outline follow-up screening and illicit discharge prevention procedures.			
Measurable Goals: Develop written plan of IDDE program			
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018			
Targeted Completion Date: 7/1/2019			
Has the BMP been completed? Complete			

BMP Activity - 4. Develop written IDDE program	
Description: A final draft of the Town's IDDE Program has been completed and the program requirements have begun to be implemented.	
Evaluation: Task has been completed. The final draft will be posted on the Town's stormwater website.	
Has the activity been completed?: Yes	
Start Date: 1/1/2020	End Date: 3/16/2020

BMP Name - 3.2 Develop list and map of all MS4 outfalls and interconnections in the town	
Staff Responsible: Engineering Department	
Description: The Town of South Windsor will 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. Each entry will include:	
<p>a. Type, material, size, shape and location (identified with a latitude and longitude) of conveyance, outfall or channelized flow (e.g. 24" concrete pipe);</p> <p>b. the name, water body ID and Surface Water Quality Classification of the immediate surface waterbody or wetland to which the stormwater runoff discharges;</p> <p>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;</p> <p>d. the name of the watershed, including the subregional drainage basin number (available from CT ECO at www.cteco.uconn.edu) in which the discharge is located;</p> <p>e. date of most recent inspection of the outfall, the condition, and any indicators of potential non-stormwater discharges as of most recent inspection;</p>	
The database will be exported into excel format for annual reports. [Include your process for keeping the spreadsheet up to date here]	

Measurable Goals: Develop database of all outfalls located within the town.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Develop list and map of all MS4 outfalls and interconnections in town	
Description: The town is in the process of updating a database of all MS4 outfalls and interconnections located in town. To date, 311 outfalls have been located, photographed, and cataloged.	
Along with utilizing the mapping of outfalls to help identify potential illicit discharges throughout the town, this information is also being used to identify storm sewer system structures (in this case - outfalls) that are in need of repair. Refer to Section 6.07 of this report for additional information regarding upgrades/repairs to the storm sewer system.	
Evaluation: Map(s) and database needs to be updated.	
Has the activity been completed?: No	
Start Date: 7/1/2017	End Date: 7/1/2019

BMP Activity - 2. Development of database and outfall screenings in priority areas	
Description: The Engineering Department has completed GIS base mapping of the MS4 in three local drainage basin areas that discharge to impaired waters - the Scantic River, Dry Brook, and Farm Brook. The mapping was field edited and modified as needed and data points sent to Barton & Loguidice, LLC for screening and testing of outfalls. See Parts II and III of this report for results of that screening.	
Evaluation: The Town will continue to focus on each regional drainage basin to verify outfall locations slated for screening and testing based on priority ranking.	
Has the activity been completed?: No	
Start Date: 7/1/2019	End Date: 7/1/2022

BMP Name - 3.3 Develop citizen reporting program
Staff Responsible: Stormwater Committee
Description: The Town of South Windsor will establish a system to allow for citizen reporting of suspected illicit discharges into the stormwater system. The system will include an email address and phone number or other means for submitting a report. The Town of South Windsor will affirmatively investigate and eliminate any illicit discharges for which a time and location of discharge are provided. The Town of South Windsor will promptly inspect the reported outfall or manhole and proceed according to the requirements of the written IDDE program. All citizen reports and responses will be included in The Town of South Windsor's annual report.
Measurable Goals: Develop citizen reporting program
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Develop citizen reporting program
Description: The town will utilize a new online and mobile tool called "Connect South Windsor" which will allow residents to report on stormwater issues. "Connect South Windsor" can be accessed on the town's website: http://www.southwindsor.org/Publicstuff , and is also available on any mobile phone device or tablet using Apple, Android or the Windows app. The stormwater committee will work with the town's IT department to create a selection from the drop down list of available issues to report on. Instructions will be

posted on the town's storm water web page on how to report a stormwater issue or illicit discharge using "Connect South Windsor".	
Has the activity been completed?: No	
Start Date: 7/1/2018	End Date: 7/1/2022

BMP Name - 3.4 Establish legal authority to prohibit illicit discharges
Staff Responsible: Stormwater Committee
<p>Description: The Town of South Windsor will 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. The authority will:</p> <ul style="list-style-type: none"> a. prohibit illicit discharges to its storm sewer system and require removal of such discharges consistent with the deadlines outlined in the MS4 general; and b. authorize the investigation of suspected illicit discharges and elimination of illicit discharge, including from properties not owned or controlled by the MS4 that discharge to the MS4 c. 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 d. authorize appropriate enforcement procedures and actions; e. authorize fines or penalties and/or recoup costs incurred by the permittee from anyone creating an illicit discharge or spilling or dumping.
Measurable Goals: Establish Town illicit discharge ordinance
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018
Targeted Completion Date: 7/1/2019
Has the BMP been completed? Ongoing

BMP Activity - 2. Draft Illicit Discharge Ordinance	
Description: A draft Illicit Discharge Ordinance has been written utilizing a template provided by UCONN CLEAR. The UConn Center for Land Use Education and Research (CLEAR) provides information, education and assistance to municipalities and land use decision makers throughout the State.	
Evaluation: The draft ordinance is being reviewed by Town Staff and the Town attorney before being adopted by the Town Council.	
Has the activity been completed?: No	
Start Date: 7/1/2018	End Date: 7/1/2022

BMP Name - 3.5 Develop record keeping system for IDDE tracking
Staff Responsible: Stormwater Committee
<p>Description: The Town of South Windsor 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.</p> <p>In addition, the Town will develop and maintain an SSO inventory that records 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.</p>

This inventory may also:

- include all known SSOs to their MS4 in the past 5 years (July 1, 2012 – June 30, 2017);
- continue to be updated to track future SSOs; and
- be included in Annual Reports.

Measurable Goals: Develop record keeping system for IDDE tracking

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018

Targeted Completion Date: 7/1/2019

Has the BMP been completed? Ongoing

BMP Activity - 1. Develop record keeping system for IDDE tracking

Description: The stormwater committee will work with the Town's consultant to develop a record keeping system to track illicit discharges. No progress was made in 2021 due to the COVID-19 pandemic and staffing constraints.

Has the activity been completed?: No

Start Date: 7/1/2018

End Date: 7/1/2022

BMP Name - 3.6 Address IDDE in areas with pollutants of concern

Staff Responsible: Stormwater Committee

Description: The Town of South Windsor will identify which areas in town are most likely to contribute nitrogen, phosphorus, and bacteria to the MS4. This assessment will consider historic on-site sanitary 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 Department for corrective action.

Measurable Goals: Perform assessment of on-site sanitary systems located in town

Implementation Plan and Schedule Comments: Implementation Plan - 7/1/2018

Targeted Completion Date: 7/1/2019

Has the BMP been completed? Ongoing

BMP Activity - 1. Develop inventory of known septic systems in Town

Description: The stormwater committee will coordinate with the Town's Health Officer to develop an inventory of known septic systems and identify any known historic on-site sanitary system failures. Septic failures that occurred in 2021 are tabulated at the end of this section.

Has the activity been completed?: In Progress

Start Date: 7/1/2018

End Date: 7/1/2022

BMP Name - 3.7 Detailed MS4 infrastructure mapping

Staff Responsible: Engineering Department

Description: The Town of South Windsor will develop a detailed map of the MS4 to include:

• Components of the MS4 within priority areas:

- o Outfalls & receiving waters;
- o Pipes; open channel conveyances; catch basins; manholes;
- o Interconnections with other MS4s and other storm sewer systems;
- o Municipally-owned stormwater treatment structures (e.g. detention & retention ponds, infiltration systems, bioretention areas, water quality swales, gross

particle separators, oil/water separators, or other systems);
o Catchment delineations for each outfall;
o Impaired water bodies identified by name and use impairment as defined by the most recent integrated water quality report;
o Municipal sanitary sewer system (if available);
o Municipal combined sewer system (if applicable).

The TOWN will update the map as new information becomes available and will report on the progress of the development of this map in the annual report.

Measurable Goals: Develop detailed map of Town's MS4 within priority areas

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018

Targeted Completion Date: 7/1/2019

Has the BMP been completed? Ongoing

BMP Activity - 2. Develop detailed map(s) of MS4 within priority areas

Description: The Engineering Department has completed GIS base mapping of the MS4 in three local drainage basin areas that discharge to impaired waters - the Scantic River, Dry Brook, and Farm Brook. The mapping was field edited and modified as needed.

Evaluation: The Town's MS4 mapping is substantially complete.

Has the activity been completed?: No

Start Date: 7/1/2019

End Date: 7/1/2022

Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table:

Location	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed	Sample data
South Windsor WPCF, 1 Vibert Rd South Windsor, CT 06074	12/10/2021 ~10 min.	MS4	~50 gal	Pumping to a tanker truck with valve in an incorrect position. Pump started on its own when driver hit a button on outside control panel.	Asked drivers not to hit start button on outside screen until talking to an operator.	N/A
115 Pine Tree Lane, South Windsor, CT 06074	8/22/2021 ~90 min.	MS4	Unknown	Basement pumped out into road and reached storm drain. Failure of town owned pump station UPS. When the UPS failed the PLC shut off, effectively disabling the station.	Station run in manual mode until replacement UPS installed.	N/A
600 Nutmeg Rd North	7/22/2021	MS4 – Discharges to Stoughton Brook tributary	Unknown	The site retention pond at 600 Nutmeg Road North was inadequately treating site stormwater runoff that was contaminated from onsite operations and solid waste management. The retention pond discharges directly to the MS4.	The site owner had the retention pond cleaned and implemented site stormwater BMPs.	Yes

Provide a summary of actions taken to address septic failures using the table below:

Method used to track illicit discharge reports	Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known	Dept. / Person responsible
Permitting File System	Berle Rd – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Gordon Dr – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Long Hill Rd – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Buckland Rd – Commercial	Permit for septic tank replacement approved.	None	South Windsor Health Department
Permitting File System	Griffin Rd – Residential	Permit for building sewer pipe repair approved.	None	South Windsor Health Department
Permitting File System	John Fitch Blvd – Commercial	Permit for septic tank replacement approved.	None	South Windsor Health Department
Permitting File System	Long Hill Rd – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Griffin Rd – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Pleasant Valley Rd – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Main St – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department
Permitting File System	Greenfield Dr – Residential	Permit for full septic system replacement approved.	None	South Windsor Health Department

Note: Traditionally, septic failures are defined as sewage rising to the ground surface or backing up into the building. Typically, permits are pulled in the Town of South Windsor for septic repairs and replacements due to insufficiencies identified during septic inspections as part of a realty transaction process.

IDDE reporting metrics:

Metrics	
Estimated or actual number of MS4 outfalls	523
Estimated or actual number of interconnections	44
Outfall mapping complete	70%
Interconnection mapping complete	90%
System-wide mapping complete (detailed MS4 infrastructure)	75%
Outfall assessment and priority ranking	0%
Dry weather screening of all High and Low priority outfalls complete	49
Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	0%

4. Construction Site Runoff Control (Section 6(a)(4) / page 25)

Control Measure
(4) Construction Site Stormwater Runoff Control
Description: This minimum control measure outlines procedures for minimizing polluted stormwater runoff from activities that disturb one or more acres of land. In Town, this is determined on a site by site basis OR collectively as part of a larger plan.
Measurable Goals: 1. Minimize polluted stormwater runoff from construction sites and prevent it from carrying sediment into waterways via MS4 infrastructure.
Was the Implementation Schedule for Year 5 met? Year 5 Evaluation Summary: The Town of South Windsor will continue to administer its land use regulations to incorporate consideration of potential water quality impacts.

BMP	Staff Responsible	Target Completion Date	Measurable Goal
4.1 Implement, upgrade and enforce land use regulations (or other legal authority) to meet requirements of MS4 general permit	Planning Department	7/1/2022	Review and upgrade the Town's current land use regulations
4.2 Develop and implement plan for interdepartmental coordination of site plan review and approval	Planning Department	7/1/2022	Interdepartmental coordination of site plan review and approval
4.3 Review site plans for stormwater quality concerns	Environmental Planner	7/1/2022	Review site plans for stormwater quality concerns
4.4 Conduct Site Inspections	Environmental Planner	7/1/2022	Ensure the adequacy of all construction runoff control measures
4.5 Implement procedure to allow public comment on site development	Planning Department	7/1/2022	Allow public comment on site development
4.6 Implement procedure to notify developers about DEEP construction stormwater permit	Environmental Planner	7/1/2022	Inform developers about DEEP construction stormwater permit

BMP Name - 4.1 Implement, upgrade and enforce land use regulations (or other legal authority) to meet requirements of MS4 general permit
Staff Responsible: Planning Department
Description: The Town of South Windsor will revise its land use regulations to establish the legal authority to control stormwater runoff from construction sites by requiring: <ul style="list-style-type: none"> a. developers, construction site operators, or contractors 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 Town of South Windsor;

c. The Town of South Windsor is authorized 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 Town of South Windsor's MS4. 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 Town of South Windsor shall 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 Town of South Windsor's MS4 including short-term and long-term inspection and maintenance measures to be implemented by the private owner; and

e. The Town of South Windsor will control, through interagency or inter-jurisdictional agreements, the contribution of pollutants between the permittee's MS4 and MS4s owned or operated by others.

Measurable Goals: Review and upgrade the Town's current land use regulations

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 1. Current Town of South Windsor requirements

Description: The Town of South Windsor requires erosion and sediment controls for all projects in accordance with all state and federal regulations. Several documents are utilized for establishing guidelines and procedures for the use of erosion and sediment controls in planning, design, and construction for town projects and private development. These documents include the following:

TOSW Public Improvement Specifications

TOSW Subdivision Regulations

TOSW Inland Wetland/Watercourse and Conservation Regulations

TOSW Zoning regulations

CT Guidelines for Soil Erosion and Sediment Control, 2002

TOSW Public Improvement Specifications

The Public Improvement Specifications specifically address the requirements for storm drainage design, which includes pre and post development conditions for developed land, and the design of stormwater wetlands. These specifications also refer to the CTDOT Standard Specifications, Form 817.

TOSW Zoning and Subdivision Regulations

These regulations specifically address the requirements for submission of a conservation plan for all proposals and/or activities disturbing an area larger than one-half acre. The conservation plan functions as, and conforms to the requirements of an "Erosion and Sediment Control Plan", as set forth in Public Act 83-388, as amended. The guide for preparation of a conservation plan refers to the CT Guidelines for Soil Erosion and Sediment Control, 2002. The Planning & Zoning Commission typically requires a bond to ensure implementation of all erosion and sediment control measures outlined in the conservation plan. The amount of the bond is established by the Inland Wetland Agency/Conservation Commission, based upon recommendation of town staff and must be in place prior to commencement of any site work.

TOSW Inland Wetland/Watercourse and Conservation Regulations

The purpose of these regulations (see section 22a-36 of the Connecticut General Statutes as amended) is to protect the citizens of the town by making provisions for the protection, preservation, maintenance and use of the inland wetlands and watercourses by minimizing their disturbance and pollution.

Ordinances, Regulatory Mechanisms and Sanctions

The town has the authority to force corrective actions on behalf of the contractor or developer to comply with appropriate regulations and controls. In case of failure by the contractor or developer to perform pollution control work, the town shall arrange for the performance of required work by approved forces. The cost of such work shall be deducted from the Erosion and Sediment Control bond set by the IWACC. If the IWACC finds that the public health, safety or welfare requires emergency action, and incorporates a finding to that effect in its order, it may order summary suspension of the wetlands permit pending further proceedings and may issue a cease and desist order to the permittee directing him to immediately halt any and all regulated activities found to be in violation of the terms of the permit. In the event the cease and desist order is not obeyed, the Agency may bring an action pursuant to section 22a-44 of the Connecticut General Statutes, as amended.

Evaluation: The Stormwater Committee will continue to review the current land use regulations on a yearly basis and recommend changes if needed.

Has the activity been completed?: Yes

Start Date: 7/1/2017

End Date: 7/1/2022

BMP Name - 4.2 Develop and implement plan for interdepartmental coordination of site plan review and approval

Staff Responsible: Planning Department

Description: The Town of South Windsor's plan to coordinate the functions of all the departments and boards involved in the review, permitting, or approval of land disturbance projects is as follows:

The Planning Department is responsible for coordinating technical reviews by other town departments for all land development applications. The Planning Department schedules a monthly meeting with town staff to discuss each application as a group. In addition, pre-application meetings are often scheduled with private developers or property owners to review development requirements and discuss what is expected.

Measurable Goals: Interdepartmental coordination of site plan review and approval

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Yes

BMP Activity - 1. Interdepartmental coordination of site plan review and approval

Description: The Town of South Windsor will continue to coordinate with all departments and boards involved in the review, permitting, or approval of land disturbance projects.

Evaluation: The Town's interdepartmental coordination plan for site plan review and approval is successful and will continue through the duration of the permit.

Has the activity been completed?: Yes

Start Date: 7/1/2017

End Date: 7/1/2022

BMP Name - 4.3 Review site plans for stormwater quality concerns

Staff Responsible: Environmental Planner

Description: The Town of South Windsor will 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-half acre or more. The Town of South Windsor will also 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.

Measurable Goals: Review site plans for stormwater quality concerns

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Yes

BMP Activity - 1. Procedures for Site Plan Review	
<p>Description: Procedures for site plan review which incorporate consideration of potential water quality impacts are utilized by the town. Construction plans and specifications are reviewed by the town's Environmental Planner and the Town Engineer for conformance to the town's requirements.</p> <p>As part of the town's land use regulations, any activity that involves site construction requires submission of application and construction plans for approval by the town's regulatory agencies including the Planning and Zoning Commission and the Inland Wetlands Agency/Conservation Commission. If deemed necessary, the agencies hold a public hearing on an application if found to be in the best interest of the public. Permits are issued by the IWACC to specific applicants for conducting regulated activities upon approval, for a duration of five (5) years.</p> <p>Projects requiring registration under the General Permit for the Discharge of Stormwater associated with construction activities shall include site plans along with the permit application and a site specific stormwater pollution control plan for review and registration by the CTDEEP.</p>	
Evaluation: The Town's procedures for site plan review and approval is successful and will continue through the duration of the permit.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Name - 4.4 Conduct Site Inspections
Staff Responsible: Environmental Planner
Description: The town will perform construction site inspections and take enforcement actions if necessary to ensure the adequacy of the installation, maintenance, operation, and repair of all construction and post-construction runoff control measures.
Measurable Goals: Ensure the adequacy of all construction runoff control measures
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Procedures for Site Inspection and Enforcement of Control Measures
<p>Description: Site inspection and enforcement of control measures are utilized on all town projects and private site developments. Inspectors employed by the town are authorized to inspect all work performed and materials furnished for each project. The inspection may extend to all or any part of the work, and to the preparation or manufacture of the materials to be used including work and materials relating to construction site runoff control. Additional inspection is also provided by the environmental Planner.</p> <p>The Inland Wetlands Agency/Conservation Commission and/or its designated agent(s) make routine inspections of all activities for which permits have been issued under their regulations. If the agency finds that any person or entity is conducting an activity which can be expected to impair, alter or destroy the wetlands or watercourses of the Town of South Windsor, or can be expected to create a source of pollution, they may be issued a written warning or order to correct such facility or condition. If the agency finds that the public health, safety or welfare requires emergency action and incorporates a finding to that effect in its</p>

order, it may order summary suspension of the permit pending further proceedings and may issue a cease and desist order to the permittee directing him to immediately halt any and all regulated activities found to be in violation of the terms of the permit. In the event said cease and desist order is not obeyed, the agency may bring an action pursuant to Section 22a-44 of the Connecticut General Statutes, as amended.

The Town of South Windsor will continue site inspections and enforcement of control measures.

Evaluation: The stormwater committee will review and update, if needed, the site inspection and enforcement process throughout the duration of the permit.

Has the activity been completed?: Yes

Start Date: 7/1/2017

End Date: 7/1/2022

BMP Name - 4.5 Implement procedure to allow public comment on site development

Staff Responsible: Planning Department

Description: The Town of South Windsor's current procedure for public involvement in proposed and ongoing development and land disturbance activities is as follows:

For proposed developments, applicants are required to notify abutting property owners by certified mail of a scheduled public hearing. In addition, the town posts legal notices in the local newspaper and on the town's website notifying the general public of scheduled public hearings. Digital copies of site development plans are also posted on the website for viewing. This procedure is followed by both the Planning and Zoning Commission and the Inland Wetlands Agency/Conservation Commission.

Information or complaints submitted by the public for ongoing development and land disturbance activities are forwarded to the appropriate department within the town for consideration. Information related to construction site runoff is forwarded to and considered by the Environmental Planner and/or the Town Engineer / Public Works - Street Services Division.

Residents are encouraged to stop in at the Town Hall offices to review development plans and applications or lodge complaints regarding land disturbance activities. Residents can also utilize the new online and mobile tool called "Connect South Windsor" which allows residents to report on various issues. "Connect South Windsor" can be accessed on the town's website: <http://www.southwindsor.org/Publicstuff>, and is also available on any mobile phone device or tablet using Apple, Android or the Windows app.

Measurable Goals: Allow public comment on site development

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 1. Allow public comment on site development

Description: The Town of South Windsor will continue with the policies and procedures currently in place to receive public comment.

Evaluation: The stormwater committee will review and update, if needed, the policies and procedures currently in place to receive public comment, throughout the duration of the permit.

Has the activity been completed?: Yes

Start Date: 7/1/2017

End Date: 7/1/2022

BMP Name - 4.6 Implement procedure to notify developers about DEEP construction stormwater permit
Staff Responsible: Environmental Planner
Description: The Town of South Windsor will inform developers and contractors of their potential obligation to obtain authorization under CTDEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (construction general permit) if their project disturbs more than 1 acre of land and results in a point source discharge to Connecticut surface waters directly or through the Town of South Windsor's MS4. The Town of South Windsor will also require a copy of the Storm Water Pollution Control Plan be made available to the permittee upon request.
Measurable Goals: Inform developers about DEEP construction stormwater permit
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Inform developers about DEEP construction stormwater permit
Description: It is the policy of the Town of South Windsor to verbally advise developers and contractors of their potential obligation to obtain authorization under CTDEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (construction general permit).
Evaluation: The Town of South Windsor will continue with this policy to inform developers about the CTDEEP construction stormwater permit.
Has the activity been completed?: Yes
Start Date: 7/1/2017
End Date: 7/1/2022

5. Post-construction Stormwater Management (Section 6(a)(5) / page 27)

Control Measure
(5) Post-construction Stormwater Management in New Development or Redevelopment
Description: This minimum control measure outlines the Town of South Windsor's program to address stormwater runoff from new or re-development projects that disturb one or more acres of land.
Measurable Goals: 1. Mitigate the long-term impacts of new and re-development projects on water quality through proper use of low impact development and runoff reduction practices.
Was the Implementation Schedule for Year 5 met? Yes Year 5 Evaluation Summary: The Town of South Windsor is continuing to implement actions to update guidelines regarding LID/runoff reduction requirements, develop a long-term maintenance plan for detention basins and stormwater treatment structures, and calculate Directly Connected Impervious Areas (DCIA).

BMP	Staff Responsible	Target Completion Date	Measurable Goal
5.1 Establish or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Planning Department	7/1/2022	Update guidelines regarding LID and runoff reduction in site development planning and reduce regulatory barriers for implementing LID.
5.2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Planning Department	7/1/2022	Update regulations to enforce LID/runoff reduction requirements.

5.3 Implement long-term maintenance plan for stormwater basins and treatment structures	Public Works / Parks & Grounds	7/1/2022	Develop and implement a long-term maintenance plan for retention/detention basins and stormwater treatment structures.
5.4 Directly Connected Impervious Area (DCIA) Mapping	Engineering Department	7/1/2020	Complete DCIA mapping by July 1, 2020 and update from there on.
5.5 Address post-construction issues in areas with pollutants of concern	Environmental Planner	7/1/2022	Prioritize and correct identified problems consistent with Retrofit Plan in areas with pollutants of concern.

BMP Name - 5.1 Establish or update legal authority and guidelines regarding LID and runoff reduction in site development planning

Staff Responsible: Planning Department

Description: The Town of South Windsor will establish or update the existing legal authority by ordinance, bylaw, regulation, standard condition of approval, or other means to require developers and contractors seeking the town's approval to consider the use of low impact development (LID) and runoff reduction site planning and development practices that meet or exceed those LID and runoff reduction practices in the CT Stormwater Quality Manual prior to other stormwater management practices allowed in town's land use regulations, guidance or construction project requirements.

This legal authority will include the following standards:

- 1) for redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, the project must 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) if those retention standards cannot be met, the developer will be required to provide a report indicating why the standard could not be met and a mitigation project on another property or pay a fee to fund a DCIA retrofit.

In developing this legal authority, The Town of South Windsor will consider the following watershed protection elements to manage the impacts of stormwater on receiving waters:

- 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.
- g. Coordinate with state or local health officials to ensure no interference with performance of on-site septic systems.
- h. Consider the limitation of turf areas to those areas necessary to construct buildings, utilities, stormwater management measures, parking and access ways, and reasonable lawn areas and contouring necessary to prevent future site erosion.

In addition, The Town of South Windsor will review its current regulations - site planning requirements, zoning regulations, street design regulations, and infrastructure specifications with minimum size criteria for impervious cover (roads, parking lots, etc.) to identify and where appropriate, reduce or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices to the Maximum Extent Practicable.
Measurable Goals: Update guidelines regarding LID and runoff reduction in site development planning and reduce regulatory barriers for implementing LID.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2021
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Review guidelines regarding LID and runoff reduction in site development planning.	
Description: The Stormwater Committee and Planning Department has reviewed the current guidelines in the Town's site development regulations. Under Article 6.6.5 of the current zoning regulations (Storm Drainage), the design of any storm water management system shall be in accordance with the 2004 Connecticut Stormwater Quality Manual and consistent with the standards set forth in the Town's Public Improvement Specifications.	
The Town encourages the use of on-site natural filtration functions as a part of currently accepted BMP's in the reduction of sediment and pollutants and to minimize discharge of pollutants to ground and surface water. Where feasible, roof runoff is collected and reintroduced to the groundwater table via infiltration devices where soils and water table depths permit. Energy dissipaters and flow spreading are used to discharge sheet flows over lawns. Storm runoff generated from parking lots and road pavements that carry sands, road salts, oils, etc. are initially treated at catch basins where heavy particles are trapped in basin sumps, and then further treated in extended detention basins or engineered structures to remove more sediment, oil, grease, and other pollutants.	
The Town will update its regulations, as necessary, to improve compliance with MS4 general permit.	
Evaluation: The stormwater committee will review and update, if needed, the guidelines regarding LID and runoff reduction in site development planning currently in place, throughout the duration of the permit.	
Has the activity been completed?: In Progress	
Start Date: 7/1/2021	End Date: 7/1/2022

BMP Name - 5.2 Enforce LID/runoff reduction requirements for development and redevelopment projects
Staff Responsible: Planning Department
Description: The Town of South Windsor will require that parties responsible for new development or redevelopment projects follow the standards set forth by the legal authority identified in section 5.1 regarding the retention of stormwater on site.
Any systems designed and installed to meet these requirements must be consistent with the Connecticut Stormwater Quality Manual. If not consistent, a report must be provided detailing why that is not feasible.
Developers will also be required to consult with the local health official in areas with onsite septic systems to ensure any retention practices do not interfere with the functioning of those systems.
Measurable Goals: Update regulations to enforce LID/runoff reduction requirements.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2021
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Update regulations to enforce LID/runoff reduction requirements.	
Description: The Stormwater Committee and Planning Department will review the current procedures for review of site plan development and evaluate if any modifications to the existing regulations are required for the Town to request maintenance and operation plans for stormwater controls. Such modifications may include a requirement for private landowners to submit a report annually to the Town regarding maintenance and operation of their stormwater basins or structures, or maintain their maintenance records and produce the records upon request of the Town. This committee may also consider developing a standard condition of approval that allows the Town access to inspect structures.	
Has the activity been completed?: No	
Start Date: 7/1/2021	End Date: 7/1/2022

BMP Name - 5.3 Implement long-term maintenance plan for stormwater basins and treatment structures
Staff Responsible: Public Works / Parks & Grounds
Description: The Town of South Windsor will develop a maintenance plan for retention / detention basins 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 an annual inspection of those retention / detention ponds and stormwater treatment structures and removal of accumulated sediment and pollutants in excess of 50% design capacity.
Measurable Goals: Develop and implement a long-term maintenance plan for retention/detention basins and stormwater treatment structures.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2019
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Update detention basin inventory and database	
Description: In 2001, the Town compiled an inventory of known detention basins including Town owned facilities as well as privately owned. As of 2001, there were 91 known detention basins located throughout the town. The database included location, ownership, outlet type, and condition.	
The Engineering Department will work in conjunction with Public Works to update the database, assess condition of the basins, and prioritize the inspection and maintenance of basins located in the Town's priority areas first.	
Has the activity been completed?: No	
Start Date: 7/1/2019	End Date: 7/1/2022

BMP Name - 5.4 Directly Connected Impervious Area (DCIA) Mapping
Staff Responsible: Engineering Department
Description: The Town of South Windsor will follow guidance provided by CTDEEP and UConn CLEAR to calculate the Directly Connected Impervious Area (DCIA) that contributes stormwater runoff to each of its MS4 outfalls. Progress on this task will be documented in each Annual Report until completion.
Measurable Goals: Complete DCIA mapping by July 1, 2020 and update from there on.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2018
Targeted Completion Date: 7/1/2020
Has the BMP been completed? No

BMP Activity - 1. Mapping of Directly Connected Impervious Area (DCIA)	
Description: The Town is utilizing the existing mapping provided by CT ECO. The Town has contracted with B&L to calculate the Directly Connected Impervious Area that contributes stormwater runoff to each MS4 outfall, beginning with the priority areas first, utilizing the Town's GIS mapping software.	
Has the activity been completed?: In Progress	
Start Date: 7/1/2018	End Date: 7/1/2022

BMP Name - 5.5 Address post-construction issues in areas with pollutants of concern
Staff Responsible: Environmental Planner
Description: 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 in BMP 5.3, the Town of South Windsor will prioritize those areas for the DCIA retrofit program under minimum control measure 6 – Pollution Prevention/Good Housekeeping.
Measurable Goals: Prioritize and correct identified problems consistent with Retrofit Plan in areas with pollutants of concern.
Implementation Plan and Schedule Comments: Implementation Plan - 7/1/2019
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 1. Inspection of storm drainage infrastructure	
Description: The Environmental Planner will work with the Department of Public Works to conduct inspections of existing MS4 structures in areas with pollutants of concern to prioritize and correct identified problems.	
Has the activity been completed?: No	
Start Date: 7/1/2019	End Date: 7/1/2022

Post-Construction Stormwater Management reporting metrics:

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	TBD
DCIA disconnected (redevelopment plus retrofits)	0 acres this year
Retrofit projects completed	0
DCIA disconnected	0% this year / Unknown total since 2012
Estimated cost of retrofits	Unknown
Detention or retention ponds identified	81 total

6. Pollution Prevention/Good Housekeeping (Section 6(a)(6) / page 31)

Control Measure
(6) Pollution Prevention / Good Housekeeping
Description: This minimum control measure outlines a program to mitigate the impact of town operations and maintenance on town owned and/or operated properties and the MS4 itself to water quality.
The Town of South Windsor will implement an operations and maintenance program to prevent or reduce pollutant runoff from town facilities and protect water quality.
Measurable Goals: 1. Prevent or reduce pollutant runoff as a result of municipal operations.

Was the Implementation Schedule for Year 5 met? Yes

Year 5 Evaluation Summary: The Town of South Windsor will continue to implement an operations and maintenance program to mitigate impacts to water quality.

BMP's such as employee training, property maintenance, infrastructure repair, street sweeping, catch basin cleaning, and snow management practices are all on-going but are in the process of being evaluated and modified to meet the requirements of the General Permit as needed.

Other BMP's such as tracking projects that disconnect DCIA will be developed and implemented throughout the term of the permit.

BMP	Staff Responsible	Target Completion Date	Measurable Goal
6.01 Develop and implement formal employee training program	Public Works	7/1/2022	Continue providing on-the-job instruction and training to new and existing municipal employees related to stormwater management.
6.02 Implement MS4 property and operations maintenance	Public Works / Parks & Grounds	7/1/2022	The Town will monitor and evaluate all maintenance operations on Town-owned properties, parks, and other facilities to minimize the discharge of pollutants to its MS4.
6.03 Implement coordination with interconnected MS4s	Stormwater Committee	7/1/2022	Coordinate municipal operations with adjoining MS4's.
6.04 Develop and implement a program to control other sources of pollutants to the MS4	Stormwater Committee	7/1/2022	The Town shall annually review the list of stormwater general permit registrants, and identify non-permitted locations which may be potential contributors and use this data to adjust screening prioritization in the IDDE Plan as warranted.
6.05 Evaluate additional measures for discharges to impaired waters	Stormwater Committee	7/1/2022	Implement practices to minimize impacts from Nitrogen, Phosphorus, and Bacteria on impaired waters.
6.06 Track projects that disconnect DCIA	Planning Department	7/1/2022	The Town of South Windsor's goal will be to reduce 1% of its total DCIA acreage per year to the maximum extent possible. The Town will also incorporate all DCIA disconnections which occurred in the town since July 1, 2012 towards meeting this goal.
6.07 Develop and implement an infrastructure repair / rehabilitation program	Public Works	7/1/2022	Develop a formal policy on infrastructure repair, rehabilitation, and retrofits.
6.08 Develop and implement plan to identify and prioritize retrofit projects	Planning Department	7/1/2022	Develop plan to identify and prioritize retrofit projects.

6.09 Develop and implement street sweeping program	Public Works / Street Services	7/1/2022	The Town shall continue it's street sweeping program and document inspection results, dates of sweeping, curb miles swept, volume/mass of material collected, and method of reuse or disposal.
6.10 Develop and implement catch basin cleaning program	Public Works / Street Services	7/1/2022	The Town shall continue it's catch basin cleaning program and document the number of structures inspected and/or cleaned, and the volume/mass of material removed.
6.11 Develop and implement snow management practices	Public Works / Street Services	7/1/2022	

BMP Name - 6.01 Develop and implement formal employee training program
Staff Responsible: Public Works
<p>Description: The Town of South Windsor will continue its MS4 training program for town employees to increase awareness of water quality issues. Training will include:</p> <ul style="list-style-type: none"> • 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; and • Spill response protocols and responsibilities. <p>These trainings may also include regional or statewide trainings coordinated by UConn CLEAR or others.</p> <p>The training program will be administered by the Director of Public Works.</p>
Measurable Goals: Continue providing on-the-job instruction and training to new and existing municipal employees related to stormwater management.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - Stormwater Pollution Prevention Training Program
<p>Description: A Stormwater Pollution Prevention Plan (SWPPP) was developed for the Town's Public Works Facility in September 2011. As part of that plan, a training program was instituted to provide facility employees with the information and techniques required to assure the facility SWPPP is properly implemented.</p> <p>The training program consists of two components. The first aspect of the program is for employees to read the Operational Procedures for Stormwater Pollution Prevention which is contained in the SWPPP. The second aspect is attendance at courses for pollution prevention.</p> <p>In December 16, 2015, the Town's consultant (Anchor Engineering Services) provided training to all of the facility employees. Topics covered included Good Housekeeping, Litter Control, Sweeping, Maintaining Erosion and Sedimentation Control Devices, Spill Control and Cleanup, Vehicle and Equipment Washing, Stormwater Control Devices, and Materials Handling.</p>

Evaluation: The Stormwater Committee and Public Works will evaluate the training program to determine if additional training is required or will be beneficial. Training will also be scheduled for any new hires who have not yet been through the program.	
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Has the activity been completed?: No	
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Start Date: 7/1/2017	End Date: 7/1/2022
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BMP Name - 6.02 Implement MS4 property and operations maintenance
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Staff Responsible: Public Works / Parks & Grounds

<p>Description: The Town of South Windsor properties, parks, and other facilities that are owned, operated, or otherwise the legal responsibility of The Town of South Windsor will be maintained so as to minimize the discharge of pollutants to its MS4. Such maintenance will include, but not be limited to:</p>

(i) Parks and open space

The Town of South Windsor 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 considered may include:

- conducting soil testing and analysis to determine soil phosphorus levels,
- the 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;
- establish procedures for management of trash containers at parks (scheduled cleanings; sufficient number).

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

(ii) Pet waste management

The Town of South Windsor will identify locations 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 Town of South Windsor will implement targeted management efforts such as public education and enforcement (e.g. increased patrol for violators).

In The Town of South Windsor-owned recreational areas where dog walking is allowed, The Town of South Windsor will install educational signage, pet waste baggies, and disposal receptacles (or require carry-out).

The Town of South Windsor will document its efforts in its annual reports. The Town of South Windsor 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

The Town of South Windsor will identify lands where waterfowl congregate and feeding by the public occurs.

To raise awareness regarding the water quality impacts, The Town of South Windsor 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.

The Town of South Windsor will 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) The Town of South Windsor Buildings and facilities (schools under the jurisdiction of The Town of South Windsor, town offices, police and fire stations, pools, parking garages and other The Town of South Windsor-owned or operated buildings or utilities)

The Town of South Windsor 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;
- 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;
- ensure that all interior building floor drains are not connected to the MS4 and are appropriately permitted.

(v) Vehicles and Equipment

The Town of South Windsor will:

- establish procedures for the storage of The Town of South Windsor-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 Town of South Windsor and used by The Town of South Windsor 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.

(vi) Leaf Management

The Town of South Windsor will 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 Town of South Windsor.

Measurable Goals: The Town will monitor and evaluate all maintenance operations on Town-owned properties, parks, and other facilities to minimize the discharge of pollutants to its MS4.

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 1. Parks and Open Space Maintenance Program

Description: The Town of South Windsor follows procedures for fertilizer and chemical application to optimize growth and minimize the discharge of pollutants. For example, the Town is currently implementing a 0% phosphorus program for fertilizer application. Standard operating practices are adhered to for handling, storage, application, and disposal of all fertilizers and chemicals.

The Town has also adopted a maintenance program to reduce mowing frequencies in various areas of town where applicable. The Town utilizes mulching mowers so disposal of grass clippings is not a problem. All equipment is washed in a designated wash bay in the maintenance building.	
Evaluation: The Town will continue to implement current practices to minimize discharge of pollutants to its MS4. The Town will also evaluate current procedures for management of trash containers at all of its parks and grounds.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Activity - 2. Pet Waste Management	
Description: The Town of South Windsor targets the recreational areas in town where dog walking is allowed for education and enforcement of proper disposal of pet waste. At Nevers Road Park, there is a designated area called the "Bark Park" where educational signage has been installed, and disposal receptacles are provided. A local environmental waste handling business has been contracted to remove and properly dispose of the waste.	
Evaluation: The Town will continue to manage the proper disposal of pet waste at Nevers Road Park and will also evaluate current procedures at other parks and areas in town where dog walking is observed.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Activity - 3. Town Owned Buildings and Facilities	
Description: The Town owns and operates various buildings and facilities including pavilions and a public pool complex. All of these buildings and facilities are maintained to minimize the discharge of pollutants to the MS4.	
The Town's Public Works Facility and the Sewage Treatment Plant are already covered under a General Permit for the Discharge of Stormwater Associated with Industrial Activities. All other buildings and facilities are covered under this MS4 Permit.	
Evaluation: The Town will continue to evaluate the use, storage, and disposal of petroleum and non-petroleum products at all of its buildings and facilities and update on-the-job training procedures to ensure that employees responsible for handling these products know proper procedures. The Town will continue to implement Spill Prevention Plans, procedures for dumpsters and other waste management equipment, and sweeping of parking lots.	
The Town will also evaluate and verify if any interior building and facility floor drains are connected to the MS4 or are properly permitted.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Activity - 4. Vehicles and Equipment	
Description: The Town has established procedures for the storage and fueling of vehicles and equipment as incorporated into the Industrial Stormwater Permit for its facilities.	
To address the potential for polluted wash water entering the storm drainage system during routine maintenance/cleaning of trucks and equipment, a vehicle wash station has been constructed in one of the bays of the Public Works Garage. The wash station utilizes a grit chamber to collect sand and debris, which is	

periodically cleaned. Wash water is then discharged into the sanitary sewer system, which is ultimately treated at the Town's Wastewater Treatment Plant.	
Evaluation: The Town has established procedures which address storage, cleaning, and fueling of vehicles and equipment to minimize the potential for discharge of pollutants to the MS4.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Activity - 5. Leaf Management	
Description: The Town has had a Town-wide leaf collection program for many years. Leaves are picked up curbside in late fall on all public streets, usually with two passes through each district. There is also a Leaf Bag collection that takes place on private roads. Residents also have the option of bringing leaves to the compost site at the Public Works Facility as well.	
The Town performs a leaf composting operation at the Public Works Facility in a designated area that does not impact any nearby waterbodies.	
Evaluation: The Town will continue the Town-wide leaf collection program, as long as the program is funded.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

BMP Name - 6.03 Implement coordination with interconnected MS4s
Staff Responsible: Stormwater Committee
Description: The Town of South Windsor will 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.
Measurable Goals: Coordinate municipal operations with adjoining MS4's.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2020
Targeted Completion Date: 7/1/2022
Has the BMP been completed? No

BMP Name - 6.04 Develop and implement a program to control other sources of pollutants to the MS4
Staff Responsible: Stormwater Committee
Description: The Town of South Windsor will 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 a CT DEEP stormwater permit.
Measurable Goals: The Town shall annually review the list of stormwater general permit registrants, and identify non-permitted locations which may be potential contributors and use this data to adjust screening prioritization in the IDDE Plan as warranted.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2020
Targeted Completion Date: 7/1/2022
Has the BMP been completed? No

BMP Name - 6.05 Evaluate additional measures for discharges to impaired waters
Staff Responsible: Stormwater Committee
Description: (i) For waters for which Nitrogen or Phosphorus is a Stormwater Pollutant of Concern:

On The Town of South Windsor-owned or -operated lands, The Town of South Windsor 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. Each Annual Report will 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 The Town of South Windsor-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 Town of South Windsor will develop, fund, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. Each Annual Report will 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 The Town of South Windsor-owned or -operated lands, prohibit the feeding of geese or waterfowl and implement a program to manage geese and waterfowl populations. Each Annual Report will discuss the actions taken to implement this program.

Measurable Goals: Implement practices to minimize impacts from Nitrogen, Phosphorus, and Bacteria on impaired waters.

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2020

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 1. Turf Management Practices and Procedures Policy

Description: The Town of South Windsor follows procedures for fertilizer and chemical application to optimize growth and minimize the discharge of pollutants. For example, the Town is currently implementing a 0% phosphorus program for fertilizer application. Standard operating practices are adhered to for handling, storage, application, and disposal of all fertilizers and chemicals.

The Town has also adopted a maintenance program to reduce mowing frequencies in various areas of town where applicable. The Town utilizes mulching mowers so disposal of grass clippings is not a problem. All equipment is washed in a designated wash bay in the maintenance building.

Evaluation: The Town will continue to implement current practices to minimize discharge of pollutants to its MS4.

Has the activity been completed?: Yes

Start Date: 7/1/2017

End Date: 7/1/2022

BMP Name - 6.06 Track projects that disconnect DCIA

Staff Responsible: Planning Department

Description: The Town of South Windsor will annually track the total acreage of Directly Connected Impervious Area (DCIA) that is disconnected from the MS4 as a result of redevelopment or retrofit projects within the town. For each retrofit/redevelopment project, The Town of South Windsor will document the amount of existing DCIA that is disconnected. The total amount of disconnected DCIA will be reported each year in the Annual Report.

Measurable Goals: The Town of South Windsor's goal will be to reduce 1% of its total DCIA acreage per year to the maximum extent possible. The Town will also incorporate all DCIA disconnections which occurred in the town since July 1, 2012 towards meeting this goal.

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2021

Targeted Completion Date: 7/1/2022

Has the BMP been completed? No

BMP Name - 6.07 Develop and implement an infrastructure repair / rehabilitation program
Staff Responsible: Public Works
Description: The Town of South Windsor will continue its program to identify MS4 structures to repair, rehabilitate, or upgrade to reduce or eliminate the discharge of pollutants into water bodies. This program will be responsive to new information on outfalls discharging pollutants, impaired waters, inspections, or observations made during outfall mapping under the IDDE section of this plan.
Measurable Goals: Develop a formal policy on infrastructure repair, rehabilitation, and retrofits.
Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Activity - 5. Repair of Existing MS4 Structures 2020-2021	
Description: There were 98 structures repaired or rebuilt by the Town's Public Works Department or private contractors in fiscal year 2020-2021.	
Evaluation: The Town will continue with inspection of its MS4 structures. Repairs will be done as funding becomes available.	
Has the activity been completed?: Yes	
Start Date: 7/1/2020	End Date: 7/1/2021

BMP Name - 6.08 Develop and implement plan to identify and prioritize retrofit projects
Staff Responsible: Planning Department
Description: The Town of South Windsor will develop a Retrofit Project Plan to identify and prioritize potential DCIA disconnection projects. Prioritization will be based on several factors, including whether the project lies within one of the MS4 priority areas (urbanized area, DCIA > 11%, discharge to impaired waters). The Town of South Windsor will include in its annual report for the third year of the permit (2020-2021) its identification and prioritization process, a rationale for the selection of projects to be implemented, and the total acres of DCIA to be disconnected upon implementation. The implementation of projects in this plan will begin by June 30, 2022.
Measurable Goals: Develop plan to identify and prioritize retrofit projects.
Implementation Plan and Schedule Comments: Implementation date - 6/30/2022
Targeted Completion Date: 7/1/2022
Has the BMP been completed? Ongoing

BMP Name - 6.09 Develop and implement street sweeping program
Staff Responsible: Public Works / Street Services
Description: The Town of South Windsor will implement a program to provide for regular inspection and maintenance of The Town of South Windsor-owned or -operated streets, parking areas and other MS4 infrastructure.
The Town of South Windsor will establish and implement procedures for sweeping town-owned or operated streets and parking lots. All streets and parking lots within the MS4 Priority Areas will be inspected, swept and/or cleaned (as necessary) at least 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 Town of South Windsor to have increased pollutant potential based on the presence of active construction activity or other potential pollutant sources. The Town of South Windsor will 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 Town of South Windsor. If wet dust suppression is conducted, the use of water will 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 MS4 Priority Areas, including any rural uncurbed streets and parking lots with no catch basins, The Town of South Windsor will either meet the minimum frequencies above, or develop and implement an inspection, documentation and targeted sweeping and/or cleaning plan for those areas by June 30, 2018 and submit such plan with its year one Annual Report. For new and redeveloped municipal parking lots, The Town of South Windsor will evaluate options for reducing stormwater runoff to surface waters and/or the storm sewer system such as installing pervious pavements and/or other measures to promote sheet flow of stormwater.

a. The Town of South Windsor will ensure the proper disposal of street sweepings in accordance with DEEP policies, guidance and regulations. Sweepings shall not be discharged back into the storm drain system and/or surface waters.

b. The Town of South Windsor will document results of its sweeping program in its annual reports including: 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 Town of South Windsor will also include documentation of any alternate sweeping plan for rural uncurbed streets and any runoff reduction measures implemented.

Measurable Goals: The Town shall continue its street sweeping program and document inspection results, dates of sweeping, curb miles swept, volume/mass of material collected, and method of reuse or disposal.

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 5. Street Sweeping - Year 2021

Description: The Town's street sweeping program has continued with sweeping of silt, sand, and debris due to erosion, storms, litter, etc. There were 141 miles of roadway swept with the Town's sweeper unit and 369 C.Y. of material was collected.

Evaluation: The Town's street sweeping program will continue despite the elimination of road sanding. This program will still effectively minimize pollutant export to receiving waters.

Has the activity been completed?: Yes

Start Date: 7/1/2020

End Date: 7/1/2021

BMP Name - 6.10 Develop and implement catch basin cleaning program

Staff Responsible: Public Works / Street Services

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

a. Inspect all The Town of South Windsor-owned catch basins within MS4 Priority Areas at least once by June 30, 2020. Catch basins outside the MS4 Priority Areas shall be inspected by June 30, 2022.

b. Prioritize inspection and maintenance for The Town of South Windsor-owned catch basins located near impaired waters and construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). The Town of South Windsor will clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.

c. Establish a schedule such that the frequency of routine cleaning will ensure that no catch basin at any time will be 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.

d. If a catch basin sump is more than fifty (50) percent full during two consecutive routine inspections/cleaning events, The Town of South Windsor will document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources. The Town of South Windsor will describe any actions taken in its Annual Report.

e. The Town of South Windsor will detail its plan for optimizing catch basin cleaning, inspection plans, and its schedule for gathering information to develop the optimization plan in its first annual report. 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 Town of South Windsor will keep a log of catch basins cleaned or inspected.

f. The Town of South Windsor will 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.

Measurable Goals: The Town shall continue its catch basin cleaning program and document the number of structures inspected and/or cleaned, and the volume/mass of material removed.

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 5. Clean Stormwater Structures 2020-2021

Description: There were a total of 1,809 drainage structures cleaned by the Town's Public Works Department or private contractors in fiscal year 2020-2021. There was an estimated total of 546 tons of material removed from those structures.

Evaluation: The Town will continue conducting routine cleaning of catch basins and structures and monitor for excessive sediment loading, in particular, in areas where high erosion may occur.

Has the activity been completed?: Yes

Start Date: 7/1/2020

End Date: 7/1/2021

BMP Name - 6.11 Develop and implement snow management practices

Staff Responsible: Public Works / Street Services

Description: (i) Deicing Material Management

The Town of South Windsor will 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 July 1, 2017, The Town of South Windsor will 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 Town of South Windsor will 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 Town of South Windsor 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.

The Town of South Windsor 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.

The Town of South Windsor 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.

The Town of South Windsor will 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).

In its Annual Report, The Town of South Windsor will 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.

Measurable Goals:

Implementation Plan and Schedule Comments: Implementation Date - 7/1/2017

Targeted Completion Date: 7/1/2022

Has the BMP been completed? Ongoing

BMP Activity - 1. Storage of De-icing Chemicals

Description: To prevent road salts from migrating into the surrounding wetlands and watercourse areas at the Town Public Works Facility, a 10,000 sq. ft. enclosed salt storage shed was constructed in 2003. Approximately 4300 cubic yards of material can be stored in the enclosure. The building was also designed to allow mixing of sand and salt within the confines of the building if required.

Evaluation: The salt shed has been effective in preventing contamination of surface waters and the migration of salts into the ground water system in the area surrounding the Public Works Facility.

Has the activity been completed?: Yes

Start Date: 7/1/2017

End Date: 7/1/2022

BMP Activity - 2. Application of anti-icing chemicals

Description: Since 2006, salting operations in South Windsor have been modified to eliminate the use of sand mixed with salt, and an anti-icing product called "Clearlane" has been introduced. Clearlane is an enhanced deicer which is more environmentally friendlier than traditional road salt, with less impact on watersheds and fewer chlorides being introduced to the environment. Whereas salt tends to bounce off the pavement when applied, Clearlane adheres to the road surface better, which translates to fewer applications and less material used.

South Windsor has also refined its standard operating practices to minimize application rates by utilizing automated application equipment and implementing a pre-treatment anti-icing policy.

Evaluation: South Windsor's current snow management practices have effectively reduced labor and equipment costs, and decreased environmental impact by minimizing exposure to the MS4.	
Has the activity been completed?: Yes	
Start Date: 7/1/2017	End Date: 7/1/2022

Pollution Prevention/ Good Housekeeping reporting metrics:

Metrics	
Employee training provided for key staff	No
Street sweeping	
Curb miles swept	141 miles
Volume (or mass) of material collected	369 C.Y.
Catch basin cleaning	
Total catch basins in priority areas (value will be less than or equal to total catch basins town or institution-wide)	Unknown
Total catch basins town- (or institution-) wide	8,559
Catch basins inspected	1,809
Catch basins cleaned	1,809
Volume (or mass) of material removed from all catch basins	546 tons
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Clearlane Treated Salt
Total amount of each deicing material applied	FY 20-21 – 3,258 tons
Type(s) of deicing equipment used	Truck/spreader
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	miles
Snow disposal location	N/A
Staff training provided on application methods & equipment	Yes
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	N/A
Reduction in turf area (since start of permit)	N/A
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	TBD

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the yellow column of the Monitoring comparison chart and the Impaired waters monitoring flowchart.

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus ☐ Bacteria ☒ Mercury ☐ Other Pollutant of Concern ☒

1.2 Describe program status.

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.

- 1) Four (4) outfalls that discharge to impaired waterbodies have been sampled.
- 2) Based on sample results of the four outfalls sampled in 2021, no further investigations are required.
- 3) No changes have been made to the Stormwater Management Plan at this time. If the need arises to update the Plan, then changes will be made at that time.

2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)

2.1 Screening data

Complete the table below to report data for any wet weather sampling completed for MS4 outfalls that discharge directly to a stormwater impaired waterbody during the reporting period. For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the yellow column of the Monitoring comparison chart and the Impaired waters monitoring flowchart.

Each Annual Report will add on to the previous year's data showing a cumulative list of sampling data. You may also attach an excel spreadsheet with the same data rather than copying it into this table.

Part II. Section 2.1 - Screening Data for Outfalls to Impaired Waterbodies

Outfall ID	Sample Date	Latitude	Longitude	E. Coli (col/100mL)	Lab	Investigation Required
3900-OT-07	4/24/2020	41.862743	-72.566671	<10	Phoenix	NO
3900-OT-08	4/24/2020	41.862838	-72.567018	<10	Phoenix	NO
7860-OT-08	4/24/2020	41.859948	-72.580926	327	Phoenix	NO
9000-OT-01	4/24/2020	41.859795	-72.581763	86	Phoenix	NO

2.2 Credit for screening data collected under 2004 permit

If any outfalls to impaired waters were sampled under the 2004 MS4 permit, that data can count towards the monitoring requirements under the modified 2017 MS4 permit. Complete the table below to record sampling data for any outfalls to impaired waters under the 2004 MS4 permit.

Outfall	Latitude / Longitude	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required? *

*Follow-up investigation required (last column) if the following pollutant thresholds are exceeded:

Pollutant of concern	Pollutant threshold
Nitrogen	Total N > 2.5 mg/l
Phosphorus	Total P > 0.3 mg/l
Bacteria (fresh waterbody)	<ul style="list-style-type: none"> E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	<ul style="list-style-type: none"> Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB Enterococci > 104 col/100ml for swimming areas or 500 col/100 for all others
Other pollutants of concern	Sample turbidity is 5 NTU > in-stream sample

3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall ID	Status of drainage area investigation	Control measure to address impairment
	It is anticipated that this work will be initiated in 2022.	

4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall sampling has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020.

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
It is anticipated that this work will be initiated in 2022.					

Part III: Additional IDDE Program Data

The Town of South Windsor is in the process of developing a preliminary assessment and priority ranking of each catchment located in the town. A catchment is the area that drains to an individual outfall or interconnection. Catchments are delineated to define contributing areas for investigation of potential sources of illicit discharges. Catchments are typically delineated based on topographic contours and mapped drainage infrastructure. Catchment delineations for the entire town are scheduled to be completed in the current permit term as part of the detailed system mapping.

The Town will initially use larger-scale watershed boundary mapping provided by CTDEEP to delineate local drainage basins which will be used to support the initial assessment and priority ranking of catchments. Updates to the catchment assessment and priority rankings will be incorporated as test results from outfall and interconnection screening and sampling takes place.

Utilizing the priority rankings for each catchment, the Town will begin monitoring and screening the outfalls that are identified as high priority, or discharge to impaired waterbodies.

The charts that follow indicate what data/information will be collected and reported in the Town's annual reports.

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank
It is anticipated that this work will be initiated in 2022.		

2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)

2.1 Dry weather screening and sampling data from outfalls and interconnections

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the blue column of the Monitoring comparison chart and the IDDE baseline monitoring flowchart.

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies. You may also attach an excel spreadsheet with the same data rather than copying it into this table.

Table 2.1a – Non-Impaired Waterbody Samples

Outfall ID	Sample Date	Latitude	Longitude	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (umhos/cm)	Salinity (g/kg)	Temp (oC)	MBAs (mg/L)	E. Coli (col/100ml)	Lab	Investigation Required
0600-OT-01	12/14/2021	41.825654	-72.532899	0.25	0	365	0.186	5.7	0.11	213	Phoenix	NO
2160-OT-01	12/14/2021	41.828552	-72.530904	0	0	474	0.231	6.8	0.15	24200	Phoenix	NO
2250-OT-01	2/5/2020	41.858417	-72.597530	0	0.04	687.6	0.34	6.5	0.25	<10	Phoenix	NO
2250-OT-04	2/5/2020	41.858699	-72.600527	0	0	1199	0.59	3.9	0.5	591	Phoenix	NO
3770-OT-01	12/14/2021	41.820741	-72.545338	0	0.04	410	0.205	6.4	0.13	20	Phoenix	NO
3830-OT-01	3/2/2020	41.867255	-72.566765	0.25	0.04	113.3	0.05	8.8	0.5	<10	Phoenix	NO
4260-OT-01	2/5/2020	41.866402	-72.576057	0.25	0.03	390.6	0.19	6.3	0.25	<10	Phoenix	NO
5070-OT-01	12/14/2021	41.823450	-72.534435	0	0	268	0.142	6.4	0.09	<10	Phoenix	NO
5820-OT-02	3/2/2020	41.862686	-72.582310	0.25	0.02	325	0.159	7	0.5	<10	Phoenix	NO
7050-OT-01	3/2/2020	41.866519	-72.584501	0	0.09	373	0.182	7.4	0.25	1600	Phoenix	NO
7470-OT-01	12/14/2021	41.827172	-72.531965	0	0	691	0.344	5.4	0.13	1720	Phoenix	NO
7860-OT-14	2/5/2020	41.862680	-72.574913	0.25	0	315.8	0.15	5.6	0.25	<10	Phoenix	NO
8100-OT-02	2/5/2020	41.866826	-72.576347	0	0.04	321.7	0.15	4.9	0.25	63	Phoenix	NO
8910-OT-01	12/14/2021	41.827189	-72.535801	0	0.01	345	0.171	5.1	0.13	<10	Phoenix	NO

Table 2.1b – Impaired Waterbody Samples

Outfall ID	Sample Date	Latitude	Longitude	E. Coli (col/100ml)	Turbidity at Outfall (NTU)	Turbidity Upstream (NTU)	Lab	Investigation Required
3240-OT-01B	12/14/2021	41.822225	-72.543407	97	1.64	3.2	Phoenix	NO
3360-OT-02	12/14/2021	41.823698	-72.532309	<10	3.15	6.39	Phoenix	NO
3900-OT-07	2/5/2020	41.862743	-72.566671	100			Phoenix	NO
9000-OT-01	2/5/2020	41.859795	-72.581763	520			Phoenix	YES

2.2 Wet weather sample and inspection data

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the green column of the Monitoring comparison chart and the IDDE catchment investigation flowchart.

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor. You may also attach an excel spreadsheet with the same data rather than copying it to this table.

Outfall / Interconnection ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
It is anticipated that this work will be initiated in 2022.										

3. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/monitoring.htm. Refer to the green column of the Monitoring comparison chart and the IDDE catchment investigation flowchart.

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors
It is anticipated that this work will be initiated in 2022.		

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;

8. 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.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. 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).
12. 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).

3.2 Key junction manhole dry weather screening and sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table.

Key Junction Manhole ID	Latitude / Longitude	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
It is anticipated that this work will be initiated in 2022.						

3.3 Wet weather investigation outfall sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table.

Outfall ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Surfactants
It is anticipated that this work will be initiated in 2022.					

3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed
It is anticipated that this work will be initiated in 2022.							

Part IV: Certification

"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."

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name:	Print name:
Signature / Date:	Signature / Date:
Email:	Email:

DRAFT