MS4 General Permit
Town of Windsor 2023 Annual Report
New MS4 Permittee
Permit Number GSM 000066
January 1, 2023 – December 31, 2023
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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, 2023 to December 31, 2023.

Part I: Summary of Minimum Control Measure Activities

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

1.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-1 Implement public education and outreach	Ongoing	Stormwater Management information and educational material available on the Town's website	Distribute/Post stormwater information on Town's website	Engineering	Ongoing beginning Jul 1, 2019	Ongoing	https://townofwindsorct.com/engineering/stormwater-management/
1-2 Address education/ outreach for pollutants of concern	Ongoing	Stormwater Management information and educational material available on the Town's website.	Distribute/Post stormwater information on Town's website	Engineering	Ongoing beginning Jul 1, 2019	Ongoing	https://townofwindsorct.com/engineering/stormwater-management/

1-3 Household Hazardous Waste Collection	Ongoing	Household Hazardous Waste collection events held between May and October	Educate and provide hazardous waste collections	MDC		9/23/2023	Windsor residents may participate in any MDC sponsored collection day

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

- Maintain information material on Town website
- Continue Household Hazardous Waste Collection Events
- Continue to participate in community clean-up events
- Continue to replace catch basin tops with "Drains to Waterway" labeling

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.
Animal Waste and Water Quality	Residents	Pick up after your pet, keep your yard clean, don't feed waterfoul, dispose of kitty litter properly	Pet Waste	Engineering
Minimizing Pollution of Lawn Fertilizer and Reduce the Need for Pesticides/Herbicides	Residents	Effecive measure to limit the amount of each substance used by residents	Fertilizer, Pesticides & Herbicides	Engineering
Disconnecting Imperious Covers – Rooftops	Residents	Downspout disconnection, rain gardens, rainwater harvesting	Impervious cover	Engineering
Potential Illicit Discharge Notifications	Residents	Residents are notified if the Town observes a potential illicit discharge that can affect the Town's stormwater system. Letters provide information to educate residents	Illicit Discharge	Engineering
Clean Water Campaign	Residents	Information on how to reduce containination of rainwater as it travels to stormwater system.	Residential Stormwater Management	Engineering
Do Not Feed Waterfoul	Residents	How feeding waterfoul can have a negative impact and what people can do to help	Waterfoul (bacteria)	Engineering
MDC Hazardous Waste Collection	Residents	The MDC colelcts hazardous waste and disposes of it through safe, environmentally responsible practices.	Septic systems (nitrogen, phosphorous and bacteria)	MDC

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

2.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
2-1 Final Stormwater Management Plan publicly available	Ongoing	Electronic copy posted on the Town's website. Hard copies available at the Engineering department front desk in Town Hall.	Make Stormwater Management Plan available to citizens	Engineering	Annually by Feb 15	04/1/2024	https://townofwindsorct.com/app/uploads/sites/8/2018/06/Final
2-2 Comply with public notice requirements for Annual Reports	Ongoing	Legal notice published. Electronic posted on the Town's website. Hard copies available at the Engineering department front desk in Town Hall.	Make annual report available to citizens	Engineering	Annually by Feb 15	Public Notice to be Published – 1/31/2024 Annual Report to be Available – 2/15/2024	https://townofwindsorct.com/engineering/stormwater-management/

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

Continue to make Stormwater Plan, Annual Report, and educational materials available to citizens.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Y	2/15/2024	https://townofwindsorct.com/engineering/stormwater-management/

Availability of Annual Report announced to public	Y	1/31/2024	https://townofwindsorct.com/engineering/stormwater-management/

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

3.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
3-1 Develop written IDDE program	Complete	Town follows adopted IDDE program	Develop written plan of IDDE program	Engineering	7/1/2019	7/1/2018	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Complete	Town continues a QA/QC process of reviewing GIS system and editing as necessary	Locate, document, and prioritize outfalls in areas of concern	Engineering	Jul 1, 2020	3/20/2018	Mapping and data will continue to be updated as outfalls are tested/repaired/etc.
3-3 Implement citizen reporting program	Complete	Citizens may report Illicit Discharges through See-Click-Fix, the Town's online reporting system	Utilize citizen reporting program for identification of potential illicit discharges	Engineering	Ongoing	Ongoing	Citizens may report illicit discharges as they would report other concerns to the Town
3-4 Establish legal authority to prohibit illicit discharges	Complete	Illicit Discharges and Connections prohibited under Chapter 3, Article X of the Town of Windsor Code of Ordinances	Identify legal authority in written IDDE Program	Engineering	Jul 1, 2019	9/08/2009	
3-5 Develop record keeping system for IDDE tracking	Complete	Town continues to maintain a list of reports that include IDDE.	Maintain a record of IDDE reports and actions	Engineering	Jul 1, 2017	9/13/2017	

3-6 Address IDDE in areas with pollutants of concern	Ongoing	Town has procured service of qualified firm to test and evaluate areas of concern.	Develop plan to address areas with high levels of pollutants	Engineering	Not specified	Ongoing	

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

- Continue Dry weather screening program
- Illicit discharges will continue to be investigated and eliminated, as they are discovered
- Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process.

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
3/31/2023	Mayflower Road/sump pump draining directly into stormwater system	Notice was sent to the resident. Resident responded and was provided information on how to amend.
11/27/2023	Intersection of Tamarack and Willowcrest, resident dumping into stormwater system	Engineering contacted the resident and discussed the situation. Provided educational information on how to properly dispose of waste moving forward.

3.4 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 (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)
*Ridge Street Pump Station	01/18/2018	Yes	10,000	Differential Settlement	Forced main break repaired by sewer crew Regular maintenance of main sewer	N/A
*East Street	04/12/2020	No	100	Debris	Crew cleared blockage of the main sewer Regular maintenance of main sewer	N/A
80 International Drive	06/24/2020	Yes	3000	Debris – Private System	Sewer line flushed by jet truck and stoppage relieved Property owner instructed to inspect/clean impacted catchbasins and any downstream pipe/structures that received flow	N/A

*Broad Street	03/18/2022	No	<100	Collapsed Building Lateral	Collpased pipe was replaced by sewer crew Regular maintenance of main sewer	N/A
40 Corey Street	06/27/2022	Yes	Unknown	Concrete Washout	Roadway swept to remove remaining debris. Catchbasins inspected. All catch basins suspected of receiving debris were cleaned. All storm pipes suspected of receiving debris were flushed.	N/A
47 Mayflower Road	3/31/2023	Yes	Unknown	Sump Pump	Resident informed how to properly amend. No illicit discharge occurred.	N/A
131 Country Club	5/10/2023	No	Unknown	Yard drain	Notice provided to resident ahead of Town's milling and paving program.	N/A
21 Arrowbrook Road	5/11/2023	Yes	Unknown	Debris	Notice sent to resident, motor oil leaking from vehicle.	N/A
*503 Windsor Ave	9/30/2023	No	100-1000	Weather Conditions	Surcharge backups eliminated once sewer flows receded back to normal	N/A
*Windsor Ave @ Arrowbrook	9/29/2023	No	75,000-100,000	Weather Conditions	Surcharge backups eliminated once sewer flows receded back to normal	N/A
*SSO information provided by MDC						

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

- Citizens can report an illicit discharge through the Town's website via the "See-Click-Fix" program
- An IDDE tracking form is available to all trained employees
- All discharges are reported to the Engineering Department for determining parties responsible and mitigating solutions
- A list of IDDE occurances is maintained by the Engineering Department

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
32 Hickory Road	Full System Replacement	None
279 Prospect Hill Road	Full System Replacement	None
564 Stone Road	Full System Replacement	None
67 Indian Hill Road	Full System Replacement	None
510 Prospect Hill Road	Full System Replacement	None
100 International Drive	Full System Replacement	None
37 Prospect Hill Road	Sewer Line Replacement Only	None
43 Basswood Road	Full System Replacement	None

4 Enders Road	Full System Replacement	None
765 Prospect Hill Road	Tank Replacement Only	None
50 Walnut Drive	Full System Replacement	None
49 Lang Road	Tank Replacement Only	None
50 Indian Hill Road	Full System Replacement	None

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	577
Estimated or actual number of interconnections	Unknown
Outfall mapping complete	100%
Interconnection mapping complete	Unknown
System-wide mapping complete (detailed MS4 infrastructure)	100%
Outfall assessment and priority ranking	75%
Dry weather screening of all High and Low priority outfalls complete	23
Catchment investigations complete	0
Estimated percentage of MS4 catchment area 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).

- Town staff has been educated about the illicit discharge ordinance since it was adopted in 2009
- New DPW employees are trained on IDDE by crew leaders
- A formal annual training plan is in progress to comply written IDDE

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

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 (Due 7/1/20)	Complete	Town follows and enforces adopted Erosion and Sediment Control and Stormwater Management Ordiances	Review and, if necessary, update the Town's Erosion and Sediment Control Ordinance (enacted in 2009) to ensure compliance with MS4 general permit	Engineering	07/01/2019	In Progress	Town ordinance requires an application for an Erosion and Sediment Permit to be submitted and approved for all land disturbing activities greater than one-half acre in size
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing)	Ongoing	Staff Development team reviewed and/or approved Site Plan/Revision applications received in 2022	Review of all Site Plans and Development Applications performed by the Staff Development Team	Planning	Ongoing	In Progress	
4-3 Review site plans for stormwater quality concerns (Ongoing)	Ongoing	Staff Development Team reviewed and/or approved Site Plan/Revision applications received in 2022	Review of all Site Plans and Development Applicaions performed by the Engineering Staff for stormwater quality concerns	Engineering	Ongoing	In Progress	Zoning Regulations require conformance with the Town's Stormwater Management Ordiance. If a Stormwater Management permit is required by the Stormwater Ordiance, evidence of an approved permit shall be a condition of approval for all zoning approvals required by the proposed development/activity. For sites that do not require a Stormwater Management Permit, Section 3.6.1 of the Zoning Regulations

							outlines minimum requirements that must be met.
4-4 Conduct site inspections	Ongoing	Completed/Documented necessary site inspections for all permitted development/redevelopment sites. Violations/Concerns documented and reported to applicants. Follow-up inspections performed.	Conduct and document site inspections	Engineering/Wetlands	Ongoing		
4-5 Implement procedure to allow public comment on site development	Ongoing	Allow Public review and comment of all open development applications	Post applications online on the Planning Department website for public review. Record public comment on applications during the "Public Comment" portion of the Planning and Zoning Commission meeting.	Planning	Ongoing		
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Notified developers about DEEP's construction stormwater permit during development application review	Develop/Implement a Site Development Plan Checklist	Planning	Ongoing		Registration under CT DEP General permit for the Discharge of Stormwater and Dewatering Wastewaters associated with Construction Activities is a requirement of the Town's permitting process.

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

- Continue to review and update ordinances and regulations to comply with MS4 General Permit
- Continue interdepartmental coordination in Board Reviews, Permitting, and Approval of Land Disturbance Projects
- Continue administration of the Town's Erosion & Sediment Control Ordiance, Permit Applications and Site Inspections

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

5.1 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	In Process	None	Adopt amended ordiance and/or regulations to be compliant with the MS4 general permit	Engineering	Jul 1, 2022	In Progress	In 2009, the Town adopted a Stormwater Management Ordinance and published a Town Stormwater Manual to meet the Post-Construction Stormwater Runoff requirements of the 2004 General Permit
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Ongoing	Engineering review of site plans requires consideration of disconnection and runoff reduction	Compliance with requirements enforced and tracked	Engineering	Ongoing beginning Jul 1, 2022	Ongoing	Developers are required to execute an Inspection & Maintenance Agreement with Windsor Land Records prior to commencing work. The Inspection & Maintenance Agreement identifies the person(s) responsible and establishes a schedule for routine inspections and maintenance.

5-3 Identify retention and detention ponds in priority areas	Complete	None	Develop and maintain a list of all retention and detention ponds, swirl oncentrators, oil/grit separators, water quality wetlands or wales, etc. approved on private and municipal property.	Engineering	Jul 1, 2020	07/01/2019	Town staff researched and identified Town-owned basins. Several basins were re-established in 2019 in order to annually maintain based on long-term maintenance plans.
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Ongoing	Town continued maintenance of stormwater detention basins	Create and inspection and maintenance plan for stormwater structures	DPW	Ongoing beginning Jul 1, 2020	Ongoing	During the appropriate time of year and following permitting through Inland Wetlands, DPW has implemented ongoing maintenance to re-establish basins (if required based on overgrowth), and provide a mowing schedule consistent with best management practices.
5-5 DCIA mapping	Complete	None	Calculate DCIA by basin and document on MS4 mapping	Engineering	Jul 1, 2020	07/01/2020	DCIA calculations completed using Sutherland Equations as outlined by UCONN CLEAR
5-6 Address post-construction issues in areas with pollutants of concern	Not Started	None	Prioritize areas where erosion or sedimentation problems are found during the annual inspections conducted under the long-term maintenance plan within DCIA retrofit program		Not specified		

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

- Adopt amended ordiance and/or regulation to include site development LID and runoff requirements
- Continue maintenance of Town owned stormwater basins and treatment structures
- Track DCIA reduction

5.3 Post-Construction Stormwater Management reporting metrics

For details on this requirement, visit www.nemo.uconn.edu/ms4/tasks/post-construction.htm. Scroll down to the DCIA section.

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	1339.63 acres*
DCIA disconnected (redevelopment plus retrofits)	Unknown/ 1339.63 acres total
Retrofit projects completed	Unknown
DCIA disconnected	Unknown this year/Unknown total since 2012
Estimated cost of retrofits	Unknown
Detention or retention ponds identified	0 this year /33 total
*Based on DCIA Calculations per BMP 5-5	

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

The Town has calculated the baseline (2012) DCIA for each basin contributing stormwater runoff to its MS4 outfalls. The DCIA calculations were made according to guidance by the UCONN Center for Land Use, Education, and Research using the Sutherland Equations to estimate DCIA based on Total IC and land use for each basin.

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

6.1 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	Employees completed training on Stormwater Pollution Prevention and Spill Prevention Control	Continue to provide on the job training to existing and new staff; review and revise training procedures as necessary	Public Works/ Engineering	Ongoing beginning Jul 1, 2019	Ongoing	
6-2 Implement MS4 property and operations maintenance	Ongoing	Municipally-owned or operated properties, parks, and other facilities are maintained so as to minimize the discharge of pollutants to the MS4.	Implement property and operations maintenance plan	Public Works	Ongoing beginning Jul 1, 2018	Ongoing	
6-3 Implement coordination with interconnected MS4s	Ongoing	None	Coordinate with interconnected MS4s	Engineering	Not specified	Ongoing	Windsor will continue to coordinate with operators of interconnected MS4s (such as neighboring municipalities, institutions and DOT) regardging the contribution of potential pollutants
6-4 Develop/implement program to control other sources of pollutants to the MS4	Ongoing	Town reviews the list of stormwater general permit registrants, to identify non-permitted locations which may be potential contributors ans use this data to adjust screening prioritization in the IDDE Plan as warranted.	Control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities through its IDDE and water quality monitoring programs and regulatory mechanisms	Engineering	Not specified	Ongoing	Windsor DPW is registered under the General Permit for Industrial Activity and General Permit for Miscellaneous Industrial Users
6-5 Evaluate additional measures for discharges to impaired waters*	In Progress	The Town provides dog waste bags and receptacles at various parks	On municipally owned or operated lands with a high potential to contribute bacteria to Mill Brook and the CT River,	Engineering/ Wetlands	Not specified	Ongoing	

			Windsor will develop, implement, prioritize, and evaluate potential funding sources for a retrofit or source management program to correct the problems(s).				
6-6 Track projects that disconnect DCIA	Not Started	None	Calculate/Track DCIA reductions	Planning	Ongoing		Track the total acreage of DCIA that is disconnected from the MS4 as a result of redevelopment or retrofit projects within the Town.
6-7 Implement infrastructure repair/rehab program	Ongoing	Continued repair and replacement repair of drainage infrastructure	Prioritize and document Infrastructure repair and rehabilitation work	Public Works	Jul 1, 2021	Ongoing	DPW reviews stormwater infrastructure repair/replacement needs annually to plan projects appropriately and as funded
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started	None	Develop retrofit project plan	Engineering	Jul 1, 2020		Retrofit Plan to identify and prioritize potential DCIA disconnection projects. Prioritization will be based on several factors, including whether the project lies within a Priority Area.
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started	None	Implement and document retrofit projects	Engineering	Jul 1, 2022	Ongoing	
6-10 Develop/implement street sweeping program	Ongoing	Town wide street sweeping conducted every spring	Develop and implement street sweeping program	Public Works	Ongoing beginning Jul 1, 2018	Ongoing	

6-11 Develop/implement catch basin cleaning program	Ongoing	Public Works utilizes a third-party vendor to clean approx. 1/3 of catch basins each year	Develop and implement street Catchbasin cleaning program	Public Works	Ongoing beginning Jul 1, 2020	Ongoing	Catch basin cleaning program resumed in 2023. A third-party vendor cleaned approx. 1/3 of the Town-owned catch basins
6-12 Develop/implement snow management practices	Ongoing	Provide training for Municipal employees on winter roadway maintenance procedures	Develop/Implement snow management practices	Public Works	Ongoing beginning Jul 1, 2018		Training Completed – 12/1/2023

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

- Continue annual employee MS4 and snow management training
- Continue to monitor and vehicles and equipment for leaks
- Continue leaf pick up, pavementsweeping and catch basin cleaning
- Develop/implement retrofit plan and track disconnections

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	8/30/2023
Street sweeping	
Curb miles swept	350 miles
Volume (or mass) of material collected	177 tons
Catch basin cleaning	
Total catch basins in priority areas (value will be less than or equal to total catch basins town or institution-wide)	1320
Total catch basins town- (or institution-) wide	4776
Catch basins inspected	1500
Catch basins cleaned	1500
Volume (or mass) of material removed from all catch basins	273 tons
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Salt
Total amount of each deicing material applied	1300 tons

Type(s) of deicing equipment used	Truck Mounted Spreaders, Broadcasters, and by Hand
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	350 miles
Snow disposal location	
Staff training provided on application methods & equipment	Y - 12/1/2023
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	$0

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program.

Windsor has developed a cleaning schedule that covers all municipally-owned catch basins every 3 years. Inspections will be documented through the use of a catch basin inspection form. Prioritize inspection and maintenance for municipally-owned catch basins located near impaired waters and construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Windsor will clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings. If a catch basin sump is more than fifty (50) percent full during two consecutive routine inspections/cleaning events, Windsor will document that finding, investigate the contributing drainage for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources.

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.

Windsor will develop a Retrofit Plan to identify and prioritize potential DCIA disconnection projects. Prioritization will be based on several factors, including whether the project lies within a Priority Area. The Plan will include a process to identify and prioritize retrofit projects, a rationale for the selection of projects to be implemented, and the total acres of DCIA to be disconnected upon implementation

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

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

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.
Wet Weather Sampling six (6) worst outfalls, based on previous testing. The selected outfalls are representative of the six worst outfalls, evenly distributed across the two impaired waterways within the Town's boundary. Results of the testing provided below.

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.

Outfall ID	**Latitude / Longitude**	**Sample date**	**Parameter** (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	**Results E.Coli (MPN/ 100 mils)**	**Name of Laboratory (if used)**	**Follow-up required? ***
164-HE-0250		04/15/2021	Bacteria	20	Phoenix Environmental	N
164-HE-0202		04/15/2021	Bacteria	<20	Phoenix Environmental	N
164-HE-0237		04/15/2021	Bacteria	<20	Phoenix Environmental	N
164-HE-0318		04/15/2021	Bacteria	<20	Phoenix Environmental	N
164-HE-0267		04/15/2021	Bacteria	<20	Phoenix Environmental	N
164-HE-0152		04/15/2021	Bacteria	11600	Phoenix Environmental	YES
164-HE-0229		04/15/2021	*Bacteria*	<20	*Phoenix Environmental*	N
164-HE-0507		04/15/2021	*Bacteria*	452	*Phoenix Environmental*	YES

164-HE-0505		04/15/2021	*Bacteria*	150	*Phoenix Environmental*	N
164-HE-0558		04/15/2021	*Bacteria*	20	*Phoenix Environmental*	N
164-HE-0519		04/15/2021	*Bacteria*	1870	*Phoenix Environmental*	YES
164-HE-0520		04/15/2021	*Bacteria*	<20	*Phoenix Environmental*	N
164-HE-0475		07/24/2021	*Bacteria*	1580	*Phoenix Environmental*	YES
164-HE-0478		08/19/2021	*Bacteria*	2830	*Phoenix Environmental*	YES
164-HE-0555		08/19/2021	*Bacteria*	900	*Phoenix Environmental*	YES
164-HE-0554		08/19/2021	*Bacteria*	9770	*Phoenix Environmental*	YES
164-HE-0508		08/19/2021	*Bacteria*	28300	*Phoenix Environmental*	YES
164-HE-0510		09/01/2021	*Bacteria*	1590	*Phoenix Environmental*	YES
164-HE-0203		09/01/2021	*Bacteria*	220	*Phoenix Environmental*	YES
164-HE-0222		09/01/2021	*Bacteria*	870	*Phoenix Environmental*	YES
164-HE-0172		09/01/2021	*Bacteria*	>48400	*Phoenix Environmental*	YES
164-HE-0146		09/01/2021	*Bacteria*	1820	*Phoenix Environmental*	YES
164-HE-0173		09/01/2021	*Bacteria*	6900	*Phoenix Environmental*	YES
164-HE-0246		09/01/2021	*Bacteria*	2930	*Phoenix Environmental*	YES
164-HE-0169		09/01/2021	*Bacteria*	24100	*Phoenix Environmental*	YES
164-HE-0184		09/01/2021	*Bacteria*	13700	*Phoenix Environmental*	YES
164-HE-508		8/7/2023	*Bacteria*	15,500	Phoenix Laboratories	Yes
164-HE-173		8/7/2023	*Bacteria*	2280	Phoenix Laboratories	Yes
164-HE-554		8/7/2023	*Bacteria*	471	Phoenix Laboratories	Yes
164-HE-172		8/7/2023	*Bacteria*	*97	Phoenix Laboratories	Yes
164-HE-519		8/7/2023	*Bacteria*	9210	Phoenix Laboratories	Yes
164-HE-152		8/7/2023	*Bacteria*	637	Phoenix Laboratories	Yes
*Total Coliforms (MPN/100mils) exceeded allowable limit of 500						

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)	• E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others • Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	• 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**

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, 2021.

Part III: Additional IDDE Program Data

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).

See Attachment A for Priority Ranking of DEEP basins in Progress

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 to this table.

Outfall / Interconnection ID	Latitude / Longitude	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken

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

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

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 that 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 that 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

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

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

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: Peter Souza	Print name: Ryan D. Gazlay
Signature / Date: 3/28/24	Signature / Date:
Email: souza@townofwindsorct.com	Email: gazlay@townofwindsorct.com

	Catchment ID	Receiving Water	Previous Screening Results Indicate Likely Sewer Input? [1]	Discharging to Area of Concern to Public Health? [2]	Frequency of Past Discharge Complaints	Receiving Water Quality [3]	Density of Generating Sites [4]	Age of surrounding development and infrastructure [5]	Historic Combined Sewers or Septic? [6]	Density of aging septic systems [7]	Culverted Streams? [8]	Est. DCIA >11%	Score	Priority Ranking	Notes
			Yes = 3 (Problem Catchment) No = 0	Yes = 3 (High Priority) No = 0	Frequent = 3 Occaisonal = 2 None = 0	Poor = 3 Fair = 2 Good = 0	High = 3 Medium = 2 Low = 1	High = 3 Medium = 2 Low = 1	Yes = 3 No = 0		Yes = 3 No = 0	Yes = 2 No = 0			
0	4100-11-1-L1	Stony Brook	0	0	0	0					0	2	2		
1	4300-50-1-L1	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
2	4300-51-1-L1	Farmington River	0	0	0	2					0	0	2		
3	4100-06-1	Stony Brook	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
4	4300-00-5+L5	Farmington River	0	0	0	2					0	0	2		
5	4300-50-1	Farmington River	0	0	0	2					0	0	2		
6	4300-53-1	Farmington River	0	0	0	2					0	0	2		
7	4300-00-5+R26	Farmington River	0	0	0	2					0	0	2		
8	4300-49-1-L1	Farmington River	0	0	0	2					0	0	2		
9	4000-11-1-L1	Connecticut River	0	0	0	3					0	0	3		
10	4300-00-5+R27	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
11	4300-49-1	Farmington River	0	0	0	2					0	0	2		
12	4300-51-1	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
13	4300-00-5+R29	Farmington River	0	3	0	2					0	0	5	High Priority	
14	4300-50-2-R1	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
15	4000-11-1	Connecticut River	0	0	0	3					0	2	5		
16	4300-00-5+R28	Farmington River	0	3	0	2					0	0	5	High Priority	
17	4300-52-1-L1	Farmington River	0	0	0	2					0	0	2		
18	4000-00-4+R4	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
19	4000-11-2-R2	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
20	4000-12-1	Connecticut River	0	0	0	3					0	2	5		
21	4300-00-5+R24	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
22	4000-16-1	Connecticut River	0	0	0	3					0	0	3		
23	4300-52-1	Farmington River	0	0	0	2					0	0	2		
24	4000-00-4+R5	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
25	43000-48-1	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
26	4300-48-1-L1	Farmington River	0	0	0	2					0	0	2		
27	4300-00-5+R25	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
28	4300-54-1	Farmington River	0	0	0	2					0	0	2		
29	4300-00-5+R30	Farmington River	0	3	0	2					0	0	5	High Priority	
30	4000-00-4+R6	Connecticut River	0	0	0	3					0	0	3		
31	4300-54-2-R1	Farmington River	0	0	0	2					0	0	2		
32	4300-00-5+R31	Farmington River	0	3	0	2					0	0	5	High Priority	
33	4300-55-1	Farmington River	0	0	0	2					0	0	2		
34	4300-00-5+L4	Farmington River	0	0	0	2					0	2	4		
35	4300-56-1	Farmington River	0	0	0	2					0	2	4		
36	4300-57-1	Farmington River	0	0	0	2					0	0	2		
37	4404-00-2-L1	North Branch Park River	0	0	0	3					0	0	3		
38	4321-01-1	Mill Brook	0	0	0	3					0	2	5		
39	4404-02-1	North Branch Park River	0	0	0	3					0	2	5		
40	4321-00-1-L2	Mill Brook	0	0	0	3					0	0	3		
41	4300-00-5+R23	Farmington River	0	0	0	2					0	0	2		
42	4321-03-1-l1	Mill Brook	0	0	0	3					0	2	5		
43	4321-00-1-L1	Mill Brook	0	0	0	3					0	2	5		
44	4000-00-4+R7	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
45	4321-00-2-R3	Mill Brook	0	3	0	3					0	2	8	High Priority	
46	4321-03-1	Mill Brook	0	0	0	3					0	2	5		
47	4000-00-5+R1	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
48	4321-00-1	Mill Brook	0	0	0	3					0	0	3		
49	4321-00-2-R2	Mill Brook	0	0	0	3					0	0	3		
50	4300-00-5+R34	Farmington River	0	3	0	2	-	-	-	-	-	-	-	High Priority	
51	4300-00-5+R32	Farmington River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
52	4321-02-1	Mill Brook	0	0	0	3					0	0	3		
53	4321-00-2-R1	Mill Brook	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
54	4300-58-1	Farmington River	0	0	0	2					0	2	4		
55	4000-23-1	Connecticut River	0	0	0	3					0	2	5		
56	4000-20-1	Connecticut River	0	0	0	3					0	0	3		
57	4000-00-5+R2	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
58	4000-00-6+R1	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
59	4000-22-1	Connecticut River	0	0	0	3					0	2	5		
60	4000-24-1	Connecticut River	0	0	0	3					0	0	3		
61	4000-22-2-R1	Connecticut River	0	0	0	3					0	2	5		
62	4000-00-6+R2	Connecticut River	0	0	0	3					0	0	3		
63	4000-00-6+R3	Connecticut River	0	0	0	3					0	0	3		
64	4400-00-4-R1	Park River	0	0	0	0					0	0	0		
65	4000-00-6+R4	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
66	4000-24-2-R1	Connecticut River	0	0	0	3					0	2	5		
67	4000-25-1	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities
68	4000-26-1	Connecticut River	-	-	-	-	-	-	-	-	-	-	-	Excluded	No MS4 Facilities

1. Previous wet weather screening results indicate impacts to impaired waters including:
   - Total Nitrogen >2.5 mg/L
   - Total Phosphorous >0.3 mg/L
   - E. Coli >235col/100 ml for swimming areas and >410 col/100 ml for all others
   - Total Coliform >500 col/100 ml, or Fecal coliform >31 col/100ml for Class SA and >260 Col/100ml for Class SB
   - Enterococci >104 col/100ml for swimming areas and >500 col/100ml for all others
   - Turbidity at outfall is more than 5 NTU greater than the in-stream sample

   Previous dry weather screening results indicate likely sewer input if any of the following are true:
   - Olfactory or visual evidence of sewage,
   - Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water
   - Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and detectable levels of chlorine

2. Catchments that discharge to or in the vicinity of any of the following areas: public beaches, recreational areas, drinking water supplies, or shellfish beds
3. Receiving water quality based on latest version of State of Connecticut Integrated Water Quality Report.
   - Poor = Waters with approved TMDLs (Category 4a Waters) where illicit discharges have the potential to contain the pollutant identified as the cause of the impairment
   - Fair = Water quality limited waterbodies that receive a discharge from the MS4 (Category 5 Waters)
4. Generating sites are institutional, municipal, commercial, or industrial sites with a potential to contribute to illicit discharges (e.x., car dealers; car washes; gas stations; garden centers; and industrial manufacturing areas, etc.)
5. Age of development and infrastructure:
   - High = Industrial areas greater than 40 years old and areas where the sanitary sewer system is more than 40 years old
   - Medium = Developments 20-40 years old
   - Low = Developments less than 20 years old
6. Areas once served by combined sewers that have been separated, or areas once served by septic that have been converted to sanitary sewers
7. Aging septic systems are systems 30 years or older in residential areas
8. Any river or stream that is culverted for distance greater than a simple roadway crossing