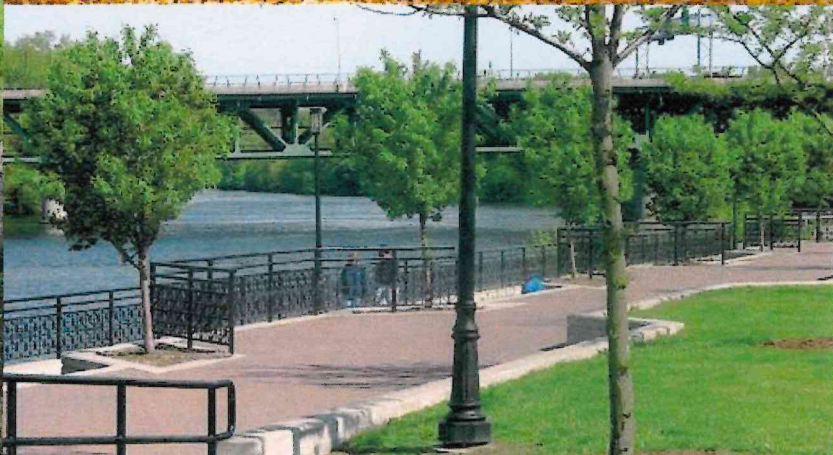
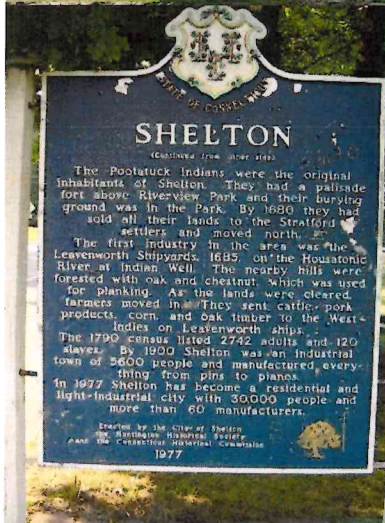




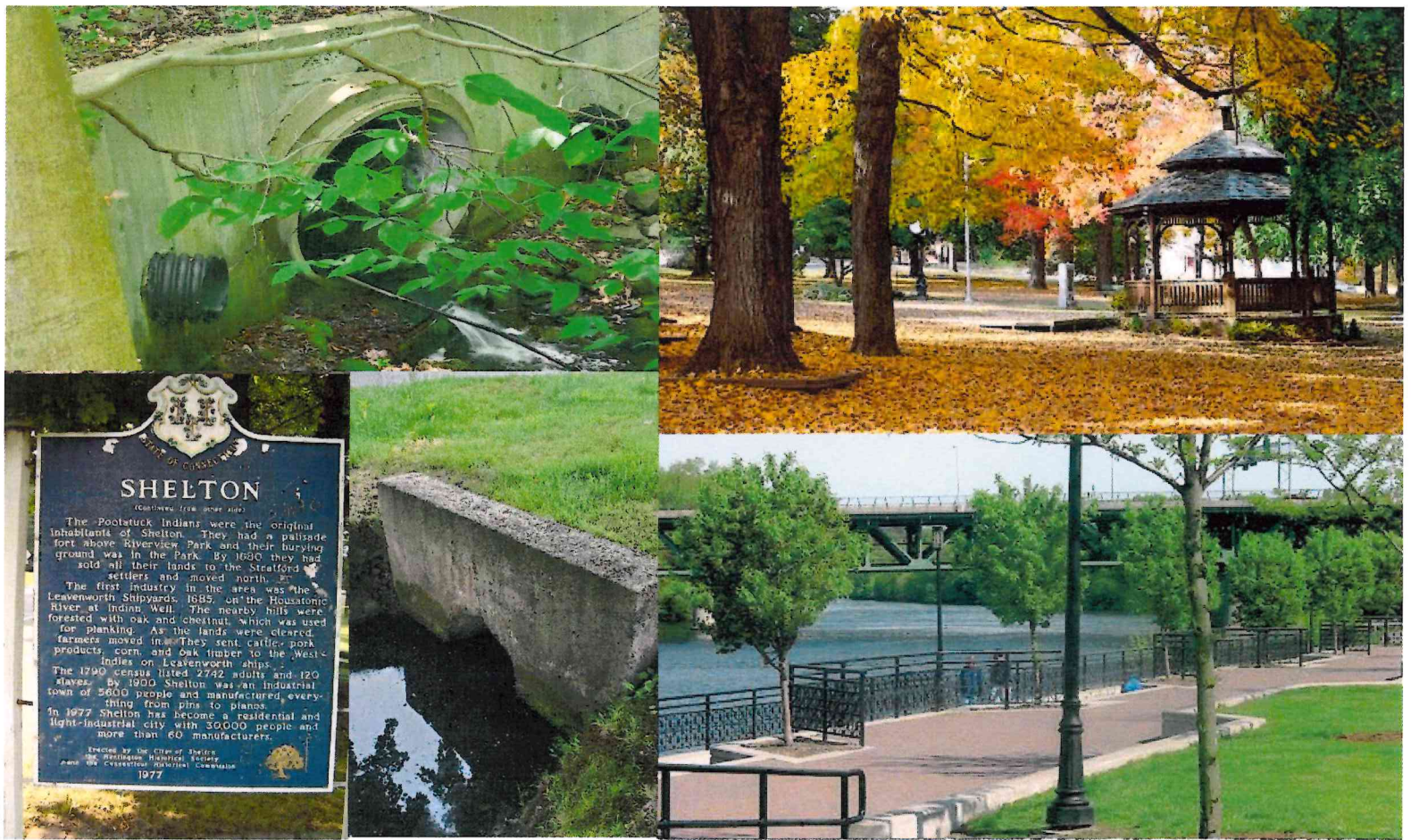
CTDEEP General Permit for the Discharge of
Stormwater from Small Municipal Separate Storm
Sewer Systems

2023 ANNUAL REPORT MS4 GENERAL PERMIT

City of Shelton

April 1, 2024

Tighe&Bond
Engineers | Environmental Specialists



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

2023 ANNUAL REPORT MS4 GENERAL PERMIT

City of Shelton

April 1, 2024

Table of Contents

Abbreviations	iv
Part I: Summary of Minimum Control Measure Activities	1
1. Public Education and Outreach.....	1
1.1 BMP Summary.....	1
1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.....	2
1.3 Details of activities implemented to educate the community on stormwater	3
2. Public Involvement/Participation	4
2.1 BMP Summary.....	4
2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.....	6
2.3 Public Involvement/Participation reporting metrics	6
3. Illicit Discharge Detection and Elimination	7
3.1 BMP Summary.....	7
3.2 Describe any IDDE activities planned for the next year, if applicable.	9
3.3 List of citizen reports of suspected illicit discharges received during this reporting period.....	9
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.....	10
3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.	11
3.6 Provide a summary of actions taken to address septic failures using the table below.	11
3.7 IDDE reporting metrics	11
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).	12
4. Construction Site Runoff Control	13
4.1 BMP Summary	13
4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.....	17
5. Post-construction Stormwater Management.....	19
5.1 BMP Summary	19
5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.	23
5.3 Post-Construction Stormwater Management reporting metrics.....	23
5.4 Briefly describe the method to be used to determine baseline DCIA.	24

6. Pollution Prevention/Good Housekeeping	25
6.1 BMP Summary	25
6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.	31
6.3 Pollution Prevention/ Good Housekeeping reporting metrics	32
6.4 Catch basin cleaning program	34
6.5 Retrofit program	34
Part II: Impaired waters investigation and monitoring	35
1. Impaired waters investigation and monitoring program	35
1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution.....	35
1.2 Describe program status.	35
2. Screening data for outfalls to impaired waterbodies	35
2.1 Screening data	35
2.2 Credit for screening data collected under 2004 permit.....	39
3. Follow-up investigations.....	39
4. Prioritized outfall monitoring.....	40
Part III: Additional IDDE Program Data.....	41
1. Assessment and Priority Ranking of Catchments data	41
2. Outfall and Interconnection Screening and Sampling data	42
2.1 Dry weather screening and sampling data from outfalls and interconnections	42
2.2 Wet weather sample and inspection data.....	43
3. Catchment Investigation data	45
3.1 System Vulnerability Factor Summary.....	45
3.2 Key junction manhole dry weather screening and sampling data.....	46
3.3 Wet weather investigation outfall sampling data	46
3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure.....	46
Part IV: Certification	47

Abbreviations

BMP	Best Management Practice
CFU	colony forming units
CGS	Connecticut General Statutes
cm	centimeters
col	colonies
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDOT	Connecticut Department of Transportation
DCIA	Directly Connected Impervious Area
GIS	Geographic Information System
IDDE	Illicit Discharge Detection and Elimination
HRRA	Housatonic Resources Recovery Authority
L	liters
lbs	pounds
LID	Low Impact Design
mg	milligrams
MS4	Municipal Separate Storm Sewer System
NEMO	Nonpoint Education for Municipal Officials
N/P	nitrogen / phosphorus
NTU	Nephelometric Turbidity Units
PFAS	per- and polyfluoroalkyl substances
ppt	parts per trillion
SOP	Standard Operating Procedure
SSO	Sanitary Sewer Overflow
TBD	to be determined
WPCA	Water Pollution Control Authority
WPCF	Water Pollution Control Facility
μmhos	millimhos



MS4 General Permit City of Shelton Annual Report

Existing MS4 Permittee
Permit Number GSM 000045
January 1, 2023 – December 31, 2023

Primary MS4 Contact: Rimas Balsys, City Engineer, o: 203.924-1555 x 1509 e: r.balsys@cityofshelton.org

This report documents Shelton'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

MS4 General Permit Section 6(a)(1) / page 19, requires the City to implement a public education program to distribute educational materials to the permittee's community or conduct equivalent outreach activities about the sources and impacts of stormwater discharges on waterbodies and the step that the public can take to reduce pollutants in stormwater runoff.

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, Complete for 2023	The City has implemented its public education efforts with the display of various stormwater brochures on the first floor of City Hall, in front of the City Council chamber. The City has a policy of requiring residential additions over a certain size to install infiltration units to disconnect	Conduct a public meeting in each year of the permit to inform the residents and discuss the program. In 2023, the City noted that	City Engineer	Ongoing	Completed: 12/31/2023	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-2 Address education/ outreach for pollutants of concern	Ongoing, Complete for 2023	The City's consultant developed a brochure to educate the public about the effort. The City's consultant developed educational brochures. The new brochures target specific pollutants and topics include information on pet waste management (bacteria), lawn care (nitrogen and phosphorus), impervious cover, and mercury. The brochures have been put on display at City Hall, the Shelton Community Center, and both libraries. The City continues to maintain Stormwater Management and Waste Disposal & Recycling pages on its website. Information of previous annual reports, hazardous waste, hazardous waste collection as well as leaf collection are included on the pages.	many of its public meetings have migrated to virtual platforms, and revised the goal to tailor educational materials to specific facets of the City's stormwater program. Post to stormwater website. Distribute annual messaging in accordance with the City's phosphorus, nitrogen, and bacteria impairments.	City Engineer	Ongoing	Completed 12/31/2023	City Stormwater Management Page Waste Disposal and Recycling Suggest posting PDFs of the brochure to this page, along with Annual Reports... only 2020 is shown.

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-3 Literature Distribution	Ongoing, Complete for 2023	The City maintains a display board outside the Council Chambers at City Hall dedicated to stormwater, various displays at various community buildings, as well as information on its website.	Develop stormwater website	City Engineer	Ongoing	Completed: 12/31/2023	City Stormwater Management Page
1-4 Storm Drain Marking/Stenciling	In progress	The City is evaluating the effectiveness of catch basin stenciling in other communities as an educational effort. In 2023, the City selected a catch basin stencil. The stenciling program will be rolled out in the future as catch basins are replaced. The City has decided that the stenciling program is best suited for City highway staff instead of the public due to the proximity of moving traffic.	Provide stenciling to volunteer groups.	Superintendent of Highways and Bridges	Not specified	Projected to begin in 2024, and continue as catch basins are replaced.	
1-5 Post stormwater and IDDE ordinances to City website	Ongoing, Complete for 2023	The City's Code of Ordinances are available to view online.	Post pertinent stormwater ordinances to City website to be viewable by residents, as stated in the SWMP.	City Engineer	Not Specified	Completed: 12/31/2023	City Stormwater Ordinances

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

The following activities are planned for 2024:

- 1. Enhance the dedicated stormwater page on the Town's website
 - a. Identify contact person from Town staff to serve as liaison to update website.
 - b. Post brochures created above to dedicated stormwater page
 - c. Post links to MS4 Permit, MS4 Stormwater Management Plan and 2023 MS4 Annual Report
 - d. Links to Household Hazardous Waste Collection Day
 - e. Include links to stormwater educational sites:
 - i. UCONN NEMO Program: <https://nemo.uconn.edu/ms4/>
 - f. Include links to Planning and Zoning meetings, stormwater (illicit discharge) and sediment and erosion control regulations.
 - g. Town IT Department to record number of views.

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.
Pet Waste Brochure	50		Bacteria	City Engineer
Lawn Care Management	50		Nitrogen + Phosphorus	City Engineer
Waste Management	50		Mercury	City Engineer
Impervious Cover Reduction	50		Impervious Cover	City Engineer

2. Public Involvement/Participation

MS4 general permit Section 6(a)(2) / page 21, requires the Town to provide opportunities to engage their community to participate in the review and implementation of the permittee's Plan.

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Final Stormwater Management Plan publicly available	In Progress	In 2023, the City updated its website, and links to a number of documents and pages were broken. The SWMP is available at the City Engineer's Office, and will be added to the City's stormwater page in early 2024.	Post the 2017 Stormwater Management Plan to the City's website	City Engineer	07/01/2017	Projected: 03/31/2024	
2-2 Comply with public notice requirements for Annual Reports	Ongoing, Complete for 2023.	The Draft 2022 Annual Report was posted to the website along with a banner alerting residents that the draft annual report was available. The Draft 2023 Annual Report (this report) will be posted by 02/15/2024	Publish reasonable public notice about the MS4 Annual Report. Accept public comments for 30 days following the publication of reasonable public notice.	City Engineer	Annually, Next Due 02/15/2024	Completed: 02/13/2023 for 2022 Annual Report Projected: 02/15/2024 for 2023 Annual Report	Only the 2020 Annual Report is posted.
2-3 Conduct Household Hazardous Waste collection day	Ongoing, Complete for 2023	The Town publicized and conducted a Household Hazardous Waste Day in September 2023	Conduct one household hazardous waste collection day per year.	Director of Public Works	Annually, by 12/31/2023	Completed: 09/30/2023	
2-4 Host Annual Shelton Clean Sweep	Ongoing, Complete for 2023	The Shelton Clean Sweep program ran	Host clean-up events	Shelton Anti-Litter Committee	Annually, by 12/31/2022	Completed: 04/23/2023	Shelton Clean Sweep

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-5 Maintain "Don't Trash Shelton" website, host discussion board and sponsor clean-ups and adopt-a-street programs	Ongoing, complete for 2023	from April 15, 2023 through April 23, 2023. The "Don't Trash Shelton" website was maintained, and the Anti-Litter Committee continued to organize cleanups and the adopt-a-street program	Ongoing Shelton Anti-Litter Committee Operations	Shelton Anti-Litter Committee	Annually	Completed: 12/31/2023	Don't Trash Shelton
2-6 Host annual Housatonic River Clean-Up / Green Sweep	Ongoing, complete for 2023	The annual Housatonic River Clean-Up was hosted and publicized	Host annual Housatonic River Clean-Up	Housatonic River Cleanup, Inc.	Annually	Completed: 12/31/2023	Housatonic River Clean Up
2-7 Recognized local residents and groups for their clean-up efforts	Ongoing, complete for 2023	Publish recognitions online	Local residents and groups are recognized for their clean-up effort annually	Shelton Anti-Litter Committee	Annually	Completed: 12/31/2023	Recognitions

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

The following activities are planned for 2024:

1. Publish notice and post 2023 Annual Report to Town Website.
2. Conduct at least one Household Hazardous Waste Collection Day.
3. Continue engagement with volunteer organizations for litter removal.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Yes	07/01/2017	
Availability of Annual Report announced to public	Yes	02/13/2023	2022 Annual Report

3. Illicit Discharge Detection and Elimination

Reference: Section 6(a)(3) and MS4 General Permit, Appendix B / page 22

3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-1 Develop written IDDE program	In progress	The illicit discharge detection and elimination plan has been completed.	Develop written plan of IDDE program	City Engineer	07/01/2018	Completed: 05/31/2020	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Completed	System wide mapping has been completed. Copies of the mapping are available at the Highway Department and the Engineering Department.	Make both a physical and electronic copy of the map available to the public.	City Engineer	07/01/2019	Completed in 2020	
3-3 Implement citizen reporting program	In Progress	Complaints regarding illicit discharges are accepted through the Highways and Bridges Department, the Water Pollution Control Authority (WPCA) Administrator, and the City Hall receptionist who direct these calls to the Engineering Department for documentation and follow-up. Complaints are tracked within the City's records for each street. Additionally, concerns can be sent using the Contact Us feature on the City's website.	Create e-mail address, phone number, or website link for citizen reports	Director of Public Works	Ongoing	Completed in 2022	Contact Us

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-4 Establish legal authority to prohibit illicit discharges	Completed	The City has enacted an illicit discharge ordinance	Ensure ordinances are compliant with Permit	Director of Public Works	07/01/2018	Completed: 09/09/2010	City Stormwater Ordinances
3-5 Develop record keeping system for IDDE tracking	Ongoing	The Town records illicit discharge abatement activities on corresponding public complaint forms, and are recorded in the Town's files.	Develop and implement documentation procedures for illicit discharge abatement activities, and update Annual Report with required abatement activity information pursuant to the updated MS4 permit.	City Engineer	07/01/2017	Ongoing	
3-6 Address IDDE in areas with pollutants of concern	In Progress	Dry weather screening began in 2021 and continue.	Conduct an assessment and use for prioritization of correction actions.	City Engineer	Not specified	In progress	
3-7 Detailed MS4 Infrastructure Mapping	Completed	Maps are available at the Highway Department and Engineering Department	Make both a physical and electronic copy of the map available to the public.	City Engineer	06/30/2022	Completed: 2020	
3-8 Complete list and maps of all MS4 stormwater outfalls throughout municipality	Completed	Maps are available at the Highway Department and Engineering Department	Make both a physical and electronic copy of the map available to the public.	City Engineer	06/30/2022	Completed: 2020	

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

The following activities are planned for 2024:

1. Evaluate the effectiveness of the existing citizen reporting feature on the Town Website and make improvements if needed. Evaluate adding specific drop down menu for Stormwater concerns.
2. Continue sampling and screening program.

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
None reported		

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.

Note: shaded rows indicate SSOs that occurred previous to the Annual Report calendar year

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)
None recorded in 2023						
92 – 96 Wooster Street 41 19' 07" N 73 06' 00" W	11/15/2022	No	Less than 25 gallons	Cracked pipe filled with soil	11/15/2022: Water was shut off 11/16/2022: New section of sewer lateral installed	
11 Bridseye Road Extension 41 18' 59" N 73 08' 24" W	10/11/2022	No	Less than 50 gallons	Mechanical equipment failure, small force main plumbing disconnected in manhole.	10/11/2022: Water vacuumed from manhole and plumbing reconnected	
Plumb Memorial Library (65 Wooster St.) 41 19' 9" N 73 05' 56"W	08/17/2022	No	Approx. 20 gallons	Heating fuel spill during tank removal	08/17/2022: CTDEEP was notified and an environmental company was called to clean it up. No catch basins or surface waters were affected.	

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)
1 Trap Falls Road 41 16' 00" N 73 07' 54" W	02/04/2021	Bypass did not reach surface water	1 – 50 gallons	Complaint regarding odor from "public lateral" on private property	02/04/2021: Jetted line, removed rags and debris	
10 Silva Drive 41 18' 15" N 73 08' 30" W	01/12/2021 8:00 – 9:00	Bypass did not reach surface water	1 – 50 gallons	Complaint regarding main line manhole bubbling	01/12/2021: Jetted line, removed rags and debris	
20 Plakson Drive Extension 41 17' 48" N 73 05' 31" W	12/11/2019	Unknown	Unknown	Complain regarding bubbling sewer manhole.	12/11/2019: Jetted line, removed 8" ball of rags, grease, and debris.	

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

Residents report illicit discharges to various departments and they are immediately handled by the WPCA or another department. This method has been successful in the past in enabling residents to communicate concerns to the City. As mentioned previously, when rolled-out, OpenGov will allow residents to have another method to contact the City about illicit discharges. Alternatively, the City is considering implementing a reporting form on the City's new website instead of using OpenGov. Currently, reports from the public are recorded within the corresponding street's file. The City considers this method effective at tracking reports and identifying problem areas within the drainage network

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

Summary of actions to address septic failures

The Naugatuck valley Health District issued 44 permits for septic repairs in the City of Shelton for 2023.

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	719
Estimated or actual number of interconnections	34
Outfall mapping complete	99%
Interconnection mapping complete	99%
System-wide mapping complete (detailed MS4 infrastructure)	99%
Outfall assessment and priority ranking	99%
Dry weather screening of all High and Low priority outfalls complete	490
Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	65%

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).

Training for Town Highway Department staff on the MS4 and Industrial Stormwater Permits occurred on 11/28/2023.

4. Construction Site Runoff Control

Reference: (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	Ongoing	The City's consultant made recommendations for changes to the City's Stormwater Management Ordinance, which are being reviewed by other departments and planned for adoption in 2024.	Review and revise regulations, if required.	Planning & Zoning	07/01/2019	Projected: 12/31/2024	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing, Completed for 2023	The City's site plan review process includes referrals to various other Town Departments, including Fire, Police, Engineering, and Health, in addition to Planning and Zoning. Projects with subject to inland wetlands review are also subject to Inland Wetlands Commission review.	Evaluate current practices and updates, as needed.	Planning & Zoning	Ongoing	Ongoing, Complete for 2023	
4-3 Review site plans for stormwater quality concerns	Ongoing, Completed for 2023	The City continues to implement its existing practices of engineering comments and site inspections and will update the site plan process as	Evaluate current practices and updates, as needed.	City Engineer	Ongoing	Ongoing, Completed for 2023: 12/31/2023	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		necessary to provide consistency with the MS4 requirements. The City also holds site plan review meetings with applicants for preapplication purposes, and documents the issues discussed, including stormwater in detailed meeting summaries for each review meeting.					
4-4 Conduct site inspections	Ongoing, Completed for 2023	The City continues to implement its existing practice of engineering comments and site inspections and will update the site plan process as necessary to provide consistency with the MS4 requirements. The City conducts site inspections of all private and construction sites.	Develop an inspection form that includes new requirements.	Planning & Zoning	Ongoing	Ongoing, Completed for 2023: 12/31/2023	
4-5 Implement procedure to allow public comment on site development	Ongoing	In accordance with state law, the City conducts public hearings on site plan applications. The City has an online feature on it's website under "Contact Us" where residents can report a concern to a	Develop and implement a procedure to allow public comment on site development.	Planning & Zoning	Ongoing	Ongoing, Completed for 2023: 12/31/2023	Contact Us

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		specific Department, which generates an e-mail to a specific contact person within the Department for follow-up and, if necessary, action.					
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing, Completed for 2023	Developers are informed of their obligation to obtain the DEEP construction stormwater permit in their approval letters.	Notify developers if their projects disturb greater than 1 acre of land.	Planning & Zoning	Planning & Zoning	Ongoing, Completed for 2023: 12/31/2023	

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

The following activities are planned for 2024:

1. Continue to enforce existing regulations
2. Continue to track citizen reports and concerns.
3. Continue site plan review process, including documentation of site plan review meetings.
4. Continue requirements for operations and maintenance plans.
5. Continue site inspection program.
6. Continue to notify to applicants of their potential obligation to register for the CTDEEP Construction Stormwater General Permit.

5. Post-Construction Stormwater Management

Reference: (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 Progress	The City's consultant made recommendations for changes to the City's Stormwater Management Ordinance, which are being reviewed by other departments and planned for adoption in 2024.	Review and revise regulations, if required.	Planning & Zoning	07/01/2019	Projected: 12/31/2024	.
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In Progress	The City's consultant made recommendations for changes to the City's Stormwater Management Ordinance, which are being reviewed by other departments and planned for adoption in 2024. The City requires residential additions over a certain size to retain the water quality volume of the addition, and requires retention of 2 inches for commercial redevelopments.	Review and revise regulations, if required.	Planning & Zoning	07/01/2022	Projected: 12/31/2024	
5-3 Identify retention and detention ponds in priority areas	Ongoing, Completed for 2023	Every spring, the City inspects its stormwater retention and detention ponds to assess maintenance needs.	Inventory retention and detention ponds and implement operations and maintenance program.	City Engineer	07/01/2019	Ongoing, Completed for 2023: 04/30/2023	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Ongoing, Completed for 2023	The O&M schedule consists of the City Engineer visiting every structure in April. Follow-up O&M activities are determined and scheduled based on site specific conditions	Inventory relevant structures and develop a schedule.	City Engineer	07/01/2019	Ongoing, Completed for 2023: 04/30/2023	
5-5 DCIA mapping	Completed	The Town computed its baseline DCIA coverage.	Calculate the DCIA that contributes stormwater runoff to each MS4 outfall by July 1, 2020, and update calculations as DCIA is added or removed within the Town.	City Engineer	07/01/2020	Completed: 08/10/2021	
5-6 Address post-construction issues in areas with pollutants of concern	Ongoing, Completed for 2023	The City's engineering consultant identified areas in the stormwater retrofit plan.	Prioritize areas impaired by nitrogen, phosphorus, and bacteria.	Planning & Zoning	Not specified	Ongoing, Completed for 2023.	

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

The following activities are proposed for 2024:

1. Continue enforcement of stormwater management regulations, and revised regulations.
2. Address post-construction sediment and erosion control issues as they occur.
3. Continue to encourage preservation and enhancement of natural buffers.
4. Continue to require consistency with the 2023 Stormwater Quality Manual.

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)	1,591.96 acres
DCIA disconnected (redevelopment plus retrofits) for 2023	15.23 acres
DCIA disconnected since 2012	117.46 acres
DCIA disconnected for 2023	0.96%
DCIA disconnected since 2012	7.38%
Detention or retention ponds identified in 2023	0
Detention or retention ponds identified since 2012	23

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

The baseline DCIA was determined using the state's 2012 impervious coverage layers as a starting point for each subregional drainage basin. For each basin, we evaluated the general connectivity by applying the Sutherland Equations as recommended by EPA Region I to approximate the directly connected area within each subregional drainage basin. The summation of the revised DCIA for each subregional drainage basin is then used as the modified, final baseline DCIA.

Refer to full plan here:

<http://cityofshelton.org/wp-content/uploads/2018/12/DCIA-PLAN-FINAL09-15-2021.pdf>

6. Pollution Prevention/Good Housekeeping

Reference: (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 and implement formal employee training program	Ongoing, Completed for 2023	Training for Highway Department employees was completed on November 28, 2023.	Conduct annual stormwater training	Director of Public Works	07/01/2019	Ongoing, Completed for 2023: 11/28/2023	
6-2 Implement MS4 property and operations maintenance	In progress	The City maintains its properties and cleans sediment and detention basins, but has not yet developed written SOPs or fully documented maintenance programs. The City is in the process of documenting its roadway assets on video.	Inspect assets and assess condition to develop program.	Director of Public Works	07/01/2018	Projected: 12/31/2024	
6-3 Implement coordination with interconnected MS4s	Ongoing, Completed for 2023	The City has been coordinating with CTDOT and neighboring communities on an as-needed basis. The City will notify interconnected MS4s if and when illicit discharges impacting interconnection are identified. 34 Interconnects were identified as follows: 2 to the Town of Monroe 4 from the Town of Trumbull	Coordinate municipal operations with adjoining MS4s.	Director of Public Works	Not specified	Ongoing, Completed for 2023: 12/31/2023	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		2 to the Town of Trumbull 4 from CTDOT 22 to CTDOT The Town's IDDE Consultant is also the MS4 Consultant for Monroe and Trumbull. The outfalls in those communities accepting discharge from the City not indicate any non-stormwater discharges.					
6-4 Develop and implement program to control other sources of pollutants to the MS4	Ongoing, Completed for 2023	The City is in the process of revising its stormwater management regulations to focus on land disturbance impacts. Draft regulations have been prepared, and will be brought to the Board of Aldermen in 2024.	Develop an asset management program.	Director of Public Works, Planning	Not specified	Ongoing, Completed for 2023: 12/31/2023	
6-5 Evaluate additional measures for discharges to impaired waters	Ongoing, Complete for 2023	The City has undertaken efforts in 2023 targeted at bacterial impairments, such as pet waste containers at some of its parks, and enforcement of inland wetland regulations related to buffers around wetlands and watercourses. The City also reviews former manufacturing sites to confirm that there are no observable impacts to wetlands and watercourses.	Develop a City-wide plan that addresses pollutants an discharges.	Director of Public Works	Not specified	Ongoing, Completed for 2023: 12/31/2023	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-6 Track projects that disconnect DCIA	In Progress	No City projects have significantly disconnected impervious cover.	Annually track the total acreage of DCIA that is disconnected from the MS4.	Planning & Zoning	07/01/2017	Projected: 06/30/2024	
6-7 Implement infrastructure repair/rehab program	Ongoing, Completed for 2023	The City has CCTV and other equipment in-house to investigate issues as needed and inform repair strategy.	CCTV drainage system, investigate flooding areas, etc., to develop program	Director of Public Works	07/01/2022	Ongoing, Completed for 2023: 12/31/2023	
6-8 Develop and implement plan to identify/prioritize retrofit projects	Completed	The City has developed a Disconnection Plan.	Inspect asrs and assess conditions to develop program	Director of Public Works	07/01/2020	Completed: 2021	
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started	The City is in the process of reviewing the recommendations from the 2021 DCIA Disconnection plan, and aligning them with their capital projects list/	Disconnect 2% of the Town's DCIA.	Director of Public Works	07/01/2023	Projected: 12/31/2024	
6-10 Develop and implement street sweeping program	Ongoing, Complete for 2023	The City sweeps streets on an annual basis, with parking lots and the downtown area being swept more frequently.	Sweep all parking lots and streets within the MS4 at least once per year.	Director of Public Works	Ongoing beginning 07/01/2017	Ongoing, Completed for 2023: 12/31/2023	
6-11 Develop and implement catch basin cleaning program	Ongoing, Complete for 2023	The City has a catch basin cleaning program that rotates throughout the City.	Track catch basin cleaning and develop a schedule.	Director of Public Works	Ongoing beginning 07/01/2020	Ongoing, Completed for 2023: 12/31/2023	
6-12 Develop and implement snow management practices	Ongoing, Complete for 2023	The City's policy is to implement deicing material optimization during snow removal events. The City no longer uses sand, except on	Implement practices to reduce salt use.	Director of Public Wokrs	Ongoing beginning 07/01/2018	Ongoing, Completed for 2023: 12/31/2023	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		roadways with significant grades where hazardous conditions persist after treatment.					
6-13 Parks and Open Space Management	Ongoing, Complete for 2023	The City optimizes fertilizer use on its parks properties. Grass clippings are left in place, and leaves are collected and composted. Pesticide use is limited to select application for grub control.	Implement turf management practices and identify retrofits where needed.	Parks and Recreation Department	07/01/18	Ongoing, Complete for 2023	
6-14 Measures for Bacteria Impairments	Ongoing, Complete for 2023	Receptacles and collection bags are located in City parks.	Prohibit the feeding of geese or waterfowl on City land and implement program to manage geese/waterfowl populations	Parks and Recreation Department	07/01/18	Ongoing, Completed for 2023: 12/31/2023	

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

The following activities are planned for 2024:

1. Conduct employee training program, include catch basin maintenance procedures as part of the program.
2. Continue to review and identify properties that may be at greater risk of contributing pollutants to MS4.
3. Utilize DCIA tracking system.
4. Refine Town's priority list of capital improvement projects as part of its five year capital plan.
5. Implement stormwater retrofits as part of larger capital improvement projects if the opportunity arises.
6. Prioritize potential retrofit projects.
7. Continue catch basin cleaning.
8. Document existing street sweeping plan and develop spreadsheet to track metrics.
9. Document snow and ice management practices and develop spreadsheet to track metrics.

10. Document fertilizer and pesticide use practices for Town owned properties.
11. Continue maintenance of pet waste disposal stations.
12. Continue existing leaf management policy.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics		Performed 11/28/2023
Employee training provided for key staff		
Street sweeping		
Curb miles swept		79.48 miles
Volume (or mass) of material collected		80 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)		5,365
Total catch basins town- (or institution-) wide		5,365
Catch basins inspected		117
Catch basins cleaned		117
Volume (or mass) of material removed from all catch basins		1,062 cubic yards
Volume removed from catch basins to impaired waters (if known)		Unknown
Snow management		
Type(s) of deicing material used		Pre-treated slat and salt brine
Total amount of each deicing material applied		1,500 tons
Type(s) of deicing equipment used		All season spreaders with brine application system
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)		432.86
Snow disposal location		In-situ, and 799 Howe Avenue if needed
Staff training provided on application methods & equipment		Ongoing and as needed
Municipal turf management program actions (for permittee properties in basins with N/P impairments)		
Reduction in application of fertilizers (since start of permit)		100 pounds (1,650 used in 2022, 1,550 in 2023)
Reduction in turf area (since start of permit)		TBD
Lands with high potential to contribute bacteria		
Cost of mitigation actions/retrofits		\$ 0

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program

Staff are continually working on better tracking inspection and cleaning efforts. A total of 75 catch basins were repaired in 2023.

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.

The 2021 DCIA Plan included BMP recommendations and prioritizations. The City evaluated the recommendations within the DCIA Plan and will consider DCIA disconnection efforts on all upcoming retrofit and development projects.

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

The 2021 DCIA Plan included BMP recommendations and prioritizations. The City evaluated the recommendations within the DCIA Plan and will consider DCIA disconnection efforts on all upcoming retrofit and development projects.

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

The 2021 DCIA Plan included BMP recommendations and prioritizations. The City evaluated the recommendations within the DCIA Plan and will consider DCIA disconnection efforts on all upcoming retrofit and development projects. The Town will continue enforcement of its stormwater management regulations which will require most applicants to treat the water quality volume, which will require stormwater treatment practices that disconnect impervious cover.

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.

To date 50 outfalls have been sampled, including 8 outfalls sampled in 2022. There are many other state owned outfalls along Route 110, which have some interconnections. During our sampling, we may identify additional outfalls or interconnections that may require sampling. The monitoring results indicate that total coliform was over the threshold in all of the samples along the Farmill River, but none exceeded the E. coli threshold, which indicates environmental inputs instead of fecal inputs into the stormwater runoff. At this point in time, no additional changes to the stormwater management plan are warranted. The City anticipates returning to re-sample the 6 worst outfalls as part of its monitoring program, and the worst outfalls include 72, 115, 117, 398, 480, and 481. The City screened an additional 176 outfalls during dry weather in 2022 and has hired a consultant to screen the remaining outfalls in 2023. The new total number of outfalls screened during dry weather conditions is 490.

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.

Entries in red exceed parameter thresholds and require follow-up.

Outfall ID	Latitude / Longitude	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
72	41.2985339372 -73.1903009921	06/03/21	Bacteria	E. coli: 152 col/100ml Total coliform: 2,420 col/100ml	EML	Yes
73	41.2978587641 -73.1897024857	06/03/21	Bacteria	E. coli: 194 col/100ml Total coliform: 1,886 col/100ml	EML	Yes
115	41.2785234161 -73.1280174505	06/03/21	Bacteria	E. coli: 236 col/100ml Total coliform: 1,733 col/100ml	EML	Yes
116	41.2796534697 -73.1251615523	06/03/21	Bacteria	E. coli: 319 col/100ml Total coliform: 2,420 col/100ml	EML	Yes
117	41.2777101272 -73.121507078	06/03/21	Bacteria	E. coli: 119 col/100ml Total coliform: 1,986 col/100ml	EML	Yes
257	41.2992234267 -73.1919580242	06/03/21	Bacteria	E. coli: 32 col/100ml Total coliform: 921 col/100ml	EML	Yes
384	41.2841493432 -73.1373195544	06/03/21	Bacteria	E. coli: 132 col/100ml Total coliform: 1,986 col/100ml	EML	Yes
387	41.319611327 -73.1007806473	06/03/21	Bacteria	E. coli: 153 col/100ml Total coliform: 1,414 col/100ml	EML	Yes
398	41.2596691102 -73.098426272	06/03/21	Bacteria	E. coli: 236 col/100ml Total coliform: 2,420 col/100ml	EML	Yes
399	41.2782954821 -73.1350334224	06/03/21	Bacteria	E. coli: 91 col/100ml Total coliform: 1,533 col/100ml	EML	Yes
414	41.2777735257 -73.1318539549	06/03/21	Bacteria	E. coli: 112 col/100ml Total coliform: 1,733 col/100ml	EML	Yes
480	41.2750397486 -73.1137965302	06/03/21	Bacteria	E. coli: 72 col/100ml Total coliform: 1,414 col/100ml	EML	Yes
481	41.2854621114 -73.1366675178	06/03/21	Bacteria	E. coli: 133 col/100ml Total coliform: 2,420 col/100ml	EML	Yes
525	41.2845435152 -73.1366775853	06/03/21	Bacteria	E. coli: 157 col/100ml Total coliform: 2,420 col/100ml	EML	Yes

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

*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	Status of drainage area investigation	Control measure implementation to address impairment
72	Outfall was sampled again on 07/10/2023, and the results indicated consistently high total coliform results, but the 07/10/2023 testing returned with high E. coli, which indicate the potential for fecal inputs. In order to better isolate a potential source, the City will sample at CB 6392 and 6393 in 2024	
115	Outfall was sampled again on 07/10/2023, and the results indicated consistently high total coliform results, but the E. coli counts were all below threshold. Septic inputs are unlikely at this location, and we believe that the coliform is likely a background condition, as coliforms also occur naturally in soil and decaying	

Outfall	Status of drainage area investigation	Control measure implementation to address impairment
	vegetation. In order to confirm, we will sample manhole 89 in 2024. Most of the vegetation is located across Commerce Drive.	
117	Outfall was sampled again on 07/10/2023, and the results indicated consistently high total coliform results, but the E. coli counts were all below threshold. Septic inputs are unlikely at this location, and we believe that the coliform is likely a background condition, as coliforms also occur naturally in soil and decaying vegetation. In order to confirm, we will sample Catch Basins 474 and 476 in 2024.	
398	Outfall was sampled again on 07/10/2023, and the results indicated consistently high total coliform results, but the E. coli counts were all below threshold. Septic inputs are unlikely at this location, and we believe that the coliform is likely a background condition, as coliforms also occur naturally in soil and decaying vegetation. In order to confirm, we will sample Catch Basins 128 and 527 in 2024.	
480	Outfall was sampled again on 07/10/2023, and the results indicated consistently high total coliform results, but the E. coli counts were all below threshold. Given the low E. coli values we believe septic inputs are unlikely, as coliforms also occur naturally in soil and decaying vegetation. In order to confirm, we will sample Catch Basin 6329 in 2024.	
481	Outfall was visited again on 07/10/2023, and was not flowing. We believe that the coliform is likely a background condition, as coliforms also occur naturally in soil and decaying vegetation. In order to confirm, we will sample Catch Basin 6330 in 2024.	

4. Prioritized outfall monitoring

(Section 6(i)(1)(D) / page 43)

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

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
72	41.2985339372 -73.1903009921	06/21/21	Bacteria	152 col / 100 mL	Eurofins
			Total Coliform	2,420 col / 100 mL	Eurofins
		07/10/23	Bacteria	1,533 col / 100 mL ↑	Eurofins
			Total Coliform	3,466 col / 100 mL ↑	Eurofins
115	41.2785234161 -73.1280174505	06/21/21	Bacteria	152 col / 100 mL	Eurofins
			Total Coliform	1,733 col / 100 mL	Eurofins
		07/10/23	Bacteria	6 col / 100 mL ↓	Eurofins
			Total Coliform	2,420 col / 100 mL ↑	Eurofins
117	41.2777101272 -73.121507078	06/21/21	Bacteria	118 col / 100 mL	Eurofins
			Total Coliform	1,986 col / 100 mL	Eurofins
		07/10/23	Bacteria	23 col / 100 mL ↓	Eurofins
			Total Coliform	1,986 col / 100 mL -	Eurofins
398	41.27829548210 -73.13503342240	06/21/21	Bacteria	236 col / 100 mL	Eurofins
			Total Coliform	2,420 col/mL	Eurofins

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results		Name of Laboratory (if used)
480	41.28546211140 -73.13666751780	07/10/23	Bacteria	101 col/100 mL	↓	Eurofins
			Total Coliform	1,553 col/100 mL	↓	Eurofins
		06/21/21	Bacteria	72 col/100 mL		
			Total Coliform	1,414 col/100 mL		
		07/10/23	Bacteria	387 col/100 mL	↑	Eurofins
			Total Coliform	1,413 col/100 mL	↓	Eurofins
481	41.28454351520 -73.13667758530	06/21/21	Bacteria	133 col/100 mL		
			Total Coliform	2,420 col/100 mL		
		07/10/23	Bacteria	Not flowing		Eurofins
			Total Coliform	Not flowing		Eurofins

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).

Catchment ID	Rank
6000-00-5+L4-01	High
6000-00-5+R11-01	High
6000-00-5+R11-02	High
6000-00-5+R12-01	High
6000-00-5+R18-01	High
6000-00-5+R18-02	High
6000-00-5+R19-01	High
6000-00-5+R19-02	High
6000-00-5+R19-03	High
6000-00-5+R19-04	High
6000-00-5+R19-05	High
6000-00-5+R19-06	High
6000-00-5+R19-07	High
6000-00-5+R20-01	High
6000-00-5+R20-02	High
6000-00-5+R20-03	High
6000-00-5+R22-01	High
6000-00-5+R22-02	High
6000-00-5+R22-03	High
6000-00-5+R22-04	High
6000-73-2-R1-0	High
6000-75-1-02	High
6000-75-1-03	High
6000-75-1-04	High
6000-75-1-05	High
6000-75-1-06	High
6000-75-1-07	High
6000-75-1-08	High
6000-75-1-09	High
6000-75-1-010	High
6000-75-1-011	High

Catchment ID	Rank
6000-75-1-31-013	High
6000-75-1-014	High
6000-75-1-015	High
6000-75-1-016	High
6000-75-1-017	High
6000-75-1-018	High
6000-75-1-019	High
6000-75-2-R1	High
6000-79-1-01	High
6000-79-1-02	High
6000-79-1-03	High
6000-79-1-04	High
6000-79-1-05	High
6000-79-1-06	High
6000-79-1-07	High
6000-79-1-08	High
6000-79-1-09	High
6000-79-1-010	High
6000-79-1-011	High
6000-79-1-012	High
6000-79-1-013	High
6000-79-1-014	High
6000-79-1-015	High
6000-79-1-016	High
6000-79-1-017	High
6000-79-1-018	High
6000-79-1-019	High
6000-79-1-020	High
6000-79-1-021	High
6000-79-1-022	High
6000-79-1-023	High
6000-79-1-024	High

Catchment ID	Rank
6000-79-1-025	High
6000-79-1-026	High
6000-79-1-027	High
6000-79-1-028	High
6000-79-1-029	High
6000-79-1-030	High
6000-79-1-031	High
6024-04-1-01	High
6024-04-1-02	High
6024-04-1-03	High
6024-06-1-01	High
6025-00-2-R2-0	High
6025-00-3-L2-01	High
6025-00-3-L2-02	High
6025-00-3-L2-03	High
6025-00-3-L2-04	High
6025-00-3-L2-05	High
6025-00-3-L2-06	High
6025-00-3-L2-07	High
6025-00-3-R5-01	High
6025-00-3-R5-02	High
6025-00-3-R5-03	High
6025-00-3-R5-04	High
6025-00-3-R5-05	High
6025-00-3-R5-06	High
6025-00-3-R5-07	High
6025-00-3-R5-08	High
6025-00-3-R5-09	High
6025-00-3-R7-01	High
6025-00-3-R7-02	High
6025-00-3-R7-03	High
6025-00-3-R8-01	High

Catchment ID	Rank
6025-00-3-R8-02	High
6025-04-1-01	High
6025-07-1-01	High
6025-08-1-01	High
6025-08-1-02	High
6025-08-1-03	High
6025-08-1-04	High
6025-08-1-05	High
6025-08-1-06	High
6025-08-1-07	High
6025-08-1-08	High
6025-08-1-09	High
6025-08-1-010	High
6025-08-1-011	High
6025-08-1-012	High
6025-08-1-013	High
7104-01-1-L1-01	High
7104-01-1-L1-02	High
4011-00-2-R3	High
6000-00-5+L4-02	Low
6000-00-5+L4-03	Low
6000-00-5+L4-04	Low
6000-00-5+L4-05	Low
6000-00-5+L4-06	Low
6000-00-5+L4-07	Low
6000-00-5+L4-08	Low
6000-00-5+L4-09	Low
6000-00-5+L4-010	Low
6000-00-5+R11-015	Low
6000-00-5+R11-016	Low
6000-00-5+R11-03	Low
6000-00-5+R11-04	Low

Catchment ID	Rank
6024-00-2-R5-07	Low
6024-00-2-R5-08	Low
6024-00-2-R5-09	Low
6024-00-2-R5-10	Low
6024-00-2-R5-11	Low
6024-00-2-R5-12	Low
6024-00-2-R5-13	Low
6024-00-2-R5-14	Low
6024-00-2-R5-15	Low
6024-00-2-R5-16	Low
6024-00-2-R5-17	Low
6024-00-2-R5-18	Low
6024-00-2-R5-19	Low
6024-00-2-R5-20	Low
6024-00-2-R5-21	Low
6024-00-2-R5-22	Low
6024-00-2-R5-23	Low
6024-00-2-R5-24	Low
6024-00-2-R5-25	Low
6024-00-2-R5-26	Low
6024-00-2-R5-27	Low
6024-00-2-R5-28	Low
6024-00-2-R5-29	Low
6024-00-2-R5-30	Low
6024-00-2-R5-31	Low
6024-00-2-R5-32	Low
6024-00-2-R5-33	Low
6024-00-2-R5-34	Low
6024-00-2-R5-35	Low
6024-03-1-01	Low
6024-03-1-02	Low
6024-03-1-03	Low
6024-04-1-04	Low
6024-04-1-05	Low
6024-04-1-06	Low
6024-04-1-07	Low
6024-04-1-08	Low
6024-04-1-09	Low
6024-04-1-10	Low
6024-04-1-11	Low
6024-04-1-012	Low

Catchment ID	Rank
6024-00-2-R5-07	Low
6024-00-2-R5-08	Low
6024-00-2-R5-09	Low
6024-00-2-R5-10	Low
6024-00-2-R5-11	Low
6024-00-2-R5-12	Low
6024-00-2-R5-13	Low
6024-00-2-R5-14	Low
6024-00-2-R5-15	Low
6024-00-2-R5-16	Low
6024-00-2-R5-17	Low
6024-00-2-R5-18	Low
6024-00-2-R5-19	Low
6024-00-2-R5-20	Low
6024-00-2-R5-21	Low
6024-00-2-R5-22	Low
6024-00-2-R5-23	Low
6024-00-2-R5-24	Low
6024-00-2-R5-25	Low
6024-00-2-R5-26	Low
6024-00-2-R5-27	Low
6024-00-2-R5-28	Low
6024-00-2-R5-29	Low
6024-00-2-R5-30	Low
6024-00-2-R5-31	Low
6024-00-2-R5-32	Low
6024-00-2-R5-33	Low
6024-00-2-R5-34	Low
6024-00-2-R5-35	Low
6024-03-1-01	Low
6024-03-1-02	Low
6024-03-1-03	Low
6024-04-1-04	Low
6024-04-1-05	Low
6024-04-1-06	Low
6024-04-1-07	Low
6024-04-1-08	Low
6024-04-1-09	Low
6024-04-1-10	Low
6024-04-1-011	Low
6024-04-1-012	Low

Catchment ID	Rank
6025-00-3-R1-02	Low
6025-00-3-R1-03	Low
6025-00-3-R1-04	Low
6025-00-3-R1-05	Low
6025-00-3-R1-06	Low
6025-00-3-R2-02	Low
6025-00-3-R2-03	Low
6025-00-3-R2-04	Low
6025-00-3-R2-05	Low
6025-00-3-R2-06	Low
6025-00-3-R2-07	Low
6025-00-3-R2-08	Low
6025-00-3-R2-09	Low
6025-00-3-R3-01	Low
6025-00-3-R3-02	Low
6025-00-3-R3-03	Low
6025-00-3-R3-04	Low
6025-00-3-R3-05	Low
6025-00-3-R3-06	Low
6025-00-3-R3-07	Low
6025-00-3-R3-08	Low
6025-00-3-R3-09	Low
6025-00-3-R3-10	Low
6025-00-3-R3-11	Low
6025-00-3-R3-12	Low
6025-00-3-R3-13	Low
6025-00-3-R3-14	Low
6025-00-3-R3-15	Low
6025-00-3-R3-16	Low
6025-00-3-R3-17	Low
6025-00-3-R3-18	Low
6025-00-3-R3-19	Low
6025-00-3-R3-20	Low
6025-00-3-R3-21	Low
6025-00-3-R3-22	Low
6025-00-3-R3-23	Low
6025-00-3-R3-24	Low
6025-00-3-R3-25	Low
6025-00-3-R3-26	Low
6025-00-3-R3-27	Low
6025-00-3-R3-28	Low

Catchment ID	Rank
6025-00-3-R3-029	Low
6025-00-3-R3-030	Low
6025-00-3-R3-031	Low
6025-00-3-R3-032	Low
6025-00-3-R3-033	Low
6025-00-3-R3-034	Low
6025-00-3-R3-035	Low
6025-00-3-R3-036	Low
6025-00-3-R3-037	Low
6025-00-3-R3-038	Low
6025-00-3-R3-039	Low
6025-00-3-R3-040	Low
6025-00-3-R3-041	Low
6025-00-3-R5-010	Low
6025-00-3-R5-011	Low
6025-00-3-R5-012	Low
6025-00-3-R5-013	Low
6025-00-3-R5-014	Low
6025-00-3-R5-015	Low
6025-00-3-R5-016	Low
6025-00-3-R5-017	Low
6025-00-3-R5-018	Low
6025-00-3-R5-019	Low
6025-00-3-R7-04	Low
6025-00-3-R7-05	Low
6025-00-3-R7-06	Low
6025-00-3-R8-03	Low
6025-00-3-R8-04	Low
6025-00-3-R8-05	Low
6025-00-3-R8-06	Low
6025-00-3-R8-07	Low
6025-00-3-R8-08	Low
6025-02-1	Low
6025-03-1-01	Low
6025-03-1-02	Low
6025-03-2-R1-01	Low
6025-03-2-R1-02	Low
6025-03-2-R1-03	Low
6025-03-2-R1-04	Low
6025-03-2-R1-05	Low
6025-03-2-R1-06	Low

Catchment ID	Rank
6025-03-2-R1-07	Low
6025-03-2-R1-08	Low
6025-03-2-R1-09	Low
6025-03-2-R1-010	Low
6025-03-2-R1-011	Low
6025-03-2-R1-012	Low
6025-03-2-R1-013	Low
6025-03-2-R1-014	Low
6025-03-2-R1-015	Low
6025-03-2-R1-016	Low
6025-03-2-R1-017	Low
6025-03-2-R1-018	Low
6025-03-2-R1-019	Low
6025-04-1-02	Low
6025-04-1-03	Low
6025-04-1-04	Low
6025-04-1-05	Low
6025-04-1-06	Low
6025-04-1-07	Low
6025-04-1-08	Low
6025-04-1-09	Low
6025-04-1-010	Low
6025-04-1-011	Low
6025-04-1-012	Low
6025-04-1-013	Low
6025-04-1-014	Low
6025-04-1-015	Low
6025-04-1-016	Low
6025-04-1-017	Low
6025-04-1-018	Low
6025-04-1-019	Low

Catchment ID	Rank
6025-05-1-01	Low
6025-05-1-02	Low
6025-05-1-03	Low
6025-05-1-04	Low
6025-05-1-05	Low
6025-05-1-06	Low
6025-05-1-07	Low
6025-05-1-08	Low
6025-05-1-09	Low
6025-05-1-010	Low
6025-05-1-011	Low
6025-05-1-012	Low
6025-05-1-013	Low
6025-06-1-01	Low
6025-06-1-02	Low
6025-06-1-03	Low
6025-06-1-04	Low
6025-06-1-05	Low
6025-06-1-06	Low
6025-06-1-07	Low
6025-06-1-08	Low
6025-06-1-09	Low
6025-06-1-010	Low
6025-06-1-011	Low
6025-06-1-012	Low
6025-06-1-013	Low
6025-06-1-014	Low
6025-06-1-015	Low
6025-06-1-016	Low
6025-06-1-017	Low
6025-06-1-018	Low

Catchment ID	Rank
6025-06-1-019	Low
6025-06-1-020	Low
6025-06-1-021	Low
6025-07-1-02	Low
6025-07-1-03	Low
6025-07-1-04	Low
6025-07-1-05	Low
6025-07-1-06	Low
6025-07-1-07	Low
6025-07-1-08	Low
6025-09-1-01	Low
6025-09-1-02	Low
6025-09-1-03	Low
6025-09-1-04	Low
6025-09-1-05	Low
6025-10-1-01	Low
6025-10-1-02	Low
6025-10-1-03	Low
6026-00-1-L1-01	Low
6026-00-1-L1-02	Low
6026-00-1-L1-03	Low
6026-00-1-L2	Low
6026-03-1-L1-01	Low
6026-03-1-L1-02	Low
7104-01-1-01	Low
7104-01-1-02	Low
7104-01-1-03	Low
7104-01-1-04	Low
7104-01-1-L1-03	Low
7104-01-1-L1-04	Low
7104-01-1-L1-05	Low

Catchment ID	Rank
7104-01-1-L1-06	Low
7104-01-1-L1-07	Low
7104-01-1-L1-08	Low
7104-01-1-L1-09	Low
7104-01-1-L1-010	Low
7104-01-1-L1-011	Low
7104-01-1-L1-012	Low
7104-01-1-L1-013	Low
7104-01-1-L1-014	Low
7104-01-1-L1-015	Low
7104-01-1-L1-016	Low
7104-01-1-L1-017	Low
7104-01-1-L1-018	Low
7104-01-1-L1-019	Low
7104-01-1-L1-020	Low
7104-01-1-L1-021	Low
7104-01-1-L1-022	Low
7104-01-1-L1-023	Low
7104-01-1-L1-024	Low
7104-01-1-L1-025	Low
7104-01-1-L1-026	Low
7104-01-1-L1-027	Low
7104-01-1-L1-028	Low
7104-01-1-L1-029	Low
7104-01-1-L1-030	Low
7104-01-1-L1-031	Low
7104-01-1-L1-032	Low
7104-01-1-L1-033	Low
7104-02-1-01	Low
7104-02-1-02	Low
4000-33-2-R2	Low

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. Where no data is presented, the outfall was not flowing at the time of visit. Values exceeding follow-up criteria are identified in red.

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

Outfall ID	Latitude / Longitude	Screening / sample date	Ammonia, mg/L	Chlorine, mg/L	Conductivity, umhos/cm	Salinity, ppm	E. coli or enterococcus, col/100mL	Surfactants, mg/L	Water Temp	Pollutant of concern	If required, follow-up actions taken
Note: Where no values are shown for an outfall, the outfall was not flowing at the time of screening, values in red indicate exceedance of benchmark.											
2	41.2872444941 -73.1560868968	6/14/2022									
3	41.2869249459 -73.1579040467	6/14/2022									
4	41.28689783120 -73.15521331390	6/10/2023									
5	41.28433704340 -73.1571515047	6/14/2022									
6	41.28565670760 -73.1569994393	6/14/2022									
7	41.28378582790 -73.1557493002	6/14/2022									
8	41.31495586900 -73.1286531667	5/2/2022									
9	41.31416165150 -73.12806638100	6/10/2023									
10	41.31632191300 -73.1269674576	5/2/2022									
11	41.31705442120 -73.1260511881	5/2/2022									
12	41.28092522590 -73.14988773	6/14/2022									
13	41.34292998780 -73.13011339	6/14/2021									

14	41.3259641618 -73.17222663	6/14/2021	0	0	444	0.12	0	0.06	59.5	
15	41.3265309109 -73.170831290	6/14/2021	0	0	386	0.44	1	0.03	61.2	
16	41.30062011840 -73.178483842	6/22/2022								
17	41.30224343150 -73.17796794	6/22/2022								
18	41.28741393180 -73.134258596	5/2/2022								
19	41.3379261197 -73.146144109	6/14/2021								
20	41.33772377 -73.1463530476	6/14/2021	0	0	202	0.1	0	0.19	64.5	
21	41.3634943771 -73.154496250	6/7/2021								
22	41.3446693312 -73.135636252	6/14/2021								
23	41.30733257790 -73.135854833	5/3/2022								
24	41.29007889090 -73.122801768	5/2/2022								
25	41.3531525825 -73.148586872	6/10/2021	0	0	422	0.1	0	ND	61.5	
26	41.28035653160 -73.177160819	6/30/2022								
27	41.27975250860 -73.180548741	6/30/2022								
28	41.30944046400 -73.19031736190	6/10/2023								
29	41.3158610132 -73.11353636	4/4/2022	0	0	368	0.13	0	0	40.4	
30	41.31586101320 -73.112198150	4/4/2022								
31	41.31696272040 -73.112010922	4/4/2022								
32	41.31710379560 -73.172169189	6/14/2022								
33	41.3652106241 -73.152706354	6/7/2021								
34	41.2728733204 -73.1728444171	6/14/2022								
35	41.2739164689 -73.170203795	6/14/2022								
36	41.2724216066 -73.1718956371	6/14/2022								
37	41.2754004125	6/30/2022								

Outfall / Interconnection ID	Sample date	Ammonia mg/L	Chlorine mg/L	Conductivity µmhos/cm	Salinity ppt	E. coli or Enterococcus CFU/100mL	Surfactants mg/L	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:

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
- Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
- Common or twin-invert manholes serving storm and sanitary sewer alignments.
- Common trench construction serving both storm and sanitary sewer alignments.
- Crossings of storm and sanitary sewer alignments.
- 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

3.3 Wet weather investigation outfall sampling data

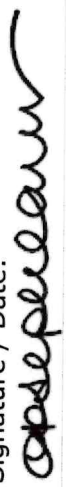
Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

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:	Print name:
Mark Lauretti, Mayor City of Shelton	Joseph Canas, PE, LEED AP, CFM, Principal Engineer Tighe & Bond
Signature / Date:	Signature / Date:
 3.19.24	 -02/02/2024
Email:	Email:
shelton01@cityofshelton.org	jacanas@tighebond.com