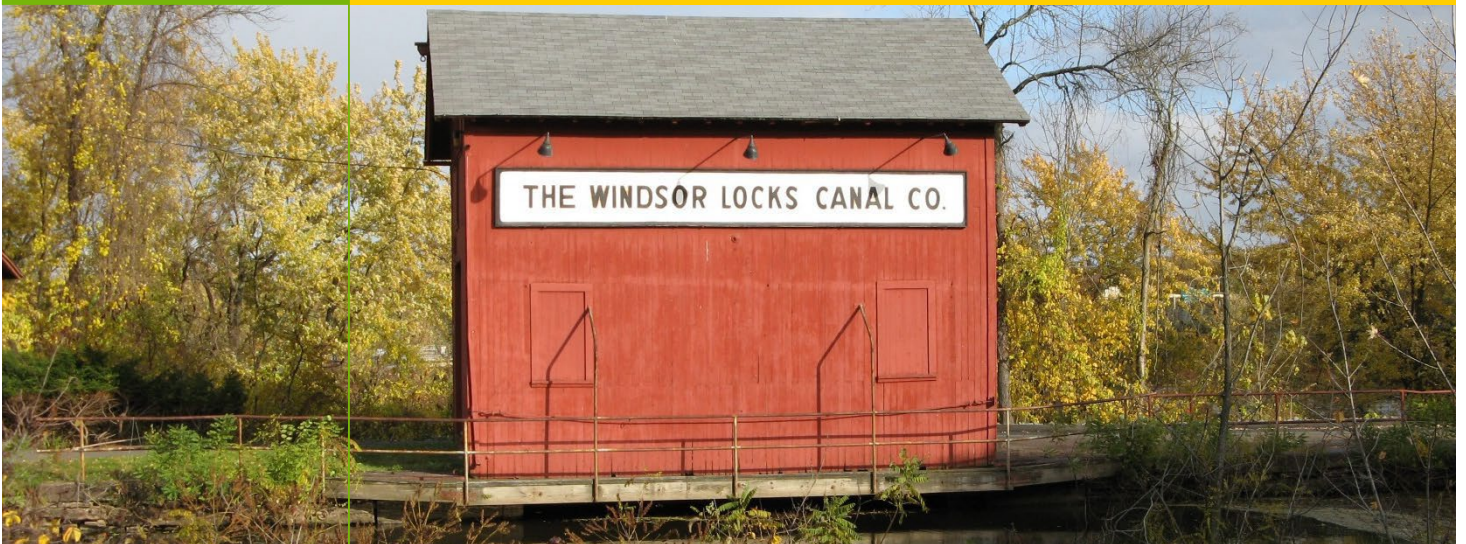




MS4 Annual Report - 2022

Town of Windsor Locks, Connecticut
Permit # GSM 000010



PREPARED FOR

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May 2023



MS4 General Permit
Town of Windsor 2022 Annual Report
Existing MS4 Permittee
Permit Number GSM 000010
January 1, 2022 – December 31, 2022
Primary MS4 Contact: Philip J. Sissick, Director of Public Works

This report documents Town of Windsor's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2022 to December 31, 2022.

The report is structured to address each minimum control measure (MCM) required by the General Permit, including the following:

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

*Due to the COVID-19 pandemic, public outreach and public involvement activities were more limited than planned in 2022. The Town of Windsor Locks is striving to continue to carry out its mission and provide services to the greatest extent practicable while keeping both the public and our workforce safe.



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PART I: SUMMARY OF MINIMUM CONTROL MEASURE ACTIVITIES

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

Table 1.1 Public Education and Outreach BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period (if needed, more space available after this table)	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
1-1 Implement public education and outreach	Ongoing	Public Works hosts a stormwater webpage that provides information specific to the MS4, as well as links to key external stormwater resources. Informational stormwater posters are located in public offices that are responsible for issuing permits or are otherwise involved in stormwater pollution prevention. A bulletin board specific to stormwater management with helpful tips, facts, and the local hotline/reporting process has been placed at Town Hall.	The public education program is implemented and tracked	Department of Public Works	Jul 1, 2018	Jul 1, 2017 (Ongoing)	The webpage is currently housed at the following web address: https://www.windsorlocksct.org/public-works/stormwater-management
1-2 Address education/outreach for pollutants of concern	Ongoing	Maintained a link to educational materials on the Town's stormwater webpage. (see BMP 1-1)	Educational materials on pollutants of concern are distributed and/or posted	Department of Public Works	Jul 1, 2018	Jul 1, 2017 (Ongoing)	https://nemo.uconn.edu/ms4/implement/public-education.htm
1-3 Inspection and Maintenance of	Ongoing	Signage inspected for conformance and visibility. Inspection and maintenance records tracked.	Inspections and maintenance of signage are	Department of Public Works	Jul 1, 2017	Jul 1, 2017 (Ongoing)	Visual inspections are part of the routine as PW employees travel routes across Town.



BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period (if needed, more space available after this table)	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
Watercourse Signage			completed and tracked				Additionally, the Highway Foreman makes routine specific inspections at a minimum of four times per year.

1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

The Town of Windsor Locks will continue ongoing public education and outreach activities. The Town is now a Bronze-Level Certified Sustainable CT community (awarded in 2020); through the pursuit of the accreditation, there are overlapping educational components that will continue to strengthen the outreach efforts. This year we will continue working with the high school honors science class in planning, designing, and constructing one green infrastructure project at the school.



Table 1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (If applicable)	Responsible dept. or partner org.
1-1 Implement Public Education and Outreach: Outreach Event at Windsor Locks High School	N/A	Reduction of impervious surface in the school's courtyard.	General	Town Planner
1-2 Address Education/ Outreach for Pollutants of Concern: Provide Educational Materials to General Public	N/A	Sedimentation	Suspended sediments	Town Planner



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

2.1 Public Involvement/Participation BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Comply with Public Notice Requirements for the Stormwater Management Plan and Annual Reports	Complete	Stormwater Management Plan developed and posted for public review.	Public notifications are made according to required schedules	Department of Public Works	Apr 3, 2017	Stormwater Management Plan received by DEEP on May 2, 2017	The Stormwater Management Plan and Annual Reports are posted on the Town's stormwater webpage: https://www.windsorlocksct.org/public-works/stormwater-management
	Complete for 2022	Annual Report developed, posted for public review, and submitted to DEEP.			May 16, 2023 (Public Draft)	2019 Report posted for public review	
					June 29, 2023 (Final)	Submitted to DEEP (Ongoing on annual basis)	
2-2 Support Community Clean-Ups	Complete for 2022	Five community clean-up events were completed in 2021 with assistance from Town offices.	Clean-up assistance provided on an annual basis and tracked	Department of Public Works/ Conservation Commission	Jun 30, 2018	Jun 30, 2018 (Ongoing on annual basis)	



2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

Waterway / Park Clean Up Schedule	Occurrence	Department / Person Responsible
Waterworks Brook	Annually in April/May	Scouts, Conservation Commission
Source to Sea – CT River Trail	Annually in September	Conservation Commission, Friends of the Canal
Spring Park	Annually in September	Youth Services, Scouts, Conservation Commission
Pesci Park	Annually in September	Youth Services, Scouts, Conservation Commission
Main Street	Annually May and September	First Selectman's Office and Friends
Public Involvement/Participation		

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan Announced to Public	Yes	May 1, 2017	https://www.windsorlocksct.org/public-works/stormwater-management
Availability of Annual Report Announced to Public	Yes	May, 2023 (Draft) June, 2023 (Final)	https://www.windsorlocksct.org/public-works/stormwater-management



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

Table 3.1 Illicit Discharge Detection and Elimination BMP Summary

Bmp	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
3-1 Develop Written IDDE Program	Complete	Draft IDDE program has been developed.	Written IDDE program developed	Department of Public Works	Jul 1, 2018	Jun 29, 2018 (Draft)	
3-2 Develop List and Maps of All MS4 Stormwater Outfalls in Priority Areas	Complete	List of stormwater outfalls in priority areas has been developed. The Town's stormwater atlas has been updated and brought into a GIS geodatabase. Stormwater features, including catch basins, manholes, and outfalls have been assigned unique IDs.	Outfall database and maps developed	Department of Public Works	Jul 1, 2019	May 31, 2019	Will be updated on ongoing basis, as new priority areas or outfalls are identified.
3-3 Implement Citizen Reporting Program	Complete	The Town received no citizen reports in 2022.	Citizen reporting system established. Reports investigated and tracked.	Department of Public Works	Jul 1, 2017	Jul 1, 2017	Citizens may report suspected illicit discharges to the MS4 by emailing the Public Works Director. Reports submitted through this system will be investigated and the outcomes of each investigation will be tracked. The program will be updated, as necessary, to facilitate citizen reporting of illicit discharges.
3-4 Establish Legal Authority to Prohibit Illicit Discharges	Complete	No amendments to report in 2022	Amended ordinance and/or regulations adopted (as needed)	Department of Public Works	Jul 1, 2018	Jul 1, 2017 (Amendments as needed)	Illicit discharges are currently prohibited under Chapter 307 of the Windsor Locks Code of Ordinances.



Bmp	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
3-5 Develop Record Keeping System for IDDE Tracking	Complete	No additional activities	IDDE database developed	Department of Public Works	Jul 1, 2017	Jul 1, 2017 (Revised as needed)	IDDE database will be linked to MS4 geodatabase (BMP 3-2)
3-6 Address IDDE in Areas with Pollutants of Concern	Ongoing	Outfall inspections have been conducted during dry and wet weather conditions at eight priority outfalls Video surveillance of drainage infrastructure is required prior to engineering of sanitary, drainage, or road surface to identify cross-connections	Illicit discharges screened, tracked, and eliminated in areas with pollutants of concern.	Department of Public Works	Jun 30, 2018	Jun 30, 2018 (Ongoing thereafter)	IDDE program will be refined to focus more on priority outfalls as other IDDE BMP components are advanced and allow for more systematic investigation and tracking
3-7 Support Hazardous Waste Collection and Recycling Events	Ongoing – complete for 2022	The Town hosted the annual Hazardous Waste Collection Day event on October 15, 2022	Hazardous waste collection event held and results tracked	Department of Public Works	June 30, 2018	Ongoing on annual basis	Event encourages residents of the Windsor Locks MS4 and other nearby communities to properly dispose of household hazardous waste

3.2 Describe any IDDE activities planned for the next year, if applicable.

Continue to implement and track prioritized IDDE activities in the MS4.

Continue to update maps of MS4 stormwater drainage networks as changes occur or new infrastructure is added.

Dry and wet weather outfall screening will continue in 2023. Illicit discharges will continue to be investigated and eliminated, as they are discovered.

The Town plans to continue using video on both storm and sanitary sewer lines to discover cross connections on Spring Street from Main to Volunteer Drive and sanitary lines along some streams.



Table 3.3 List of citizen reports of suspected illicit discharges received during this reporting period. Illicit discharges are any unpermitted discharge to waters of the state that do not consist entirely of stormwater or uncontaminated groundwater except those discharges identified in Section 3(a)(2) of the MS4 general permit when such non-stormwater discharges are not significant contributors of pollution to a discharge from an identified MS4.

Date of Report	Location / Suspected Source	Response Taken
Zero received in 2022	none	

Table 3.4 Record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through 2023

Location (Lat Long/ Street Crossing /Address and Receiving Water)	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 (Include Dates)	Sampling Data (If Applicable)
Oak Street Connecticut River	Unknown duration	MS4	Unknown	Residential sanitary connection to the MS4	4 Connections redirected to sanitary sewer	N/A
Spring Street Outfall SPR2 Discharging to Paper Mill Brook (tributary to Kettle Brook)	Ongoing	Surface water via MS4	<0.05 cfs	Unknown but residential graywater connection to the MS4 suspected	Initial investigation is inconclusive and ongoing in 2023.	See Part II

3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

Illicit discharges are reported directly to the Director of Public Works, who coordinates the investigation, response, and tracking of each incident. Additional details on means and methods are available in the IDDE Plan.



Table 3.6 Provide a summary of actions taken to address septic failures using the table below.

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known
No septic failures were identified in 2022		

Table 3.7 IDDE reporting metrics

Metrics	Value
Estimated or actual number of MS4 outfalls	91
Estimated or actual number of interconnections	Determination in progress
Outfall mapping complete	100%
Interconnection mapping complete	Determination in progress
System-wide mapping complete (detailed MS4 infrastructure)	Determination in progress
Outfall assessment and priority ranking	15%
Dry weather screening of all High and Low priority outfalls complete	2 outfalls screened
Catchment investigations complete	0
The estimated percentage of MS4 catchment areas investigated	0%

3.8 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).



IDDE training for employees is provided on an ongoing basis and annual basis. Training has included the following topics: general goals and objectives of the Stormwater Management Plan, identification and reporting of illicit discharges and improper waste disposal, spill response protocols and respective responsibilities of involved personnel, street sweeping, green infrastructure, and revegetation of erosion-prone areas. Continuous discussions with staff pertaining to storm water and pollutants occurs on an ad hoc and on the job basis.

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

Table 4.1 BMP Summary

BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
4-1 Implement, Upgrade, and Enforce Land Use Regulations or Other Legal Authority to Meet Requirements of MS4 General Permit	Ongoing	<p>Existing zoning and inland wetlands and watercourses regulations were enforced.</p> <p>LID Wetlands Regulations amendment adopted by IWW Commission on February 6, 2019.</p> <p><i>Section 7.5 e. and f. and PZC Section 404 g. MFSD regulation amendments approved on 2/1/2020.</i></p> <p>2022 No ordinances were amended and no regulations were adopted in 2022.</p>	Amended ordinance and/or regulations adopted	Department of Public Works, Planning and Zoning Commission Inland Wetland and Watercourses Commission	Jul 1, 2019	Ongoing	Chapters IX, X, and XI of the Windsor Locks zoning regulations and Chapter 7 of the IWW regulations require plans acceptable to staff including the engineering consultant which provide measures for controlling erosion and sediment control.



BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
4-2 Develop/Implement Plan for Interdepartmental Coordination in Site Plan Review and Approval	Complete	Process exists for interdepartmental coordination in site plan review and approval. Plans are submitted to several Departments for comment including Public Works.	Plan developed and implemented by coordinating departments and commissions	Department of Public Works, Planning and Zoning Commission, Town Engineer, Building Department, Inland Wetlands and Watercourses Commission	Jul 1, 2017	Jul 1, 2017	Coordination procedures to be improved as needed
4-3 Review Site Plans for Stormwater Quality Concerns	Ongoing	Thirteen proposals were reviewed by staff during the year.	Site plans reviewed and tracked	Planning and Zoning Commission, Town Engineer, Building Department, Inland Wetlands and Watercourses Commission	Jul 1, 2017	Jul 1, 2017 (Ongoing)	
4-4 Conduct Site Inspections	Ongoing	Fifteen inspections were conducted for 13 projects.	Site inspections conducted and documented	Department of Public Works, Planning and Zoning Commission, Town Engineer, Inland Wetlands and Watercourses Commission	Jul 1, 2017	Jul 1, 2017 (Ongoing)	



BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
4-5 Implement Procedure to Allow Public Comment on Site Development	Complete	A public comment procedure is in place.	Public comment procedure implemented for site development proposals and ongoing activities	Planning and Zoning Commission	Jul 1, 2017	Jul 1, 2017 (Ongoing)	The public may provide comments on site development, including proposed and ongoing site development and land disturbance activities at Planning and Zoning Commission meetings. Meetings are held by zoom, Town Hall is open for in-person by appointment, process for comment not impacted per COVID. Public comment is allowed during virtual public meetings.
4-6 Implement Procedure to Notify Developers About DEEP Construction Stormwater Permit	Ongoing	Developers notified about need to comply with DEEP construction stormwater permit.	Incorporate written notification procedure into site development review process	Planning and Zoning Commission	Jul 1, 2017	Ongoing	This was incorporated in the application packet and is discussed with applicants during review process.

4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.

Ongoing implementation and/or updates of BMPs 4-1, 4-3, 4-4, and 4-6.



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

A summary of the Town's progress under this MCM is presented in the following tables:

Table 5.1 Post-construction Stormwater Management BMP Summary

BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
5-1 Establish and/or Update Legal Authority and Guidelines Regarding LID and Runoff Reduction in Site Development Planning	Complete – ongoing updates, as needed	IWWC Section 7.5 e. and f. and PZC Section 404 g. MFSD regulation amendments were completed in 2020.	Amended ordinance and/or regulations adopted	Department of Public Works, Planning and Zoning Commission	Jul 1, 2021	February 6, 2019 (Ongoing, as needed)	Seeking funding to pay consultant to assist with town-wide LID regulations in 2021.
5-2 Enforce LID/Runoff Reduction Requirements for Development and Redevelopment Projects	Ongoing	Staff and Planning and Zoning Commission require consideration of reduction of pavement and disconnect. Preliminary discussions with applicants now include LID and runoff reduction opportunities.	Compliance with requirements enforced and tracked	Department of Public Works, Planning and Zoning Commission, Town Engineer, Inland Wetlands and Watercourses Commission	Jul 1, 2019	Ongoing	
5-3 Implement Long-Term Maintenance Plan for Stormwater Basins and Treatment Structures	Not started	No activities to report	Written plan developed and implemented	Department of Public Works, Planning and Zoning Commission, Town Engineer, Inland Wetlands and Watercourses Commission	Jul 1, 2019	Anticipated by 2023	



BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
5-4 DCIA Mapping	Complete	Town-wide map of directly connected areas has been developed.	DCIA calculated for drainage areas associated with each outfall	Department of Public Works	Jul 1, 2020	Dec 19, 2019 (Draft)	
5-5 Address Post-Construction Issues in Areas with Pollutants of Concern	Ongoing	Initial assessment of retrofit options in Kettle Brook watershed has been developed.	Retrofits identified and tracked for discharges to impaired waters	Department of Public Works	Jul 1, 2018	June 29, 2019 (Ongoing)	

5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects and track enforcement actions.
 5-3 Write and implement long-term maintenance plan for stormwater basins and treatment structures.
 5-4 Adjust DCIA mapping, if needed.
 5-5 Continue to address post-construction issues in priority catchments.

Table 5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	467.9 Acres*
DCIA disconnected (redevelopment plus retrofits)	0 / 467.9 acres
Retrofits completed	1
DCIA disconnected	0 % this year / 0 % total since 2012
Estimated cost of retrofits	\$ to be determined
Detention or retention ponds identified	# This year /# total to be determined

*Based on draft DCIA assessment calculations



5.4 Briefly describe the method to be used to determine baseline DCIA.

The Town has calculated the baseline (2012) DCIA contributing stormwater runoff to each of its MS4 outfalls. The DCIA calculations were made according to a protocol that is consistent with guidance available from the DEEP stormwater webpage (www.ct.gov/deep/municipalstormwater). See the Town's Stormwater Management Plan for more details.



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

Table 6.1 Pollution Prevention/Good Housekeeping BMP Summary

BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
6-1 Develop/Implement Formal Employee Training Program	Ongoing	PW Employees were trained on an ongoing basis.	Employee training continued	Department of Public Works	Jul 1, 2017	Jul 1, 2017 (Ongoing)	<p>Training has included the following topics:</p> <p>General goals and objectives of the Stormwater Management Plan</p> <p>Identification and reporting of illicit discharges and improper waste disposal</p> <p>Spill response protocols and respective responsibilities of involved personnel</p> <p>Street sweeping</p> <p>Green infrastructure</p> <p>Revegetation of erosion prone areas</p>



BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
6-2 Implement MS4 Property and Operations Maintenance	Ongoing	Property and operations maintenance activities improved to minimize the discharge of pollutants to the MS4.	Property and operations maintenance is conducted and tracked	Department of Public Works	Jul 1, 2018	Ongoing	Intense overseeding program of sports turf
6-3 Implement Coordination with Interconnected MS4s	In progress	The Town has had an initial discussion with CAA regarding connections to Windsor Locks MS4.	Coordination of permit responsibilities implemented and documented	Department of Public Works	Jul 1, 2017	Ongoing	
6-4 Develop/Implement Program to Control Other Sources of Pollutants to the MS4	Not started	No activities to report.	Program to control pollutants from other facilities (commercial, industrial, and other non-permitted facilities) implemented and documented	Department of Public Works	Jul 1, 2017	Ongoing	
6-5 Evaluate Additional Measures for Discharges to Impaired Waters	Not started	No activities to report.	Additional measures to control discharges to impaired waters implemented, as feasible, and documented	Department of Public Works	Jul 1, 2017	Ongoing	



BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
6-6 Track Projects that Disconnect DCIA	Ongoing	One project has been tracked to date.	Disconnections tracked and mapped	Department of Public Works	Jul 1, 2017	Ongoing	
6-7 Implement Infrastructure Repair/Rehab Program	Ongoing	200 structural elements were repaired or rehabilitated	Infrastructure repair and rehabilitation work is completed and documented	Department of Public Works	Jul 1, 2021	Ongoing	
6-8 Develop/Implement Plan to Identify/Prioritize Retrofit Projects	Ongoing	No additional planning activities to report for 2021.	As roads are selected for rehabilitation, potential retrofits are explored	Department of Public Works	Jul 1, 2020	Ongoing	
Implement Retrofit Projects to Disconnect 2% Of DCIA	Ongoing	Tree box filter retrofit has been installed on Bel Aire Circle	2% of DCIA disconnected by 2022	Department of Public Works	July 1, 2022	Ongoing	
6-9 Develop/Implement Street Sweeping Program	Ongoing	Town-wide road sweeping completed. Some roadways or parking areas swept more than once, as needed.	Street sweeping program developed and implemented	Department of Public Works	Jul 1, 2017	Jul 1, 2017 (Ongoing)	Municipal parking lots and roadway intersections showing signs of excess winter sand are periodically swept during winter months.
6-10 Develop/Implement Catch Basin Cleaning Program	Ongoing	Within the MS4, 500 catch basins were inspected and cleaned using Vacall machine.	Catch basin cleaning program developed and implemented	Department of Public Works	Jul 1, 2020	Jul 1, 2017 (Ongoing)	



BMP	Status	Activities in Current Reporting Period	Measurable Goal	Department / Person Responsible	Due	Date Completed or Projected Completion Date	Additional Details
6-11 Develop/Implement Snow Management Practices	Ongoing	The Town applied the following de-icing agents to manage snow and ice: sodium chloride. Sodium chloride brine being applied to reduce quantity of salt application.	Snow management practices developed and implemented	Department of Public Works	Jul 1, 2018	Jul 1, 2017 (Ongoing)	No sand used for snow management

6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

Employee training on pollution prevention/good housekeeping activities will continue in 2022. Implementation and tracking of street sweeping, catch basin cleaning, and snow management practices will continue in 2023 as well.

Table 6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee Training Provided for Key Staff	Yes
Street Sweeping	
Curb Miles Swept	200 Miles
Volume (Or Mass) Of Material Collected	100 Cubic Yards
Catch Basin Cleaning	
Total Catch Basins in Priority Areas	# To Be Determined
Total Catch Basins in MS4	1,800
Catch Basins Inspected	1,800
Catch Basins Cleaned	475
Volume (Or Mass) Of Material Removed from All Catch Basins	35 Cubic Yards
Volume Removed from Catch Basins to Impaired Waters (If Known)	Separate Volume Data Not Currently Available
Snow Management	



Type(S) Of Deicing Material Used	Sodium Chloride
Total Amount of Each Deicing Material Applied	600 Tons
Type(S) Of Deicing Equipment Used	Spreader Body
Lane-Miles Treated	100 Miles
Snow Disposal Location	No Relocation
Staff Training Provided on Application Methods & Equipment	Pre-Storm
Municipal Turf Management Program Actions (For Permittee Properties In Basins With N/P Impairments)	
Reduction in Application of Fertilizers (Since Start Of Permit)	0 Lbs.
Reduction in Turf Area (Since Start of Permit)	<0.1 Acre
Lands With High Potential To Contribute Bacteria (Dog Parks, Parks With Open Water, & Sites With Failing Septic Systems)	
Cost of Mitigation Actions/Retrofits	\$0

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program

Inspections and cleanings are completed more often in locations that are known to collect debris at a faster rate. For instance, catch basins in low-lying areas may require more frequent cleanings. Particularly in fall, catchbasin tops are cleaned of leaves and observations are made of the catchbasins.

6.5 Retrofit program

Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project.

As roads are rehabilitated, the drainage structures are evaluated for potential retrofits.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years.

The Town of Windsor Locks is highly urbanized, and opportunities for retrofitting are anticipated to be limited in scope. However, the Town will evaluate retrofitting possibilities at Town facilities and also as part of upcoming public road, sidewalk, sewer, or other infrastructure improvement projects. Additional DCIA disconnection may be achievable through redevelopment projects.

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years.

Not applicable at this time.



PART II: IMPAIRED WATERS INVESTIGATION AND MONITORING

Impaired waters investigation and monitoring program

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.

Status of Windsor Locks' impaired waters investigation and monitoring program:

Currently, the only state-listed impairment in waters receiving discharge from the Windsor Locks MS4 area is bacteria. As a result, Windsor Locks' impaired waters investigation and monitoring program has focused on monitoring bacteria levels, specifically *Escherichia coli*, which is the preferred indicator for assessment of bodies of freshwater.

Six stormwater outfalls that discharge to impaired receiving waterbodies (or have otherwise been prioritized by the Town) have been monitored to date. Screening and monitoring results suggest follow-up investigations may be necessary; however, no additional changes have been made to the Stormwater Management Plan at this time.

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

Table 2.1 Screening Data Collected Under 2017 Permit

Outfall ID	Sample Date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory	Follow-up Required?
SMI1*	6/28/2018	Bacteria – <i>E. coli</i>	697 MPN/100 mL	Phoenix	Yes
SEY1*	6/28/2018	Bacteria – <i>E. coli</i>	3,450 MPN/100 mL	Phoenix	Yes
	11/23/2020	Bacteria – <i>E. coli</i>	473 MPN/100 mL	Phoenix	Yes
	9/22/2022	Bacteria – <i>E. coli</i>	>24,200 MPN/100 mL	Phoenix	Yes
	11/30/2022	Bacteria – <i>E. coli</i>	1,210 MPN/100 mL	Phoenix	Yes



Outfall ID	Sample Date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory	Follow-up Required?
SOU1*	6/28/2018	Bacteria – <i>E. coli</i>	1,220 MPN/100 mL	Phoenix	Yes
	11/23/2020	Bacteria – <i>E. coli</i>	No Flow	Phoenix	Yes
	9/22/2022	Bacteria – <i>E. coli</i>	2,760 MPN/100 mL	Phoenix	Yes
	11/30/2022	Bacteria – <i>E. coli</i>	No Flow	Phoenix	Yes
FAI1*	6/13/2019	Bacteria – <i>E. coli</i>	17,300 MPN/100 mL	Phoenix	Yes
	11/23/2020	Bacteria – <i>E. coli</i>	471 MPN/100 mL	Phoenix	Yes
	9/22/2022	Bacteria – <i>E. coli</i>	52 MPN/100 mL	Phoenix	Yes
	11/30/2022	Bacteria – <i>E. coli</i>	85 MPN/100 mL	Phoenix	Yes
SPR2*	6/13/2019	Bacteria – <i>E. coli</i>	1,150 MPN/100 mL	Phoenix	Yes
	11/23/2020	Bacteria – <i>E. coli</i>	2,100 MPN/100 mL	Phoenix	Yes
	9/22/2022	Bacteria – <i>E. coli</i>	3,810 MPN/100 mL	Phoenix	Yes
	11/30/2022	Bacteria – <i>E. coli</i>	1,400 MPN/100 mL	Phoenix	Yes
VOL1*	6/13/2019	Bacteria – <i>E. coli</i>	97 MPN/100 mL	Phoenix	Yes**
WES2*	6/13/2019	Bacteria – <i>E. coli</i>	1,940 MPN/100 mL	Phoenix	Yes
	11/23/2020	Bacteria – <i>E. coli</i>	1,550 MPN/100 mL	Phoenix	Yes
	9/22/2022	Bacteria – <i>E. coli</i>	>24,200 MPN/100 mL	Phoenix	Yes
	11/30/2022	Bacteria – <i>E. coli</i>	1,290 MPN/100 mL	Phoenix	Yes
WES1*	6/13/2019	Bacteria – <i>E. coli</i>	3,260 MPN/100 mL	Phoenix	Yes
	11/23/2020	Bacteria – <i>E. coli</i>	3,080 MPN/100 mL	Phoenix	Yes
	9/22/2022	Bacteria – <i>E. coli</i>	19,900 MPN/100 mL	Phoenix	Yes
	11/30/2022	Bacteria – <i>E. coli</i>	1,570 MPN/100 mL	Phoenix	Yes
CEN1*	6/13/2019	Bacteria – <i>E. coli</i>	906 MPN/100 mL	Phoenix	Yes



*Outfall does not discharge directly to an impaired water body. However, the Town has elected to include these outfalls as priority, due to downstream flooding issues and/or other water quality considerations.

**Based on total coliform exceeding 500/100 mL. *E. coli* was below threshold for follow-up.

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

Outside of field observations in the SPR2 catchment, the Town has not yet completed formal follow-up investigations for outfalls exceeding the pollutant threshold.

4. Prioritized Outfall Monitoring (Section 6(i)(1)(D) / page 43)

The Town identified six outfalls for ongoing prioritized outfall monitoring in 2022. The outfalls selected were determined to have the highest Bacteria – *E. coli* concentrations in previous sampling events. Two sampling events took place in 2022 and are summarized below.

Town of Windsor Locks MS4 Water Quality Results - 2022

Site Name	Date	Time	Temperature (C°)	E. Coli (MPN/100 mls)	Total Coliforms (MPN/100 mls)	Bacteria Level Exceedance*
SEY-1	9/22/2022	11:45	19.1	>24,200	>24,200	Yes
	11/30/2022	16:40	11.8	1,210	>24,200	Yes
SPR-2	9/22/2022	12:00	21.5	3,810	>24,200	Yes
	11/30/2022	16:20	10.1	1,400	24,200	Yes
WES-1	9/22/2022	12:05	20.1	19,900	>24,200	Yes
	11/30/2022	16:05	10.4	1,570	>24,200	Yes
WES-2	9/22/2022	12:10	21.1	>24,200	>24,200	Yes
	11/30/2022	16:10	10.4	1,290	24,200	Yes
SOU-1	9/22/2022	12:15	21.3	2,760	>24,200	Yes
	11/30/2022	-	-	No Flow	No Flow	N/A
FAI-1	9/22/2022	12:20	21.3	52	>24,200	Yes
	11/30/2022	16:30	10.3	85	>24,200	Yes

*Bacteria level exceedance in accordance with General Permit for the Discharge of Stormwater from Municipal Separate Storm Sewer Systems (section i. Monitoring requirements B. Outfall screening for bacteria). Sites with *E.coli* concentrations >410 MPN/100 mls and/or total coliform concentrations >500 MPN/100 mls have been identified for follow-up investigation.



PART III: ADDITIONAL IDDE PROGRAM DATA

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

The town has not yet assigned final IDDE priority rankings to catchments

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

Table 3.1 Dry weather screening and sampling data from outfalls and interconnections

The Town conducted dry weather outfall screening at two outfalls in 2019. One outfall (RIV1) was not observed to produce dry weather discharge, while minimal discharge was noted at the other outfall (TOW1). Monitoring results are provided Table 3.1. The extremely low discharge rate provided insufficient volume for laboratory analysis of all analytes at TOW1. However, the results obtained do not appear to be suggestive of an illicit discharge from TOW1.

Table 3.1 Dry Weather Outfall Screening Data

Site	Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (µmhos/cm)	Salinity (ppt)	Surfactants (mg/L)	<i>E. coli</i> (MPN/100 mL)
RIV1	06/13/19	Dry	Dry	Dry	Dry	Dry	Dry
TOW1*	06/13/19	Insufficient volume	Insufficient volume	392	0.2	Insufficient volume	30

*Observations of this outfall and surroundings suggest that groundwater infiltration may be a seasonal source of dry weather flow

The Town also conducted wet weather IDDE outfall screening for outfalls that discharge to priority waters in 2019. Monitoring results are provided in Table 3.2.

Five of the six locations exceeded at least one benchmark for the tested analytes (primarily *E. coli*). However, of the outfalls sampled, SPR2 was the only location that exceeded more than one benchmark (surfactants and *E. coli*). Additionally, a flow of foam with a soapy odor was observed discharging into Paper Mill Brook from this outfall. Therefore, SPR2 is likely to be source of illicit discharge from the MS4. Initial visual investigations of the SPR2 catchment on the date of sampling were unable to identify a source of the foamy discharge.

Table 3.2 Wet weather sample and inspection data



Site	Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (µmhos/cm)	Salinity (ppt)	Surfactants (mg/L)	<i>E. coli</i> (MPN)
FAI1	06/13/19	0.38	<0.02	84	0.1	0.19	17,300
SPR2	06/13/19	0.33	<0.02	81	0.1	15.8	1,150
VOL1	06/13/19	0.13	<0.02	1,220	<2	0.07	97
WES2	06/13/19	0.34	<0.02	117	0.1	0.21	1,940
WES1	06/13/19	0.22	0.02	107	0.1	0.14	3,260
CEN1	06/13/19	0.12	<0.02	517	0.3	0.13	906

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

The Town has not yet initiated formal catchment investigations for IDDE. However, initial visual field investigations were conducted in the catchment for outfall SPR2 on June 13, 2019 to ascertain whether a source of the observed soapy discharge could be located. No sources were observed.



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: Paul Harrington, First Selectman	Print name:
Signature / Date:	Signature / Date:
Email:	Email:



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

Print name: Paul Harrington, First Selectman

Document Prepared by

Print name: Stephanie L. Martin

Signature / Date:

Signature / Date:


Email:

Email: Stephanie.Martin@trccompanies.com



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: Paul Harrington, First Selectman		Print name:	
Signature / Date: 		Signature / Date:	
Email: harrington@cmpril.com		Email:	