

## **2020 ANNUAL REPORT**

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

***Registration No. GSM000023***

*for*

*Town of Waterford, CT  
15 Rope Ferry Road  
Waterford, CT 06385*



Prepared By:



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**MS4 General Permit  
Town of Waterford 2020 Annual Report**

Existing MS4 Permittee

Permit Number GSM000023

January 1, 2020 – December 31, 2020

Primary MS4 Contact: Gary J. Schneider; Director of Public Works; (860) 444-5864; [gschneider@waterfordct.org](mailto:gschneider@waterfordct.org)

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This report documents the Town of Waterford's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2020 to December 31, 2020.

## **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/ projected	Additional details
1-1 Implement public education and outreach	Complete	Link was created for accessing the Town's Stormwater Regulations website. Links were added discussing Stormwater & Water Quality, Impervious Cover, Urban Runoff, the NPDES Program and Save the Sound. Planning & Development and Recreation & Parks added a webpage link to the Stormwater. Informational material is also present at Town offices.	Continue distributing educational brochures as bill inserts, mailings, and fact sheets at town offices and with building permits, and on the town website.	Department of Public Works	Jul 1, 2018	Mar 23, 2018 On-going	
1-2 Address education/outreach for pollutants of concern*	Complete	Weblinks regarding nitrogen, phosphorus, turbidity and bacteria were added to the Stormwater website.	Develop and Distribute Information on Nitrogen and Bacteria Pollution	Department of Public Works	Jul 1, 2018	June 8, 2018	

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
1-3 Town Website	Complete	Public educational documents have been made available on the Town's Stormwater webpage. The SMP and draft Annual Report were added to the webpage. A link has been added for the Construction Stormwater General Permit to the webpage.	Update website to include additional stormwater information.	Department of Public Works	Jan 2018	Mar 23, 2018	
1-4 Catch Basin Stenciling/Badges	Compete	All catch basins have been stenciled.	Continue an on-going stenciling program in which basins in Town are prioritized and stenciled.	Department of Public Works	N/A	On-going	The Town will continue its catch basin stenciling program, as needed.
1-5 Household Hazardous Waste Collection Days	Complete	HHW Collections Days were conducted.	Continue program in an effort to remove household hazardous waste safely from the waste stream using a Qualifying Local Program	Department of Public Works	Annually	On-going	SCRRRA provided fliers. Conducted monthly on Saturdays Apr thru Nov, 2020

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

- Continue to update the Town's Stormwater webpage with new/updated stormwater related information
- Continue distributing educational brochures
- Attempt to coordinate efforts with local schools for presentation on stormwater management
- Continue the catch basin stenciling/badges program, as needed
- Continue to coordinate HHW program

### 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
Stormwater Management website was created	General Public	Stormwater runoff	All	Department of Public Works
Link for information on Household Hazardous Waste was added to the Public Works webpage	General Public	HHW Disposal	All	Department of Public Works
Links were added to the Stormwater Regulations website that discuss the following areas: Stormwater & Water Quality, Impervious Cover, Urban Runoff, the NPDES Program and Save the Sound.	General Public	General stormwater management topics	All	Department of Public Works

## 2. PUBLIC INVOLVEMENT/PARTICIPATION (Section 6(a)(2) / page 21)

### 2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
2-1a Final Stormwater Management Plan publicly available	Complete	Notice of the SMP was published in The Day newspaper and on Town's Stormwater website.	Notify public of published SMP and document comments received.	Department of Public Works	Apr 3, 2017	April 1, 2017	The Stormwater Management Plan will be reviewed periodically and updated, as necessary.
2-1b Comply with public notice requirements for the Annual Report	Complete	Notice of the draft Annual Report was posted on the Town's website.	Notify public of draft Annual Report and document comments received.	Department of Public Works	January 31 Annually	Feb 23, 2020 Feb 17, 2021	
2-2 Community Group Engagement	Complete	The Planning Department and Public Works department continue to work with the Niantic River Watershed Committee in implementation of educational programs, and installation of LID measures within the Niantic Watershed. Due to the pandemic this year, the residential outreach components of the program were suspended.	Identify and reach out to local organizations that may want to participate in review and implementation of this SMP.	Department of Public Works	Feb 15, 2018	On-going	NEIWPCC continued a pilot community social marketing campaign on reducing fertilizer application, including garbage container stickers.
2-3 Interagency Meetings	Complete	Meetings were held throughout the year with Public Works and Planning & Development.	Continue to facilitate a panel of staff and volunteers.	Department of Public Works	Ongoing	2/6/20 2/19/20; 3/10/20; 4/8/20; 7/20/20 On-going	

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

- Continue to provide notice of updated SMPs and draft Annual Reports
- Continue to engage Community Groups
- Continue interagency meetings

## 2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes	April 1, 2017	The Day, Planning & Development and Town Clerk's Offices, Department of Public Works Complex, the Library and <a href="http://www.waterfordct.org/sites/waterfordct/files/file/file/20170912_waterford_bmp_smp_2017.pdf">http://www.waterfordct.org/sites/waterfordct/files/file/file/20170912_waterford_bmp_smp_2017.pdf</a>
Announcement to public and availability of Annual Report	Yes	2019 Report Announced 2/23/20 2020 Report Announced 2/17/21	Planning & Development and Town Clerk's Offices, Department of Public Works Complex, the Library and <a href="https://www.waterfordct.org/sites/waterfordct/files/uploads/2019_waterford_ms4_annual_report_draft.pdf">https://www.waterfordct.org/sites/waterfordct/files/uploads/2019_waterford_ms4_annual_report_draft.pdf</a>

## 3. ILLICIT DISCHARGE DETECTION AND ELIMINATION (Section 6(a)(3) and Appendix B / page 22)

### 3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department/Person Responsible	Due	Date completed/projected	Additional details
3-1 Develop written IDDE program	Complete	The Town finalized its IDDE program.	Development and implement an IDDE Program	Department of Public Works	Jul 1, 2018	Apr 29, 2020	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	In Progress	The Town conducted significant efforts to locate additional outfalls in priority areas that were not previously identified.	Finalize mapping of all MS4 Outfalls	Department of Public works	Jul 1, 2019	December 2021	The Town will continue to update its mapping as new information is gathered.
3-3 Develop citizen reporting program	In Progress	Currently, citizens can call the Department of Public Works to report any activities. Updated system will be developed to include use of <i>Municipality Software</i> .	Develop an online method for citizens to report spills and illicit dischargers	Department of Public Works	Jul 1, 2017	December 2021	The Town is adding an email and phone contact of the will be provided in the stormwater page for reporting illicit discharges.
3-4 Establish legal authority to prohibit illicit discharges	Substantial Complete	Current ordinance generally meets requirements. The Town reviewed its ordinance against the template provided by UConn CLEAR and will be making slight changes to be more consistent with the template.	Review and update ordinances.	Department of Public Works	Jul 1, 2018	December 2021	

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
3-5 Develop record keeping system for IDDE tracking	Complete	The Town currently uses excel and access spreadsheets, along with GIS, for IDDE tracking.	Record illicit discharge abatement activities. Develop and maintain an SSO inventory.	Department of Public Works	Jul 1, 2017	Jul 1, 2017 On-going	The Town started developing a recording system for IDDE tracking using the <i>Municipal Software</i> .
3-6 Address IDDE in areas with pollutants of concern	In Progress	The Town continues to identify structures that are not connected to the sanitary sewer system which are located near the MS4.	Identify which areas in Town are most likely to contribute nitrogen phosphorous, and bacteria to the MS4 (IDDEs).	Department of Public Works	Jun 2020	On-going	
3-7 Map MS4 System in Priority Areas	In Progress	The Town conducted significant efforts to locate additional outfalls in priority areas that were not previously identified. The Town also conducted efforts for mapping catch basins, piping and stormwater structures in priority areas.	Map Priority Areas	Department of Public Works	Jun 2022	On-going	

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

- Post IDDE Program to the Stormwater webpage and include link in next year's Annual Report
- Post an Illicit Discharge Reporting link on the Stormwater webpage
- Continue updating the MS4 outfall and system mapping
- Maintain master IDDE tracking system
- Investigate illicit discharges in areas with pollutants of concern

### 3.3 List of citizen reports of suspected illicit discharges received during this reporting period.

Date of Report	Location / suspected source	Response taken
No reports were recorded in 2020		

**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)
No illicit discharges were reported during 2020						
No SSOs were reported from 2012 through 2020						

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

Currently, phone calls and emails are received by the Department of Public Works from citizen's reporting possible illicit discharges. The Town will continue tracking illicit discharges using an excel table. The Town is working towards tracking reports and responses using the *Municipality Software* program.

**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
409 Mohegan Ave Pkwy; septic system failure	Action initiated by septic installer and repair completed in December 2018	Unknown
55 Douglas Lane; sewage effluent was surfacing over the leaching structures	Action initiated by septic installer and repair completed in 2020	Unknown
61 Dayton Rd; sewage effluent was surfacing over the leaching structures	Action initiated by septic installer and repair completed in 2020	Unknown
63 Bloomingdale Rd; septic tank collapsed	Action initiated by septic installer and repair completed in 2020	Unknown

### 3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	262
Estimated or actual number of interconnections	10
Outfall mapping complete	75%
Interconnection mapping complete	25%
System-wide mapping complete (detailed MS4 infrastructure)	30%
Outfall assessment and priority ranking	262 outfalls have initial rankings
Dry weather screening of all High and Low priority outfalls complete	240 of 262
Catchment investigations complete	6 investigations were initiated
Estimated percentage of MS4 catchment area investigated	2%

### 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).

An MS4 and IDDE training program was developed for presentation to all Town personnel that may come into contact with stormwater or that may review applications and plans that impact stormwater quality. Typically, this training is conducted on an annual basis, or as needed when new employees are added. The training program that is typically conducted in the spring for members of Public Utility, Board of Education, Department of Public Works, Parks and Recreation, Police Department, and Fire Department was postponed until further notice due to safety restrictions resulting from the COVID-19 pandemic.

## 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/ projected	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	Complete	P&Z updated the Subdivision and Zoning Regulations to incorporate LID, green infrastructure, and stormwater design requirements.	Review and update the regulations to be consistent with the requirements of the permit.	Planning	Jul 1, 2019	April 2018	The Town will continue to update ordinances/regulations to improve compliance with MS4 General Permit.

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
4-2 Develop/ Implement plan for interdepartmental coordination in site plan review and approval	Complete	Site applications are forwarded to Town Officials for review and comment during application process. Plans are not signed by commission until all departments have signed off on project plan.	Document Current Procedure	Planning	Jul 1, 2017	Jul 1, 2017 On-going	
4-3 Review site plans for stormwater quality concerns	Complete	Commercial and residential site plans involving greater than 0.5 acre of land disturbance were reviewed for stormwater quality control measures.	Continue to review all design plans for consistency with town and state guidelines for erosion and sediment control.	Planning	Jul 1, 2017	Jul 1, 2017 On-going	Application review checklists have been revised to include stormwater management regulation requirements
4-4 Conduct site inspections	Complete	Zoning and Inland Wetland enforcement staff verify site development practices are in accordance with approved plans. Planning staff employ an inspection checklist to document compliance and to identify measures requiring repair/additional control measures. Inspections occur after every significant rainfall event.	Document Inspections Performed Continue existing program of construction inspections.	Planning	Jul 1, 2017	Jul 1, 2017 On-going	
4-5 Implement procedure to allow public comment on site development	Complete	All agendas and minutes are noticed in compliance with State requirements for public notice. Public hearings announced in newspaper. Complaints regarding land-disturbance are forwarded to Planning and Development Department	Document Public Comments	Planning	Jul 1, 2017	Jul 1, 2017	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Complete	Town agencies notify developers of stormwater requirements. When applicable, developers submit notification of registration to State. P&Z application checklist was revised to require applicant's determination if a Construction Stormwater GP is required.	Update application forms to include determining if Construction Stormwater GP is required. Updated webpage.	Planning	Jul 1, 2017	Jul 1, 2019	A note was added to the website regarding need for a Construction Stormwater GP.

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

- Continue to update ordinances/ regulations to improve compliance with MS4 General Permit.
- Continue to review all design plans for consistency with Town and State guidelines for erosion and sediment control.
- Continue existing program for construction inspections.
- Continue to follow all State public notice and hearing requirements and follow up on all comments and complaints received.

### 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/ projected	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Complete	P&Z updated the Subdivision and Zoning Regulations to incorporate LID, green infrastructure, and stormwater design requirements.	Review and update the regulations to be consistent with the requirements of the Permit.	Planning	Jul 1, 2021	April 2018	The Town will continue to update ordinances/ regulations to improve compliance with MS4 General Permit.
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Complete	Section 25.6 Stormwater Management regulations require LID, run-off control and stormwater treatment to the maximum extent practicable for all new development >0.5 acre.	Review current regulations to identify and, where appropriate, reduce or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices to the MEP.	Planning	Jul 1, 2019	April 2018 On-Going	
5-3 Identify retention and detention ponds in priority areas	Complete	Known ponds under the control of the Town have been mapped.	Inventory Town retention/detention ponds	Department of Public Works	Jul 1, 2019	Mar 23, 2018	

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Complete	Inspection reports and water quality monitoring for stormwater and treatment basins were completed. Town maintains an inventory of required stormwater management control practices for completed site developments. Documentation of inspection and maintenance of stormwater treatment is requested as part of land use and building permit approvals. Town employees receive instruction on maintenance for rain gardens, stormwater detention /treatment systems.	Develop a maintenance plan for retention/ detention ponds and stormwater treatment structures that it owns or over which it holds an easement or other authority and that are located in the Permittee's priority areas to ensure their long-term effectiveness.	Planning	Jul 1, 2019	Feb 15, 2018	All basins and structures are maintained at least annually.
5-5 DCIA mapping	Substantially Completed	The DCIA for the priority areas have been calculated using the available impervious cover layers.	Calculate DCIA	Department of Public Works	Jul 1, 2020	Jul 1, 2020 On-going	The DCIA mapping will be updated, as necessary, to include retrofit, development and development projects.
5-6 Address post-construction issues in areas with pollutants of concern	To be Started	None	Document issues identified and address. Prioritize areas for the DCIA retrofit program under MCM-6	Department of Public Works	Not specified	On-going	

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

- Continue to review and update ordinances/regulations to improve compliance with MS4 General Permit.
- Continue to enforce LID/runoff reduction requirements for development and redevelopment projects.
- Review Stormwater Structures Management Plan for areas of optimization.
- Continue to conduct inspections and water quality monitoring for stormwater and treatment basins.
- Continue updating the DCIA mapping, as necessary.

### 5.3 Post-Construction Stormwater Management reporting metrics

Metrics		
Baseline (2012) Directly Connected Impervious Area (DCIA)	240	acres
DCIA disconnected (redevelopment plus retrofits)	Unknown	acres this year / acres total
Retrofits completed	Unknown	#
DCIA disconnected	TBD	% this year / % total since 2012
Estimated cost of retrofits	Unknown	\$
Detention or retention ponds identified	9	# total

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

- To calculate the baseline DCIA for the Town of Waterford, the Town used the process found on the CT NEMO website. CT NEMO developed 5 formulas to calculate the DCIA and Impervious Cover (IC) independently for each basin in the Town using the percent DCIA for the basin with the state DCIA removed from the equation. The Town took the formulas and created a bell curve to input the calculated percent of DCIA for each basin and calculate the total DCIA and IC amounts for the Town. Each basin value was added together to create the baseline for the DCIA and IC for the Town.

## 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/ projected	Additional details
6-1 Develop/ implement formal employee training program	Complete	A training program has been developed. No training events were conducted during 2020 due to safety restrictions resulting from the COVID-19 pandemic.	Track Town employee training	DPW, Parks and Rec., Utility Commission, Waterford Buildings and Grounds, and Waterford BOE.	Jul 1, 2017	On-going	
6-2 Implement MS4 property and operations maintenance	Complete	Salt piles are stored under cover and on impervious surfaces. Town industrial stormwater discharges are monitored. Vehicle maintenance is performed undercover.	Continue the pattern of MS4 property and operations maintenance in accordance with the Permit.	Depart of Public Works, Police Depart, Fire Depart, Board of Ed, Parks and Rec	Jul 1, 2018	Jul 1, 2017 On-going	The Town continues reviewing current practices and looking for areas for optimization.

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
6-3 Implement coordination with interconnected MS4s	In Progress	Through the outfall identification process, the Town has identified several interconnections with the neighboring towns/cities.	Coordinate pollution prevention activities with interconnected MS4s.	Department of Public Works	Not specified	On-going	
6-4 Develop/ implement program to control other sources of pollutants to the MS4	In Progress	The Town has identified industrial facilities not registered under the DEEP's Industrial Stormwater General Permit.	Develop and implement a program to control the contribution of pollutants to the MS4.	Department of Public Works	Not specified		The Town plans on notifying industrial facilities of their requirements to register under the Industrial Stormwater GP.
6-5 Evaluate additional measures for discharges to impaired waters*	To be Started	None	Identify potential project locations.	Department of Public Works	Not specified		
6-6 Track projects that disconnect DCIA	In Progress	A table was created for tracking disconnected DCIA.	Annually track acreage of DCIA disconnected as a result of redevelopment/ retrofit projects within the Town.	Department of Public Works	Jul 1, 2017	Jul 1, 2019 On-going	The Town is starting tracking disconnected DCIA using the table it created.
6-7 Implement infrastructure repair/rehab program	In Progress	None	Identify MS4 structures to repair, rehabilitate, or upgrade to reduce pollutant discharge.	Department of Public Works	Jul 1, 2021	December 2021	The Town will review current practices and look for areas for optimization.
6-8 Develop/ implement plan to identify/prioritize retrofit projects	In Progress	In 2021, the Town will continue working with its consultant to identify and prioritize potential projects for the Retrofit Program to the maximum extent practicable.	Develop a retrofit project plan to identify and prioritize DCIA connection projects	Department of Public Works	Jul 1, 2020	December 2021	
6-9 Implement retrofit projects to disconnect 2% of DCIA	In Progress	In 2021, the Town will continue working with its consultant to identify and prioritize potential projects for the Retrofit Program to the maximum extent practicable.	Implement retrofit projects	Planning	Jul 1, 2022	Jul 1, 2022	
6-10 Develop/ implement street sweeping program	Complete	All Town-owned roads are swept every year, starting after the last snow melt.	Continue sweeping all streets at least once per year, as soon as possible after snowmelt.	Department of Public Works	Jul 1, 2017	Jul 1, 2017 On-going	The Town continues reviewing current practices and looking for areas for optimization.
6-11 Develop/ implement catch basin cleaning program	Complete	The Town cleans approximately 1/3 of all of the catch basins annually.	Continue current maintenance program in accordance with the Permit.	Department of Public Works	Jul 1, 2020	Jul 1, 2019 On-going	The Town continues reviewing current practices and looking for areas for optimization.

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
6-12 Develop/ implement snow management practices	Complete	DEEP Guidelines on snow management provided to Town. The Town streets and municipal lots were plowed, as necessary. Roads were treated with salt (no sand), as necessary.	Develop/implement snow management practices	Department of Public Works	Jul 1, 2018	Jul 1, 2017 On-going	The Town continues reviewing current practices and looking for areas for optimization.

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

- Conduct annual MS4 training events.
- Continue to review MS4 property and operations maintenance practices and look for areas for optimization.
- Notify industrial facilities of their requirements to register under the Industrial Stormwater GP.
- Continue tracking disconnected DCIA using the table created.
- Continue efforts to identify and prioritize potential projects for the Retrofit Program to the maximum extent practicable.
- Continue street sweeping, catch basin cleansing and snow management practices.

## 6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	No training in 2020 due to COVID-19 pandemic
Street sweeping	
Curb miles swept	242 miles
Volume (or mass) of material collected	60-75 Cu Yards
Catch basin cleaning	
Total catch basins in priority areas	~3,000
Total catch basins in MS4	~3,000
Catch basins inspected	1,000-1,100
Catch basins cleaned	1,000-1,100
Volume (or mass) of material removed from all catch basins	~240 CY
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	~1,400 tons
Type(s) of deicing equipment used	Truck/spreader
Lane-miles treated	242 miles
Snow disposal location	N/A
Staff training provided on application methods & equipment	Yes – as necessary

Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	Unknown
Reduction in turf area (since start of permit)	Unknown
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	N/A

#### 6.4 Catch basin cleaning program

**Briefly describe the method used to optimize your catch basin inspection and cleaning schedule.**

Catch basins will all be inspected, cleaned out and the sums will be measured. A second round of inspections and cleaning will be conducted, and the amount of material removed will be recorded. A list will be generated and the catch basins with the most material present will be put on a more frequent cleaning schedule to ensure that the 50% design capacity for the sump is not exceeded.

#### 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**

In 2021, the Town will continue working with its consultant to identify and prioritize potential projects for the Retrofit Program to the maximum extent practicable.

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

In 2021, the Town will continue working with its consultant to identify and prioritize potential projects for the Retrofit Program to the maximum extent practicable.

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

In 2021, the Town will continue working with its consultant to identify and prioritize potential projects for the Retrofit Program to the maximum extent practicable.

## Part II: Impaired waters investigation and monitoring

### 1. Impaired waters investigation and monitoring program

#### 1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution.

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) Wet weather samples were collected from 24 of 47 total outfalls that discharge to impaired waters corresponding to 51% completed.
- 2) 13 outfalls sampled exceeded pollutant thresholds and require follow-up investigation.
- 3) Based on the resulted of the samples collected, the top six (6) worst outfalls have been selected and will began annual sampling in the spring of 2021.

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

#### 2.1 Screening data collected under 2017 permit

Table 2.1a - Class SA & SB Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	Outfall Turbidity (NTU)	Turbidity Upstream (NTU)	Fecal Coliform (col/100mL)	Enterococcus (col/100mL)	Nitrogen (mg/L)	Phosphorous (mg/L)	Lab	Investigation Required
4TH-1	41.326394	-72.175706	4/13/2020	5.57	7.52	1190	1170	0.72	0.094	Phoenix	YES
BALD-1	41.336172	-72.144587	4/13/2020	n/a	n/a	20	187	n/a	n/a	Phoenix	NO
BALD-2	41.3350363	-72.14569031	4/13/2020	n/a	n/a	< 10	97	n/a	n/a	Phoenix	NO
BLOOM-2	41.4010613	-72.1207251	9/25/2018	3.34	6.07	n/a	n/a	n/a	n/a	Phoenix	NO
GLEN-1	41.3172803	-72.1037312	4/24/2020	n/a	n/a	< 10	96	0.54	0.05	Phoenix	NO
NIARIV-1	41.35634543	-72.17600201	4/13/2020	6.33	0	31	437	0.73	0.046	Phoenix	YES
NIARIV-2	41.3532664	-72.1762042	4/13/2020	0	2.11	74	512	0.56	0.051	Phoenix	YES
NIARIV-5	41.34061	-72.17339	12/30/2019	15.5	0	< 10	292	0.79	0.163	Phoenix	YES
NIARIV-6	41.3392626	-72.1736651	12/30/2019	9.47	0	52	393	0.42	0.05	Phoenix	YES
NIARIV-7	41.3359644	-72.1740182	12/30/2019	1.97	18.8	20	171	0.57	0.082	Phoenix	NO
OLDMIL-2	41.4002874	-72.1150245	9/25/2018	7.54	3.4	n/a	n/a	n/a	n/a	Phoenix	NO
OLDNOR-2	41.4031901	-72.1115214	4/24/2020	n/a	n/a	41	262	1.41	0.106	Phoenix	NO

Table 2.1a - Class SA & SB Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	Outfall Turbidity (NTU)	Turbidity Upstream (NTU)	Fecal Coliform (col/100mL)	Enterococcus (col/100mL)	Nitrogen (mg/L)	Phosphorous (mg/L)	Lab	Investigation Required
OLDNOR-3	41.4031439	-72.112051	9/25/2018	n/a	n/a	3260	8160	0.52	0.117	Phoenix	YES
OLDNOR-4	41.40117677	-72.11190543	4/24/2020	n/a	n/a	31	10	0.34	0.033	Phoenix	NO
OLDNOR-5	41.3996828	-72.1116347	9/25/2018	4.98	2.44	n/a	n/a	n/a	n/a	Phoenix	NO
OSWE-5	41.355933	-72.1772576	4/13/2020	0	1.14	< 10	537	0.75	0.046	Phoenix	YES
PARK-1	41.3502878	-72.1858535	4/13/2020	2.71	0.71	75	1310	0.62	0.046	Phoenix	YES
RIVSI-2	41.3524954	-72.1870468	4/13/2020	0	2.14	301	2600	0.62	0.051	Phoenix	YES
SHAW-1	41.3497751	-72.1817401	4/13/2020	8.14	4.76	52	1500	1.78	0.117	Phoenix	YES
WINDW-1	41.3169534	-72.1568046	4/13/2020	n/a	n/a	882	3650	n/a	n/a	Phoenix	YES
WINT-1	41.4009492	-72.1114224	9/25/2018	18.79	13.59	11200	4610	0.4	0.09	Phoenix	YES
WINT-2	41.40077	-72.10806	9/25/2018	11.46	7.08	1500	2250	0.43	0.046	Phoenix	YES

Table 2.1b - Class A & B Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	Total Coliform (col/100mL)	E. Coli (col/100mL)	Lab	Investigation Required
OSWE-6	41.3567635	-72.1761815	4/13/2020	3650	10	Phoenix	NO
OSWE-7	41.3567781	-72.1761586	12/30/2019	30800	20	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	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
N/A					

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

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment
It is anticipated that this will be initiated during 2021		

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

Once outfall screening 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	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
It is anticipated that this will be conducted annually, starting prior to June 30, 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 provided with this report.

#### 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

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

Table 2.1a - Non-Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (umhos/cm)	Salinity (g/kg)	Temp (oC)	MBAs (mg/L)	E. Coli (col/100ml)	Lab	Investigation Required
ALMO-1	41.3552399	-72.131162	4/1/2020	1	0	94.1	0.0424	10.3	0.25	< 10	Phoenix	NO
AVERY-1	41.3446707	-72.1372108	4/1/2020	0	0.02	259	0.126	12.3	0.25	20	Phoenix	NO
AVERY-2	41.3439838	-72.1380138	6/20/2018	0.25	0.07	675	0.33	20.85	0.25	63	Phoenix	NO
BLN-1	41.339836	-72.1454662	10/24/2019	0	0.06	139	0.0663	12.4	0.25	< 10	Phoenix	NO
BRAM-2	41.3194889	-72.115328	5/5/2020	0	0.02	140	0.0663	14	0.25	< 10	Phoenix	NO
CHAP-1	41.3767821	-72.1225643	2/20/2020	0.5	0.13	319	0.155	6.2	0.5	< 10	Phoenix	YES
CHAP-3	41.3757661	-72.1271063	6/18/2018	0	0.02	758	0.39	22.46	0.25	< 10	Phoenix	NO
COLL-1	41.3831457	-72.1109513	7/21/2020	3	0	807	0.391	27.1	>3	>24200	Phoenix	YES
CROSDR-1	41.3384009	-72.1403596	1/29/2020	0	0.55	120	0.0579	4.6	0.25		Phoenix	NO
CROYD-1	41.3293422	-72.1712939	5/5/2020	0	0	514	0.229	13.3	0.25	< 10	Phoenix	NO
DIMM-1	41.3118341	-72.114509	5/12/2020	0.25	0	147	0.698	12.7	0.25	< 10	Phoenix	NO
DOYLE-1	41.348095	-72.1709064	7/21/2020	0.25	0.03	217	0.102	20.2	0.25	41	Phoenix	NO
FULM-1E	41.352156	-72.174253	5/12/2020	0	0.01	172	0.07	12.7	0.25	85	Phoenix	NO

Table 2.1a - Non-Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (umhos/cm)	Salinity (g/kg)	Temp (oC)	MBAs (mg/L)	E. Coli (col/100ml)	Lab	Investigation Required
FULM-2	41.3524608	-72.1741223	6/20/2018	0.5	0.11	360	0.17	16.89	0.5	393	Phoenix	YES
GOUN-1	41.3174841	-72.1195059	5/5/2020	0.25	0.11	125	0.0596	13.4	0	10	Phoenix	NO
HICK-1	41.384342	-72.143777	1/15/2020	0	0.16	177	0.0834	10.4	0.25	< 10	Phoenix	NO
HIGRID-1	41.3306536	-72.170537	1/22/2020	0.25	0.06	156	0.0748	8.5	0.25	10	Phoenix	NO
INA-1	41.3496525	-72.1677084	4/1/2020	1	0.01	197	0.0952	7.7	0.25	< 10	Phoenix	YES
LAUCRE-1	41.3299415	-72.1350245	1/29/2020	0.25	0	204	0.0942	7.8	0.25	< 10	Phoenix	NO
LAUCRE-2	41.3299966	-72.1294099	1/29/2020	0	0	187	0.0887	9.6	0.25	< 10	Phoenix	NO
LONG-1	41.3428261	-72.1510046	3/10/2020	0	0.16	229.4	0.11	7.3	0.25	< 10	Phoenix	NO
MAYF-1	41.3176849	-72.1181761	5/5/2020	0.25	0.44	201	0.096	14.5	1	< 10	Phoenix	NO
OLDCOL-1	41.4210875	-72.132232	8/27/2018	0.25	0.39	344	0.16	23.45	0.25	< 10	Phoenix	NO
PEPP-1	41.3303782	-72.1147537	5/5/2020	0.25	0	355	0.171	14.4	0.25	< 10	Phoenix	NO
PILG-1	41.3770728	-72.1226691	6/18/2018	0.25	0.05	210	0.11	21.34	0.25	< 10	Phoenix	NO
POND-1	41.3898657	-72.1398288	1/15/2020	0	0.05	231	0.111	9.9	0	30	Phoenix	NO
SEATER-1	41.3278522	-72.1684398	5/12/2020	0	0	203	0.097	13.7	0.25	< 10	Phoenix	NO
SEATER-2	41.3295015	-72.1683705	5/12/2020	0	0.04	174	0.0826	12.6	0.25	< 10	Phoenix	NO
SHORD-1	41.3216761	-72.1475107	10/24/2019	0	0	89.4	0.0424	13	0.25	98	Phoenix	NO
SHORD-2	41.3198319	-72.1474884	9/9/2019	0.25	0.13	275	0.139	20.1	0	20	Phoenix	NO
SHORD-4	41.315372	-72.146904	6/28/2019	0.25	0.03	215	0.12	18.21	0.25	520	Phoenix	NO
SHORD-6	41.3095762	-72.1440754	10/24/2019	0.25	0	228	0.105	18	0.25	530	Phoenix	NO
STOHEI-1	41.3517855	-72.1599865	3/9/2020	0.25	0.04	198.4	0.09	6.7	0	< 10	Phoenix	NO
STOHEI-2	41.3519492	-72.1609592	4/1/2020	0.5	0.01	101	0.048	9.6	0.25	< 10	Phoenix	YES
STOHEI-3	41.3505843	-72.1595844	4/1/2020	0	0.01	222	0.106	10.7	0.25	< 10	Phoenix	NO
STOHEI-4	41.3500931	-72.1590696	3/9/2020	0	0.22	279.9	0.13	7.4	0	< 10	Phoenix	NO
SUSA-1	41.3199053	-72.1254505	5/12/2020	0.25	0.04	69	0.0323	13.5	0.25	10	Phoenix	NO
SUSA-2	41.3191034	-72.1253908	5/5/2020	0.25	0.16	86.6	0.0404	11.1	0.25	< 10	Phoenix	NO
SUSA-6	41.3157063	-72.1251014	5/5/2020	0.25	0.05	130	0.0615	14.2	0.25	< 10	Phoenix	NO
TOTO-1	41.3901968	-72.1115598	10/25/2019	0.25	0.01	59	0.03	24.04	0.5	10	Phoenix	NO
TWINHA-1	41.366985	-72.132366	3/9/2020	0	0	404.9	0.19	6.7	0.25	< 10	Phoenix	NO
TWINLA-1	41.390183	-72.141697	1/15/2020	0.25	0	78.1	0.037	10.3	0.25	< 10	Phoenix	NO
TWINLA-2	41.387082	-72.1361025	6/18/2018	0.25	0.51	190	0.09	23.69	0	< 10	Phoenix	NO
TWINLA-3	41.38603	-72.137506	1/3/2020	0	0.02	118	0.089	2.8	0.25	< 10	Phoenix	NO
VILL-1	41.3320006	-72.1340978	3/10/2020	0.25	0	305	0.148	7.3	0.75	< 10	Phoenix	NO
VILL-2	41.3320006	-72.1340979	1/29/2020	3	0	243	0.116	14	0.25	< 10	Phoenix	NO
WESTW-1	41.3104625	-72.1243861	8/24/2018	0	0.06	537	0.26	27.5	0.25	84	Phoenix	NO
WINRID-1	41.3563186	-72.1307051	4/1/2020	0.5	0.52	328	0.158	11.8	0.25	20	Phoenix	YES

Table 2.1b - Class SA & SB Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	Outfall Turbidity (NTU)	Turbidity Upstream (NTU)	Enterococcus (col/100mL)	Nitrogen (mg/L)	Phosphorous (mg/L)	Lab	Investigation Required
4TH-1	41.326394	-72.175706	4/25/2019	1.09	0	< 10	1.31	0.056	Phoenix	NO
ALEW-1	41.31653	-72.1034217	10/25/2019	n/a	n/a	51	2.41	0.086	Phoenix	NO
BALD-1	41.336172	-72.144587	1/29/2020	n/a	n/a	< 10	n/a	n/a	Phoenix	NO
EWHARF-1	41.327666	-72.1740938	4/25/2019	0.02	0	< 10	4.68	10	Phoenix	YES
JORCIR-2	41.316541	-72.151863	5/5/2020	n/a	n/a	496	n/a	n/a	Phoenix	NO
NIARIV-1	41.35634543	-72.1760020	4/1/2020	0.84	0.86	< 10	2.93	< 0.01	Phoenix	YES
NIARIV-2	41.3532664	-72.1762042	4/25/2019	0.22	0.3	< 10	0.46	0.039	Phoenix	NO
NIARIV-8	41.3284041	-72.1740437	2/5/2019	2.81	2.75	107	2.63	0.252	Phoenix	YES
OIL-1	41.3699747	-72.1922504	10/25/2019	4.04	3.1	73	0.77	0.032	Phoenix	NO
OLDNOR-3	41.4031439	-72.112051	8/24/2018	n/a	n/a	173	1.5	0.105	Phoenix	NO
SHORD-3S	41.3175383	-72.1472038	10/24/2019	n/a	n/a	30	n/a	n/a	Phoenix	NO
WINDW-3	41.3131931	-72.1603927	10/25/2019	n/a	n/a	< 10	n/a	n/a	Phoenix	NO

Table 2.1c - Class A & B Non-Impaired Waterbody Samples

Outfall ID	Latitude	Longitude	Sample Date	E. Coli (col/100mL)	Lab	Investigation Required
TANGLE-2	41.4052925	-72.1158648	6/18/2018	598	Phoenix	YES

## 2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

Outfall / Interconnection ID	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
It is anticipated that this will be initiated during 2021									

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

#### 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.

Outfall ID	Receiving Water	System Vulnerability Factors
CHAP-1	Thames River Basin	Sanitary and Storm Drain Infrastructure >40 years Old
EWHARF-1	LIS EB Inner - Niantic River(mouth), Niantic	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
FULM-2	Niantic River Basin	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
JORCIR-1	LIS EB Inner - Jordan Cove, Waterford	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
NIARIV-5	LIS EB Inner - Niantic River(mouth), Niantic	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
NIARIV-6	LIS EB Inner - Niantic River(mouth), Niantic	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
NIARIV-8	LIS EB Inner - Niantic River(mouth), Niantic	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
OIL-1	LIS EB Inner - Niantic River(mouth), Niantic	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
OLDNOR-3	LIS EB Inner – Thames River (middle)	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
OSWE-2	LIS EB Inner - Niantic River(mouth), Niantic	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
SHORD-3	Southeast Shoreline Basin	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
VILL-2	Southeast Shoreline Basin	Septic with Poor Soils or Water Table Separation
WINT-1	LIS EB Inner – Thames River (middle)	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation
WINT-2	LIS EB Inner – Thames River (middle)	Sanitary and Storm Drain Infrastructure >40 years Old; Septic with Poor Soils or Water Table Separation

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

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants
It is anticipated that this will be initiated during 2021					

### 3.3 Wet weather investigation outfall sampling data

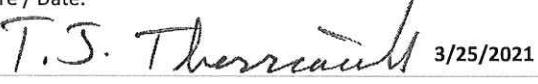
Outfall ID	Sample date	Ammonia	Chlorine	Surfactants
It is anticipated that this will be initiated during 2021				

### 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 will be initiated during 2021							

## 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: <b>Robert J. Brule</b> First Selectman	Print name: <b>T.J. Therriault, EIT, CDT</b> ANCHOR a Barton & Loguidice company
Signature / Date: 	Signature / Date:  3/25/2021
Email: <a href="mailto:firstsel@waterfordct.org">firstsel@waterfordct.org</a>	Email: <a href="mailto:tjt@bartonandloguidice.com">tjt@bartonandloguidice.com</a>

Catchment ID	Receiving Water	Wet Sampling Results Indicate Likely Illicit Discharge <sup>2</sup>	Dry Screening Results Indicate Likely Illicit Discharge <sup>1a</sup>	Discharging to Area of Concern to Public Health <sup>2</sup>	Frequency of Past Discharge Complaints	Receiving Water Quality <sup>3</sup>	Density of Generating Sites <sup>4</sup>	Age of Development/ Infrastructure <sup>5</sup>	Historic Combined Sewers or Septic <sup>6</sup>	Aging Septic <sup>7</sup>	Culverted Streams <sup>8</sup>	Additional Characteristics	Sample Score	Total Score	Priority Ranking
New Catchment ID	Information Source	Catchment inspections and sample results	Catchment inspections and sample results	GIS Maps	Municipal Staff	Impaired Waters List	Land Use/GIS Maps, Aerial Photography	Land Use Information, Visual Observation	Municipal Staff, GIS Maps	Land Use, Municipal Staff	GIS and Stormwater system Maps	Other			
	See Note	Score is determined using an extrapolated formula based on the results	Yes = 3 No = 0	Frequent = 3 Occasional = 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 = 3 No = 0	TBD				
2ND-1	LIS EB Inner - Niantic River(mouth), Niantic	0	0	3		3		3		0			0	9	Low
4TH-1	LIS EB Inner - Niantic River(mouth), Niantic	8	3	3		3		3		0			11	20	High
ALEW-1	LIS EB Inner - Alewife Cove, Waterford/New London	0	8	0		3		3		0			8	14	High
ALMO-1	Jordan Brook Basin	0	2	0		0		3		0			2	5	Low
ARROW-1	Niantic River Basin	0	0	0		0		2		0			0	2	Low
AVERY-1	Jordan Brook Basin	0	2	0		0		3		0			2	5	Low
AVERY-2	Jordan Brook Basin	0	2	0		0		3		0			2	5	Low
AVERY-3	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
BALD-1	LIS EB Inner - Jordan Cove Waterford	0	0	0		3		3		0			0	6	Low
BALD-2	LIS EB Inner - Jordan Cove Waterford	0	0	0		3		3		0			0	6	Low
BEACH-1	LIS EB Shore - Outer Jordan Cove Waterford	0	0	0		3		3		0			0	6	Low
BEECH-1	Jordan Brook Basin	0	0	0		0		2		0			0	2	Low
BEECH-2	Jordan Brook Basin	0	0	0		0		2		0			0	2	Low
BEECH-3	Jordan Brook Basin	0	0	0		0		2		0			0	2	Low
BLN-1	Jordan Brook Basin	0	2	0		0		3		0			2	5	Low
BLOOM-1	Hunts Brook Basin	0	0	0		0		3		0			0	3	Low
BLOOM-2	Hunts Brook (Waterford)-02	0	0	0		2		3		0			0	5	Low
BLOOM-3	Hunts Brook Basin	0	0	0		0		3		0			0	3	Low
BOLL-1	Hunts Brook Basin	0	0	0		0		3		0			0	3	Low
BRAM-1	Hunts Brook Basin	0	0	0		0		3		0			0	3	Low
BRAM-2	Hunts Brook Basin	0	2	0		0		3		0			2	5	Low
BRIAR-1	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
BROOK-1	Niantic River Basin	0	0	0		0		3		0			0	3	Low
BURL-1	Hunts Brook Basin	0	0	0		0		3		0			0	3	Low
BUTLER-1	Polly Brook	0	0	0		0		3		0			0	3	Low
BUTLER-2	Oil Mill Brook Basin	0	0	0		0		3		0			0	3	Low
CASE-1	Niantic River Basin	0	0	0		0		3		0			0	3	Low
CHAP-1	Thames River Basin	0	4	0		0		3		0			4	7	High
CHAP-3	Lake Brandegee	0	2	0		0		3		0			2	5	Low
CHAP-5	Lake Brandegee	0	0	0		0		3		0			0	3	Low
CIRC-1	Niantic River Basin	0	0	0		0		3		0			0	3	Low
CLARLN-1	Fenger Brook (Waterford)-01	0	0	0		3		3		0			0	6	Low
CLARLN-2	Southeast Shoreline Basin	0	0	0		0		3		0			0	3	Low
CLARP-1	Hunts Brook Basin	0	0	0		0		3		0			0	3	Low
COLL-1	Thames River Basin	0	13	0		0		3		0			13	16	High
COLO-1	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
COLO-2	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
COUCLU-1	Southeast Shoreline Basin	0	0	0		0		3		0			0	3	Low
CROSDR-1	Jordan Mill Pond	0	0	0		0		3		0			0	3	Low
CROSDR-1	Niantic River Basin	0	0	0		0		3		0			0	3	Low
CROSDR-2	Niantic River Basin	0	0	0		0		3		0			0	3	Low
CROSDR-3	Niantic River Basin	0	0	0		0		3		0			0	3	Low
CROSDR-4	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
CROSDR-5	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
CROSDR-6	Niantic River Basin	0	0	0		0		3		0			0	3	Low
CROYD-1	Niantic River Basin	0	1	0		0		3		0			1	4	Low
DANIEL-1	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
DAVID-1	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
DEVO-1	Jordan Brook Basin	0	0	0		0		3		0			0	3	Low
DIMM-1	Southeast Shoreline Basin	0	1	0		0		3		0			1	4	Low
DIVI-1	LIS EB Inner - Jordan Cove, Waterford	0	0	0		0		3		0			0	3	Low
DOYLE-1	Niantic River Basin	0	0	0		0		2		0			0	2	Low
EAST-1	Niantic River Basin	0	0	0		0		3		0			0	3	Low
ELAKE-1	Lake Brandegee	0	0	0		0		2		0			0	2	Low
EWHARF-1	LIS EB Inner - Niantic River(mouth), Niantic	13	11	0		3		3		0			24	30	High
FAIR-1	Thames River Basin	0	0	0		0		3		0			0	3	Low
FITZ-1	Thames River Basin	0	0	0		0		3		0			0	3	Low
FITZ-2	Church Brook	0	0	0		0		3		0			0	3	Low
FOG-1	Perry Pond	0	0	0		0		3		0			0	3	Low
FORE-1	Southeast Shoreline Basin	0	0	0		0		3		0			0	3	Low
FULM-1E	Niantic River Basin	0	1	0		0		3		0			1	4	Low
FULM-2	Niantic River Basin	0	3	0		0		3		0			3	6	High
GIOV-1	Jordan Brook Basin	0	0	0		0		2		0			0	2	Low
GLEN-1	LIS EB Inner - Alewife Cove, Waterford/New London	0	0	0		3		3		0					

Catchment ID	Receiving Water	Wet Sampling Results Indicate Likely Illicit Discharge <sup>2</sup>	Dry Screening Results Indicate Likely Illicit Discharge <sup>1a</sup>	Discharging to Area of Concern to Public Health <sup>2</sup>	Frequency of Past Discharge Complaints	Receiving Water Quality <sup>3</sup>	Density of Generating Sites <sup>4</sup>	Age of Development/ Infrastructure <sup>5</sup>	Historic Combined Sewers or Septic <sup>6</sup>	Aging Septic <sup>7</sup>	Culverted Streams <sup>8</sup>	Additional Characteristics	Sample Score	Total Score	Priority Ranking
New Catchment ID	Information Source	Catchment inspections and sample results	Catchment inspections and sample results	GIS Maps	Municipal Staff	Impaired Waters List	Land Use/GIS Maps, Aerial Photography	Land Use Information, Visual Observation	Municipal Staff, GIS Maps	Land Use, Municipal Staff	GIS and Stormwater system Maps	Other			
	See Note	Score is determined using an extrapolated formula based on the results	Yes = 3 No = 0	Frequent = 3 Occasional = 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 = 3 No = 0	TBD				
OLDBAR-1	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
OLDBAR-2	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
OLDCOL-1	Sandy Brook	0	4	0	0	3			0				4	7	Low
OLDMIL-1	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
OLDMIL-2	Hunts Brook (Waterford)-01	0	0	0	2	3			0				0	5	Low
OLDNOR-1	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
OLDNOR-2	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
OLDNOR-3	LIS EB Inner – Thames River (middle)	8	10	0	2	3			0				18	23	High
OLDNOR-4	LIS EB Inner – Thames River (middle)	0	0	0	2	3			0				0	5	Low
OLDNOR-5	Hunts Brook (Waterford)-01	0	0	0	2	3			0				0	5	Low
OLDNOR-6	Church Brook	0	0	0	0	3			0				0	3	Low
OLDNOR-7	Thames River Basin	0	0	0	0	3			0				0	3	Low
OLDNOR-8	Thames River Basin	0	0	0	0	3			0				0	3	Low
OSWE-1	Niantic River Basin	0	0	0	0	3			0				0	3	Low
OSWE-3	Niantic River Basin	0	0	0	0	3			0				0	3	Low
OSWE-4	Niantic River Basin	0	0	0	0	3			0				0	3	Low
OSWE-5	LIS EB Inner – Niantic River (mouth) Niantic	1	0	0	3	3			0				1	7	Low
OSWE-6	Stony Brook (Waterford)-01	0	0	0	2	3			0				0	5	Low
OSWE-7	Stony Brook (Waterford)-02	0	0	0	2	3			0				0	5	Low
OSWE-8	LIS EB Inner – Niantic River (mouth), Niantic	0	0	3	3	3			0				0	9	Low
PADG-1	Thames River Basin	0	0	0	0	2			0				0	2	Low
PALM-1	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
PARK-1	LIS EB Inner – Niantic River(mouth), Niantic	4	0	0	3	3			0				4	10	High
PARK-2	LIS EB Inner – Niantic River (mouth) Niantic	0	0	0	3	3			0				0	6	Low
PARKN-1	Niantic River Basin	0	0	0	0	3			0				0	3	Low
PENN-1	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
PEPP-1	Southeast Shoreline Basin	0	1	0	0	2			0				1	3	Low
PEPP-2	Southeast Shoreline Basin	0	0	0	0	2			0				0	2	Low
PERFAR-1	Southeast Shoreline Basin	0	0	0	0	1			0				0	1	Low
PILG-1	Thames River Basin	0	2	0	0	3			0				2	5	Low
PINE-1	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
POND-1	Green Swamp Brook	0	1	0	0	3			0				1	4	Low
RAIN-1	Hunts Brook Basin	0	0	0	0	2			0				0	2	Low
RICGRO-1	LIS EB Inner – Thames River (middle)	0	0	0	2	3			0				0	5	Low
RIDG-1	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
RIDG-2	LIS EB Inner – Alewife Cove	0	0	0	3	3			0				0	6	Low
RIVSI-1	Niantic River Basin	0	0	0	0	3			0				0	3	Low
RIVSI-2	LIS EB Inner – Niantic River(mouth), Niantic	5	0	0	3	3			0				5	11	High
ROBHIL-1	Jordan Brook Basin	0	0	0	0	3			0				0	3	Low
ROBHIL-2	Jordan Brook Basin	0	0	0	0	3			0				0	3	Low
ROCRID-1	Jordan Brook Basin	0	0	0	0	3			0				0	3	Low
ROPFER-1	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
ROPFER-2	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
ROPFER-3	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
ROPFER-5	Jordan Brook Basin	0	0	0	0	3			0				0	3	Low
ROSELE-1	Thames River Basin	0	0	0	0	3			0				0	3	Low
ROSEMA-1	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
ROSEMA-2	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
SAVI-1	Jordan Brook Basin	0	0	0	0	3			0				0	3	Low
SCOCAP-1	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
SCOCAP-2	Hunts Brook Basin	0	0	0	0	3			0				0	3	Low
SEABRE-1	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
SEAMEA-1	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
SEAMEA-2	Southeast Shoreline Basin	0	0	0	0	3			0				0	3	Low
SEATER-1	Niantic River Basin	0	1	0	0	1			0				1	2	Low
SEATER-2	Niantic River Basin	0	2	0	0	1			0				2	3	Low
SHAW-1	LIS EB Inner – Niantic River(mouth), Niantic	0	0	0	3	3			0				0	6	Low
SHODR-1	LIS EB Inner – Alewife Cove, Waterford/New London	0	0	0	3	3			0				0	6	Low
SHODR-2	LIS EB Inner – Alewife Cove, Waterford/New London	0	0	0	3	3			0				0	6	Low
SHODR-3	LIS EB Inner – Alewife Cove, Waterford/New London	0	0	0	3	3			3				0	9	Low
SHORD-1	Jordan Brook Basin	0	0	0	0	3			0				0	3	Low
SHORD-2	Jordan Brook Basin	0	2	0	0	3			0				2	5	Low
SHORD-3S	Southeast Shoreline Basin	5	3	0	0	3			3				8	14	High

Catchment ID	Receiving Water	Wet Sampling Results Indicate Likely Illicit Discharge?	Dry Screening Results Indicate Likely Illicit Discharge?	Discharging to Area of Concern to Public Health?	Frequency of Past Discharge Complaints	Receiving Water Quality <sup>3</sup>	Density of Generating Sites <sup>4</sup>	Age of Development/ Infrastructure <sup>5</sup>	Historic Combined Sewers or Septic?	Aging Septic?	Culverted Streams?	Additional Characteristics	Sample Score	Total Score	Priority Ranking
		Catchment inspections and sample results	Catchment inspections and sample results	GIS Maps	Municipal Staff	Impaired Waters List	Land Use/GIS Maps, Aerial Photography	Land Use Information, Visual Observation	Municipal Staff	Land Use, Municipal Staff	GIS and Stormwater system Maps	Other			
New Catchment ID	Information Source	Score is determined using an extrapolated formula based on the results	Yes = 3 No = 0	Frequent = 3 Occasional = 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 = 3 No = 0	TBD				

Scoring Criteria:

If there's no waterbody feature identified the receiving body source will be the name of the subregional basin the outfall resides in

<sup>1</sup> 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 or,

Total Coliform >500 col/100 ml, or Fecal coliform >31 col/100ml for Class SA and >260 Col/100ml for Class SB, or

Enterococci >104 col/100ml for swimming areas and >500 col/100ml for all others, or

Turbidity at outfall is more than 5 NTU greater than the in-stream sample.

<sup>1a</sup> Previous dry weather screening results indicate likely sewer input if any of the following are true:

Olfactory or visual evidence of sewage,

Ammonia  $\geq$  0.5 mg/L, surfactants  $\geq$  0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water, or

Ammonia  $\geq$  0.5 mg/L, surfactants  $\geq$  0.25 mg/L, and detectable levels of chlorine

<sup>2</sup> Catchments that discharge to or in the vicinity of any of the following areas: public beaches, recreational areas, drinking water supplies, or shellfish beds

<sup>3</sup> 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)

Good = No water quality impairments

<sup>4</sup> Generating sites are institutional, municipal, commercial, or industrial sites with a potential to contribute to illicit discharges (e.g., car dealers, car washes, gas stations, garden centers, industrial manufacturing, etc.)

<sup>5</sup> 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

<sup>6</sup> Areas once served by combined sewers and but have been separated, or areas once served by septic systems but have been converted to sanitary sewers.

<sup>7</sup> Aging septic systems are septic systems 30 years or older in residential areas.

<sup>8</sup> Any river or stream that is culverted for distance greater than a simple roadway crossing.