

MS4 General Permit
 Town of Enfield 2021 Annual Report
 New MS4 Permittee
 Permit Number GSM 000086
 January 1, 2021 – December 31, 2021

DRAFT

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This report documents Town of Enfield’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2021 to December 31, 2021.

Part I: Summary of Minimum Control Measure Activities

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

1.1 BMP Summary

BMP	Activities in current reporting period	Sources Used (if applicable)	Method of Distribution	Audience (and number of people reached)	Measurable Goal	Department / Person Responsible	Additional details
1-1 Implement public education and outreach	Maintain the ‘stormwater’ page on the Town website, with links to educational materials, appropriate for impaired waters and stormwater pollutants of concern	URL link to UConn NEMO website ⁽¹⁾ , and other Town generated documents	Town website		Number of clicks on the stormwater ‘link’ on the Town’s website	MS4 Program Coordinator, Town IT Department	“PUBLIC STORMWATER MANAGEMENT PROGRAM” “What Can You Do to Protect Local Waterway’s”

1-2 Address education/ outreach for pollutants of concern	Distribute educational materials at outdoor events; make available at Town offices, and for school's classroom use	UConn NEMO website ⁽¹⁾ documents, and other Town generated documents	Replenish materials at event's points of distribution;		Track the collected education materials	MS4 Program Coordinator, Town Conservation Commission	CT NEMO's Public Education and Outreach Library ⁽¹⁾
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1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

- Scantic River Spring Splash – pending 2022
- Earth Day Event – pending 2022 (April 22)
- Source to Sea Clean-Up - pending 2022 (September 23-24), Connecticut River Conservancy
- Volunteer opportunities with the Scantic River Watershed (Association) Monitoring Program
- Provide informational materials on pollution prevention at the Donald W. Barnes Boat Launch (CT River)

⁽¹⁾ Reference: <http://nemo.uconn.edu/ms4/index.htm>

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

2.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Location Posted	Additional details
2-1 Final (2016) Stormwater Management Plan made publicly available	Complete: Posted on the Town website(s), paper copies available in Town offices	Available through on-going posting	Readily available	MS4 Program Coordinator	April 3, 2017 (final version)	https://www.enfield-ct.gov/1294/MS4	
2-2 Comply with public notice requirements for Annual MS4 Reports (annually by 2/15)	On-Going: Draft report posted on Town website, and paper copies available in Town offices	Notice of Draft MS4 Report availability published in Local newspaper	Readily available; acknowledgment and review of comments received, with a response, as applicable	MS4 Program Coordinator	Draft MS4 Report (pending 2/15), Final MS4 Report (pending 4/01)	https://www.enfield-ct.gov/1294/MS4	Current Annual MS4 Report available in paper copy at Town Offices

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

- Hold periodic stormwater committee meetings to review MS4 implementation progress and plan other activities.
- Public meetings of the Enfield Inland Wetlands and Watercourses Agency to regulate proposed activities within 100' of any wetlands and/or watercourse
- Public meetings of the Enfield Conservation Commission to protect the Town's natural resources (Enfield POCD update is on-going)
- 'Public Stormwater Management Program' posting on the Town of Enfield's website (<https://www.enfield-ct.gov/DocumentCenter/View/14557/Enfield-Municipal-Stormwater-Management-Information-PDF>)
- Ability to report potential stormwater issues using the "Report a Concern"/ "FixIt Enfield" tool on the Town web site: <https://www.enfield-ct.gov>

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

3.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
3-1 Develop written IDDE program (Due 7/1/19)	Complete	Reference as needed to guide IDDE legal authority, catchment rankings, screenings, and investigations	Develop written plan of IDDE program	MS4 Program Coordinator, and Committee	Completed July 2018	'Illicit Discharge Detection and Elimination (IDDE) Program – Town of Enfield'
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20)	Complete	GIS interactive map available, locates stormwater outfalls, with a field of outfall 'status information'	Assists in prioritization of stormwater outfall/catchment area improvements	MS4 Program Coordinator, Public Works	Completed June 30, 2021	Summary Table of each outfall inidctcs structural condition, potential for erosion, and if submerged, along with other data
3-3 Implement citizen reporting program (Ongoing)	Complete, & Ongoing	The citizen "Report a Concern" / "Fix It! Enfield" is operational; and includes stormwater-related topics	Number of citizen reports, and response to those reports	MS4 Program Coordinator / Town Public Works / IT	Completed July 1, 2016, and ongoing	Citizen Reports addressed in 2021 related to stormwater included 4 CBs with clogged inlets (which were cleared), and 1 damaged CB (which was replaced)
3-4 Establish legal authority to prohibit illicit discharges (Due 7/1/19)	In progress	Town is reviewing draft Illicit Discharge and Illegal Connection Ordinance , with plans to adopt and add to Town Ordinances	Adoption of Ordinance	MS4 Program Coordinator/Enfield Planner	Started July 1, 2017	Ongoing POCD and Town P&Z Regs and Ordinances updates; 2021-2022 (Gorman & York Consultants)
3-5 Develop record keeping system for IDDE tracking (Due 7/1/17)	Complete, & Ongoing	The Enfield citizen "Report a Concern" / "Fix It! Enfield" maintains an archive of the f reports, their acknowledgement and resolution.	Response to citizen reports	MS4 Program Coordinator, Public Works	Completed July 1, 2016, and ongoing	<i>See Section 3.5 for a listing of septic system repairs /replacements in CY 2021</i>
3-6 Address IDDE in areas with pollutants of concern	Completed	Identifying areas with high potential for septic system failure.	Mapping areas and actions taken to respond to and address septic system failures.	MS4 Program Coordinator, Town Engineer	Ongoing, supported by the 'Catchment and Priority Ranking May 2021 Report'	On-going coordination of septic system status with North Central Health District, as oversight agency

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

- The written program will be posted to the Dept. of Public Works webpage and a link listed in next year’s Annual Report; will update the written IDDE program as needed throughout the permit term.
- Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process

3.3 Provide a record of all citizen reports of suspected illicit discharges and other illicit discharges occurring during the reporting period and SSOs occurring during CY 2021 using the following table. 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.

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)
241 Hazard Ave., Enfield	CY 2021	No	NA		“Septic System was backing up into building, corrected with connection of building to public sewer; no waterways were known to be impacted.” (North Central Health District)	NA

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

Method used to track illicit discharge reports	Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known	Dept. / Person responsible
Calls to North Central Health District - Sanitarian	See notes in Section 3.5 below	See notes in Section 3.5 below	None	North Central District Health Department

3.5 Briefly describe the method and effectiveness of said method used to track illicit discharge reports.

North Central Health District – Septic Tank replacements (3 each CY 2021) – no waterways known to be impacted
 [20 Long Hollow Road, 20 Somers Road, 229 Broad Brook Road]
 North Central Health District – Leaching Field replacements (3 each in CY 2021) - no waterways known to be impacted
 [35 Shaker Road, 8 Charnley Road, 39 Mullen Road]

3.6 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	355 each
Estimated or actual number of interconnections	12 each (CT DOT)
Outfall mapping complete	100 %
Interconnection mapping complete	50%
System-wide mapping complete (detailed MS4 infrastructure)	80%
Outfall assessment and priority ranking	100%
Dry weather screening of all High and Low priority outfalls complete	355
Catchment investigations complete	Not started- planned for 2022
Estimated percentage of MS4 catchment area investigated	%

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

- Enfield Stormwater Committee meeting last held July 26, 2021; reviewed outfall mapping data, assessment and priority ranking of catchments, reviewed language of draft IDDE ordinance and means of enforcement, reviewed last annual MS4 Report contents and alignment with goals of the MS4 program, and proposed activities for CY 2022.
- Freshwater Brook Watershed Plan (PL-566) NRCS Study - Ongoing
- [MS4 Outfall Mapping – GIS link: https://fussandoneill.maps.arcgis.com/apps/webappviewer/index.html?id=3be6d6c68ea44c64b5b9c74b8bc8e9a5](https://fussandoneill.maps.arcgis.com/apps/webappviewer/index.html?id=3be6d6c68ea44c64b5b9c74b8bc8e9a5)

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

4.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit (Due 7/1/20)	Ongoing, In-Progress	Enfield Town Planner, Town Engineer, Zoning Enforcement Officer (ZEO) carry out and enforce the Town's land use regulations, consistent with the requirements of the MS4 Permit for proposed development and redevelopment projects.	Effective in mitigating notices of violations or other deficiencies	Enfield Inland Wetlands & Watercourses Agency (IWWA), Enfield Town Planner, Town Engineer, Zoning Enforcement Officer (ZEO)	Ongoing; 12/31/2022	Ongoing Town P&Z Regs and Ordinances updates; 2021-2022 (Gorman & York Consultants), includes MS4 requirements cross reference or modifications as necessary
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing)	Complete, Ongoing	Enfield Town Planner, Town Engineer coordinate plan reviews, referrals to IWWA as applicable.	Plan review checklist completed for proposed development and redevelopment projects	Enfield Town Planner, Town Engineer	Ongoing	Enfield's 'Site Plan Review Application' ⁽¹⁾ provides a checklist of submission requirements Enfield's 'Subdivision Application' ⁽²⁾ provides a checklist of submission requirements
4-3 Review site plans for stormwater quality concerns (Ongoing)	Complete, Ongoing	Enfield Town Planner, Town Engineer coordinate plan reviews, referrals to IWWA as applicable	Plan review checklist completed for proposed development and redevelopment projects	Enfield Town Planner, Town Engineer	Ongoing	Plan review referrals to Enfield IWWA as applicable
4-4 Conduct site inspections (Ongoing)	Complete, Ongoing	Enfield Town Planner, Town Engineer, Zoning Enforcement Officer (ZEO) carry out and enforcement	Number of sites inspected. Number of enforcement actions taken. Resolution of violations.	Enfield Town Planner, Town Engineer	Ongoing	Town holds pre-construction meetings on-site, to verify S&EC measures have been installed; with periodic check-ins during construction; and at end

						of project for plan conformance.
4-5 Implement procedure to allow public comment on site development (Ongoing)	Complete, Ongoing	Enfield Planning & Zoning Commission (PZ&C), and Enfield Inland Wetlands & Watercourses Agency (IWWA) post upcoming meetings and draft agenda	PZ&C and IWWA upcoming meetings posted on Town website	Enfield Planning & Zoning Commission (PZ&C), and Enfield Inland Wetlands & Watercourses Agency (IWWA)	Ongoing	PZ&C and IWWA Meeting Minutes posted
4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing)	Complete, Ongoing	Enfield Town Planner, Town Engineer coordinate plan reviews, referrals to IWWA as applicable	Plan review checklist completed for proposed development and redevelopment projects	Enfield Town Planner, Town Engineer	Ongoing	Plan review comments provided to project developer for follow-up as applicable for regulatory compliance.

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

- (1) <https://www.enfield-ct.gov/DocumentCenter/View/16057/Application-for-Administrative-Approval?bidId>
- (2) <https://www.enfield-ct.gov/DocumentCenter/View/12719/Subdivision-Application-PDF>
- Continue to inform developers / contractors of their potential obligations to register under the DEEP ‘Construction Activities General Permit ‘and provide a copy of the associated Storm Water Pollution Control Plan with submittal to Enfield for review and approval
 - Continue interdepartmental (Planning , PZC and IWWA) review and approval procedures for proposed construction’s ‘Drainage Design’ and ‘S&EC Plan’; and review both submittals for consistency with the MS4 Program requirements; integrate revisions into the Plan Compliance Checklist and the PZC & IWWA plan review process, once completed
 - Review public comment on plans presented at PZC and IWWA public hearings for their reflection in the final site or subdivision construction applications.
 - Continue review of proposed drainage plans for effectiveness in maintaining stormwater quality post- construction; review stormwater management drainage plan design compliance for consistency with the MS4 Program
 - Continue review of stormwater management S&EC Plans for effectiveness in maintaining stormwater quality during construction; review stormwater management S&EC Plans compliance for consistency with the MS4 Program
 - Review project applicant plans for Wetlands Regulations (adopted April 21, 2020) requirement for integration of one or more Low Impact Development Management Practices for Soil Erosion and Sediment Control and one or more Low Impact Development Management Practices for Stormwater Management
 - Continue Town Engineer follow-up on complaints of ineffective S&EC practices during construction; document inspection activities; review opportunities for other pro-active inspection opportunities

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

5.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning (Due 7/1/22)	Ongoing, In-Progress	Enfield Town Planner, Town Engineer, Zoning Enforcement Officer (ZEO) carry out and enforce the Town's land use regulations, consistent with the requirements of the MS4 Permit for proposed development and redevelopment projects.	Effective in mitigating notices of violations or other deficiencies	Enfield Town Planner, Town Engineer, Zoning Enforcement Officer (ZEO)	Ongoing, 12/31/2022	Ongoing Town P&Z Regs and Ordinances updates; 2021-2022 (Gorman & York Consultants), includes MS4 requirements cross reference or modifications as necessary
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects (Due 7/1/22)	Complete	On-going – Zoning Regulations amended 1/23/2019 to add 'Low Impact Development' definition and requirement; Wetlands Regulations adopted April 21, 2020 require integration of LID for SE&C and Stormwater Management.	Project compliance	Enfield Town Planner, Town Engineer, Zoning Enforcement Officer (ZEO)	1/23/2019 and ongoing	
5-3 Identify retention and detention ponds in priority areas (Due 7/1/20)	Ongoing, In Progress	Ponds listed and identified, not yet prioritized	Complete pond prioritization with site visits to review pond conditions, with a summary of their status/recommendations	Enfield Town Planner, Town Engineer, MS4 Program Coordinator	7/1/ 2017 and ongoing	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures (Ongoing)	Ongoing, In Progress	Follow up on pond conditions status/recommendations with prioritization of maintenance needs, scope of work / costs.	Develop Action Plans for pond maintenance	Enfield Town Planner, Town Engineer, MS4 Program Coordinator	7/1/ 2017 and ongoing	

5-5 DCIA mapping (Due 7/1/20)	Complete	Utilize results of DCIA Mapping to prioritize disconnections of directly connected impervious areas on Town parcels and site redevelopment projects.	Number of site / acreages with DCIA reductions	Enfield Town Planner, Town Engineer, MS4 Program Coordinator	7/1/ 2017 and ongoing	
5-6 Address post-construction issues in areas with pollutants of concern		Address erosion and sediment problems noted during final project inspections and pond inspections (Item 5-3 above)	Mitigation in identified areas of pollutant concerns, with prioritization on bacteria sources in Scantic River and Buckhorn Brook catchment areas	Enfield Town Planner, Town Engineer, MS4 Program Coordinator	7/1/ 2017 and ongoing	

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

- IWWA – Wetland and Zoning Regulations - to establish legal authority and guidelines regarding low impact development (LID) in new development and redevelopment projects. (Reference NEMO’s ‘Developing a Sustainable Community’)
- Review retention and detention ponds status (as privately owned or Town owned and responsible); review pond functionality status, determine if maintenance needed, and follow up as necessary.

5.3 Post-Construction Stormwater Management reporting metrics

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

Metrics	
Baseline (based on 5/19/2020 Analysis) Directly Connected Impervious Area (DCIA)	1602 acres
DCIA disconnected (redevelopment plus retrofits)	0 / 2.14 acres total
Retrofit projects completed	2 each
DCIA disconnected	0% this year / 0.13% total since 2012 (2017)
Estimated cost of retrofits	\$ Not determined (part of larger roads project)
Detention or retention ponds identified	0 this year /12 total

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

The Baseline DCIA was calculated using CT DEEP’s local basins mapping, and the Sutherland Equations from EPA.

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

6.1 BMP Summary

BMP	Status (Complete, Ongoing, In Progress, or Not started)	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Date completed or projected completion date (include the start date for anything that is 'in progress')	Additional details
6-1 Develop/implement formal employee training program (Ongoing)	Ongoing	MS4 Stormwater Committee training – July 20, 2021 Enfield DPW SWPPP & SPC training - November 17, 2021	Dates of training, names of those trained, topics reviewed	MS4 Program Coordinator, Town Public Works, Town Engineer, Town Building and Grounds	Annually	Power point presentation, and attendance sign-in sheet (available upon request)
6-2 Implement MS4 property and operations maintenance (Ongoing)	Ongoing	Town properties are managed with pollution prevention practices, to mitigate releases form chemical storage, to minimize use of fertilizers, and manage parks to control pet waste and waterfowl	Property evaluations consistency with minimizing discharge of pollutants from the sites	MS4 Program Coordinator, Town Public Works, Town Engineer, Town Building and Grounds		Monthly inspections of Enfield owned sites with Stormwater Pollution Prevention Plans (SWPPP) and/or with Spill Prevention Control and Countermeasures (SPCC) Plans
6-3 Implement coordination with interconnected MS4s	Ongoing	CT DOT stormwater system added to Town's GIS mapping of Stormwater system – July 2020; identifying interconnections, managed on a project basis.	Functioning stormwater system	MS4 Program Coordinator, Town Public Works, Town Engineer		Refer to GIS Mapping Link in Section 3.7 above
6-4 Develop/implement program to control other sources of pollutants to the MS4	Ongoing	Identify polluting activities from reporting through Click-It/FixIt, or call of an illicit discharge, review of catch basin contents during bi-annual cleaning; and follow up to cease and remedy the activity	Adequate response to reported polluting activities	MS4 Program Coordinator, Town Public Works, Town Engineer		
6-5 Evaluate additional measures for discharges to impaired waters*	Ongoing	Mitigation in identified areas of pollutant concerns, with prioritization on bacteria sources in Scantic River and Buckhorn Brook catchment areas, within Enfield	Compare bacteria levels at interconnection with Somers, and downstream results in Enfield	MS4 Program Coordinator,		Coordinate with Scantic River Watershed Association Scantic River monitoring program to collect data

6-6 Track projects that disconnect DCIA (Ongoing)	Ongoing	Annually track total acreage of DCIA that is disconnected as a result of redevelopment or retrofits	Identify projects as likely candidates for DEICA or retrofit projects	MS4 Program Coordinator, Town Public Works, Town Engineer		
6-7 Implement infrastructure repair/rehab program (Due 7/1/21)	Ongoing	Repair, rehabilitate, or retrofit MS4 infrastructure (e.g., conveyances, structures, outfalls) as needed in a timely manner.	Repairs/retrofits completed.	Town Public Works, Water Pollution Control, MS4 Program Coordinator		
6-8 Develop/implement plan to identify/prioritize retrofit projects (Due 7/1/20)	In-Progress, to be completed 2022	Develop retrofit plan and list of priority sites in 2022	Records of retrofit high priority sites	MS4 Program Coordinator, Town Public Works, Town Engineer, Town Planner		Evaluate runoff reduction measures such as permeable pavement or other measures at specific Town owned sites
6-9 Implement retrofit projects to disconnect 2% of DCIA (Due 7/1/22)	In-Progress, to be completed 2022	Develop schedule to implement retrofit plans, identifying high priority locations for initial funding in 2022	Records of retrofit implementation	MS4 Program Coordinator, Town Public Works, Town Engineer, Town Planner		
6-10 Develop/implement street sweeping program (Ongoing)	Ongoing	Continue to annually sweep all municipally-owned or –operated streets and Town owned parking lots, in the spring	Tracking collected materials	MS4 Program Coordinator, Town Public Works		Observe street side sweepings for potential pollutants and track findings
6-11 Develop/implement catch basin cleaning program (Ongoing)	Ongoing	Continue to annually clean 50% of the ~5,000 catch basins sumps on Town roads and properties	Tracking collected materials	MS4 Program Coordinator, Town Public Works		Observe sump debris for potential pollutants and track findings Areas sensitive to erosion (Shaker Lake and Crescent Lake) have annual CB sump cleanings
6-12 Develop/implement snow management practices (Due 7/1/18)	Ongoing	Continue to implement practices for managed deicing material applications, as needed	Limiting Salt use; calibration of salting units completed annually (November)	MS4 Program Coordinator, Town Public Works		

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

Capital Improvement plans include relocation of Building and Grounds facility to the Public Works Highway Department site, within the next few years, to consolidate activities.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	(Yes) 11/8/2021
Street sweeping	
Curb miles swept	182.5 miles (of 329 miles – one side of road)
Volume (or mass) of material collected	A portion of 272 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)	~3,500
Total catch basins town- (or institution-) wide	~6,141 (some DOT owned)
Catch basins inspected	2,500
Catch basins cleaned	2,500
Volume (or mass) of material removed from all catch basins	271 tons
Volume removed from catch basins to impaired waters (if known)	A portion of 272 tons
Snow management	
Type(s) of deicing material used	Mg Cl-liquid
Total amount of each deicing material applied	6,150 lbs
Type(s) of deicing equipment used	CaCl – solid (salt)
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	21,168 miles
Snow disposal location	Where plowed, Brainard Park
Staff training provided on application methods & equipment	(Yes) 11/8/2021
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	(Limited use) lbs or %
Reduction in turf area (since start of permit)	acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$ Not determined

6.4 Catch basin cleaning program

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

Catch Basin Cleaning will consist of removing dirt, refuse and other debris from the catch basin, the gutter mouth of curb inlets and properly disposing of materials removed. This will involve removing the basin grate, cleaning the sides and bottom of the sump. Each basin should be thoroughly cleaned of sand, silt and debris from the sump through the use of a vacuum truck, other mechanical means, or by hand if necessary.

- Clean and remove grate, remove all material in basin including sticks, dirt, refuse and other debris using minimal amounts of water.
- While cleaning, observe condition of basin for undermining, cracked or broken frames, plugged or broken pipe connections or any suspicious pipe inlets. Record and report as observed.
- Upon completion of cleaning, replace grate securely.

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. (Due 7/1/20)

During CY 2022, a planning-level assessment of potential stormwater retrofit at Town owned sites will be conducted; where low-impact development (LID), green infrastructure (GI), and/or runoff reduction could be implemented, also addressing disconnection of Directly Connected Impervious Areas (DCIA), and ranking potential projects, to enable the Town to meet its DCIA reduction goals.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection annually in future years. (Due 7/1/22)

During CY 2022, the Retrofit Program will include a prioritization schedule for identified projects.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

For details on this requirement, visit <https://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 X 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.
E-coli (bacteria) is pollutant of concern in the Scantic River and Buckhorn Brook waterways. Samples of stormwater outfall discharge flows identified during the dry-weather outfall investigations (from a trickle, to low and moderate flows) were analyzed for e-coli levels. Of the total 54 outfalls with discharge sample collection, exactly 4 each had e-coli results greater than 410 colonies / 100 ml. The Town received notification and followed up to investigate potential pollutant sources (See Section 3 below) No changes to the Stormwater Management Plan were made as a result of these findings.

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. If you do attach a spreadsheet, please write “See Attachment” below.

Note: Wet Weather sampling has not yet been authorized/funded.

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

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

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

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

Provide the following information for outfalls exceeding the pollutant threshold (dry weather monitoring where a flow was identified).

Outfall ID	Status of drainage area investigation	Control measure to address impairment
BB-08	Buckhorn Brook (Dec 4, 2017) e-coli at 1,860 cols/100mls	Follow up (verify if failed septic in area)
BO-03	Bowyens Brook (Aug 7, 2018) e-coli at 650 cols/100mls	Follow up
CT-02	Connecticut River (Aug. 7, 2018) e-coli at 24,200 cols/100mls	Follow up
FB-06	Tributary to Freshwater Brook (Aug 21, 2018) e-coli at 1,260 cols/100ml	Follow up

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

Once outfall sampling has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2021. You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write "See Attachment" below.

Note: Wet Weather sampling has not yet been authorized/funded.

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)

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).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank
4205-03	High Priority	10
4000-04	High Priority	8
4205-01	High Priority	5
4205-00	High Priority	3
4000-00 / 4200-00	High Priority	2
4003-00	Low Priority	6
4000-03 / 4000-05 / 4000-07 / 4000-08 / 4003-00 / 4200-23	Low Priority	5
4000-01	Low Priority	3
4003-01 / 4003-03	Low Priority	2
4003-02	Low Priority	0

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 <https://nemo.uconn.edu/ms4/tasks/monitoring.htm>. Refer to the blue column of the Monitoring comparison chart and the IDDE baseline monitoring flowchart.

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies. You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write “See Attachment” below.

Outfall / Interconnection ID	Latitude / Longitude	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken
See Attachment – Table 1 – Scantic River and Buckhorn Brook											
See Attachment – Table 2 – Connecticut River											

2.2 Wet weather sample and inspection data

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

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor. You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write “See Attachment” below.

Note: Wet Weather sampling has not yet been authorized/funded.

Outfall / Interconnection ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern

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

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

3.1 System Vulnerability Factor Summary

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

Outfall ID	Receiving Water	System Vulnerability Factors

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write “See Attachment” below.

Key Junction Manhole ID	Latitude / Longitude	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants

3.3 Wet weather investigation outfall sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table. If you do attach a spreadsheet, please write “See Attachment” below.

Outfall ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Surfactants

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

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed

Part IV: Certification

<p>"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."</p>	
Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name: Donald Nunes, Director, Enfield Public Works	Print name: Erik Mas, Vice President, Fuss & O'Neill
Signature / Date:	Signature / Date:
Email: <i>dnunes@enfield.org</i>	Email: <i>emas@fando.com</i>

Table 1
Scantic River and Buckhorn Brook
MS4 Outfall Dry-Weather Sampling Analytical Results Summary
Enfield, CT - MS4 General Permit
June 30, 2021

Watershed:				Buckhorn Brook	Scantic River		Scantic River				
				BB-08	SR-05	SR-06	SR-07	SR-08	SR-09	SR-12	SR-13
Parameter ⁽¹⁾	Threshold Indicators	Reporting Level (BDL - Below Detection Limit indicated)	Units	Outfall ID: BB-08 Buckhorn Brook (LBAS_NO 4205-00) Date sampled: Dec 4, 2017 -Cook D	Outfall ID: SR-05 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 1, 2018 -Brennan K..	Outfall ID: SR-06 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 1, 2018 -Brennan K..	Outfall ID: SR-07 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 1, 2018 -Brennan K..	Outfall ID: SR-08 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.	Outfall ID: SR-09 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.	Outfall ID: SR-12 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.	Outfall ID: SR-13 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.
			Flow Description:	Trickle	Trickle	High	Trickle	High	Moderate	High	Moderate
Laboratory Analysis (ID No.):				BZ49836	CB86617	CB86618	CB86619	CC05240	CC05241	CC05242	CC05243
Ammonia	≥ 0.50 ⁽²⁾	0.05	mg/l	0.09	BDL	BDL	BDL	BDL	0.34	BDL	BDL
Surfactants-MBAS ⁽⁶⁾	≥ 0.25 ⁽²⁾	0.05	mg/l	<0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Coliforms, Fecal (E-Coli)	> 410 ⁽⁵⁾	10	MPN/100mls	1860	BDL	31	BDL	BDL	BDL	BDL	BDL
Coliforms, Total	> 500 ⁽⁵⁾	10	MPN/100mls	15500	350	1420	2910	529	20	959	275
Chlorine	≥ 0.0 ⁽²⁾⁽⁴⁾	0.02	mg/l	<0.02	BDL	0.03	BDL	BDL	0.31	BDL	0.02
Field Screening											
Conductivity			uS/cm	524.8	148.67	317.16	290.73	206	2170	496	257.64
pH ⁽³⁾			SU	6.5	7.2	7.25	7.21	7.44	7.08	7.27	7.41
Salinity			PSU		0.07	0.15	0.14	0.1	0.1	0.24	0.12
TDS ⁽³⁾			mg/l		100	180	180	110	120	270	140
Temperature			° C	9.16	17.83	16.67	18.56	11.23	10.19	11.46	10.62
Other IDDE Indicators											
Visual Evidence of Illicit Discharge ⁽⁷⁾				Negligible	Negligible	Negligible	Negligible	Oily Sheen	Negligible	Negligible	Negligible
Olfactory Evidence of Illicit Discharge ⁽⁷⁾				Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Level of Concern Priority Ranking ⁽⁸⁾				Mid	Negligible	Mid	Low	Mid	Negligible	Mid	Low
Parameters of Most Concern				Fecal and Total Coliform	NA	Total Coliform, High Flow	Total Coliform	Oily Sheen, High Flow	Moderate Flow	Total Coliform, High Flow	Moderate Flow
Other Comments: (Potential Pollution Source)				Possibly failed septic in area (Sandpiper Rd)	(Patricia Circle)	Erosion at sides and under outfall (Celtic Circle -S)	(Celtic Circle - N)	NE of Holy Family Church (Simion Rd)	Post Office Road at driveway to Church	No pipe outfall support (Campsite Rd)	No Pipe outfall support) E of Raffia Rd

Bold result indicates finding above potential sewage input indicator level

BDL indicates value not detected above laboratory/equipment reporting limit

Footnotes:

⁽¹⁾ Parameter List from MS4 General Permit - Appendix B - Section 5(c)

⁽²⁾ Threshold Indicators of a potential sanitary discharge to stormwater (Ref.: MS4 General Permit -

* if ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and E. Coli > 410 MPN/100mls

* If all three conditions are exceeded, the catchment area would be considered a 'High-priority catchment', with further investigation required.

⁽³⁾ Parameter measures taken, but not required by MS4 General Permit

⁽⁴⁾ Detectable levels of chlorine

⁽⁵⁾ From MS4 General Permit - Appendix D - table of 'Water Quality Targets for Waters for Which Bacteria is

⁽⁶⁾ The methylene blue active substances (MBAS) method is a standard method for determination of anionic

⁽⁷⁾ Where quality of evidence measured parameter or field indicators (visual or olfactory) results indicate a potential pollutant source impairing waters of the State

⁽⁸⁾ Samples of Concern rated as 'high' level exceeded thresholds for ammonia, surfactants and e-coli; as 'mid' level with multiple parameters above thresholds; as 'low' level with high total coliforms; and otherwise 'Negligible'.

Test Method:	Other:
Laboratory Analysis	Result in Question
Field Equipment	

Table 1
Scantic River and Buckhorn Brook
MS4 Outfall Dry-Weather Sampling Analytical Results Summary
Enfield, CT - MS4 General Permit
June 30, 2021

Watershed:				Scantic River							
				SR-14	SR-15	SR-17	SR-23	SR-24	SR-64	SR-48	SR-66
Parameter ⁽¹⁾	Threshold Indicators	Reporting Level (BDL - Below Detection Limit indicated)	Units	Outfall ID: SR-14 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.	Outfall ID: SR-15 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.	Outfall ID: SR-17 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Pierce K.	Outfall ID: SR-23 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 29, 2018 -Flaherty S. Flow	Outfall ID: SR-24 Scantic River (LBAS_NO 4200-00) Date Sampled: Nov 30, 2018 -Flaherty S. Flow	Outfall ID: SR-64 Scantic River (LBAS_NO 4200-00) Date Sampled: Dec 5, 2018 -Pierce K.	Outfall ID: SR-48 Scantic River (LBAS_NO 4200-00) Date Sampled: Dec 5, 2018 Pierce K.	Outfall ID: SR-66 Scantic River (LBAS_NO 4200-00) Date Sampled: June 11, 2021 -Tyropolis J.
			Flow Description:	Moderate	Moderate	Moderate	High	High	Moderate	Moderate	Trickle
Laboratory Analysis (ID No.):				Phoenix No. x	Phoenix No. x	Phoenix No. x	CC05244	CC05653	CC07851	CC07852	CI53360
Ammonia	≥ 0.50 ⁽²⁾	0.05	mg/l	BDL	0.34	BDL	BDL	BDL	BDL	BDL	0.25
Surfactants-MBAS ⁽⁶⁾	≥ 0.25 ⁽²⁾	0.05	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	<0.05
Coliforms, Fecal (E-Coli)	> 410 ⁽⁵⁾	10	MPN/100mls	BDL	0.15	0.12	10	31	BDL	BDL	74
Coliforms, Total	> 500 ⁽⁵⁾	10	MPN/100mls	529	20	959	573	909	383	487	>24200
Chlorine	≥ 0.0 ⁽²⁾⁽⁴⁾	0.02	mg/l	BDL	BDL	BDL	0.19	0.17	0.21	0.25	0.0
Field Screening											
Conductivity			uS/cm	287	392	310	587.79	566.75	500	66	499.3
pH ⁽³⁾			SU	7.45	7.6	7.32			6.87	7.33	6.80
Salinity			PSU	0.009	0.15	0.12	0.28	0.28	0.24	0.03	0.2
TDS ⁽³⁾			mg/l	110	120	270	310	300	260	54	
Temperature			° C	10.55	11.14	10.44	9.45	12.86	10.15	6.49	6.80
Other IDDE Indicators											
Visual Evidence of Illicit Discharge ⁽⁷⁾				Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Olfactory Evidence of Illicit Discharge ⁽⁷⁾				Negligible	Negligible	Negligible	Sewage	Negligible	Negligible	Negligible	Rotten egg/sewage odor
Level of Concern Priority Ranking ⁽⁸⁾				Low	Negligible	Low	Mid	Low	Negligible	Negligible	Mid
Parameters of Most Concern				Moderate Flow	Moderate Flow	Total Coliform, Moderate Flow	Sewage Smell, High Flow	Total Coliform, High Flow	Moderate Flow	Moderate Flow	Total Coliform, Sewage odor
Other Comments: (Potential Pollution Source)				Eroded channel (E of Raffia Rd)	JFK Middle School - SE side (Raffia Rd)	(Sharp St)	Near Sanitary Lift Station (Indian Run)	Pipe partially crushed (South Rd - E of Indian Run)	Town Farm Rd (E of Scantic River)	Bailey Rd	Metal screen in outfall (Michael Dr)

Bold result indicates finding above potential sewage input indicator level

BDL indicates value not detected above laboratory/equipment reporting limit

Footnotes:

⁽¹⁾ Parameter List from MS4 General Permit - Appendix B - Section 5(c)

⁽²⁾ Threshold Indicators of a potential sanitary discharge to stormwater (Ref.: MS4 Ger

* if ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and E. Coli > 410 MPN/100mls

* If all three conditions are exceeded, the catchment area would be considered a 'High'

⁽³⁾ Parameter measures taken, but not required by MS4 General Permit

⁽⁴⁾ Detectable levels of chlorine

⁽⁵⁾ From MS4 General Permit - Appendix D - table of 'Water Quality Targets for Waters'

⁽⁶⁾ The methylene blue active substances (MBAS) method is a standard method for dete

⁽⁷⁾ Where quality of evidence measured parameter or field indicators (visual or olfacto

⁽⁸⁾ Samples of Concern rated as 'high' level exceeded thresholds for ammonia, surfacta

Table 2
Connecticut River Tributary
MS4 Outfall Dry-Weather Sampling Analytical Results Summary
Enfield, CT - MS4 General Permit
June 30, 2021

Watershed:	Connecticut River									
				CT-02	CT-03	CT-16	CT-18	CT-19	CT-21	CT-23
Parameter ⁽¹⁾	Threshold Indicators	Reporting Level (BDL - Below Detection Limit indicated)	Units	Outfall ID: CT-02 Connecticut River (LBAS_NO 4000-00) Date sampled: Aug 7, 2018 Cook D	Outfall ID: CT-03 Connecticut River (LBAS_NO 4000-00) Date sampled: Aug 17, 2018 -Main K. Flow	Outfall ID: CT-16 Connecticut River (LBAS_NO 4000-00) Date sampled: Aug 21, 2018 -Pierce K	Outfall ID: CT-18 Connecticut River (LBAS_NO 4000-00) Date sampled: Oct 14, 2019 -Washburn E	Outfall ID: CT-19 Connecticut River (LBAS_NO 4000-00) Date sampled: Oct 14, 2019 -Washburn E	Outfall ID: CT-21 Connecticut River (LBAS_NO 4000-00) Date sampled: Oct 29, 2019 -Tyropolis J	Outfall ID: CT-23 Connecticut River (LBAS_NO 4000-00) Date sampled: March 2, 2020 -Tyropolis J
			Flow Description:	Trickle	Moderate	Moderate	Trickle	Trickle	Moderate	Moderate
Laboratory Analysis (ID No.):				CB06226	CB13848	CB15672	CE40437	CE40438	CE50027	CF41787
Ammonia	≥ 0.50 ⁽²⁾	0.05	mg/l	0.08	0.06	BDL	BDL	0.25	0.25	0.25
Surfactants-MBAS ⁽⁶⁾	≥ 0.25 ⁽²⁾	0.05	mg/l	BDL	BDL	BDL	0.25	0.25	0.25	BDL
Coliforms, Fecal (E-Coli)	> 410 ⁽⁵⁾	10	MPN/100mls	>24200	97	30	96	52	BDL	BDL
Coliforms, Total	> 500 ⁽⁵⁾	10	MPN/100mls	>24200	>24200	7700	24200	7700	4810	285
Chlorine	≥ 0.0 ⁽²⁾⁽⁴⁾	0.02	mg/l	0.64	0.2	BDL	0.26	0.08	0.11	BDL
Field Screening										
Conductivity			uS/cm	887.71	777.2	736.8	1434	4.20	449.20	195.5
pH ⁽³⁾			SU		6.9	7.86	8.38	7.85	6.99	7.63
Salinity			PSU		0.4	0.36	0.78	0		
TDS ⁽³⁾			mg/l	500	460	560				
Temperature			° C	22.78	25.16	23			16.8	13.3
Other IDDE Indicators										
Visual Evidence of Illicit Discharge ⁽⁷⁾				Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Olfactory Evidence of Illicit Discharge ⁽⁷⁾				Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
Level of Concern Priority Ranking ⁽⁸⁾				Mid	Mid	Mid	Low	Low	Low	Negligible
Parameters of Most Concern				Fecal and Total Coliform	Total Coliform, Moderate Flow	Total Coliform, Moderate Flow	Total Coliform	Total Coliform	Total Coliform	NA
Other Comments: (Potential Pollution Source)				Outfall with sediment; Old Depot Hill Rd/River Rd	Parsons Rd, N end of WPCF; waterfall effect at discharge	At RR crossing, N of Spier Ave (St. Bernard Catholic School)	W of River St., N of Whitworth St. (Bigelow Commons)	Main St.; at N & S River St	Outfall on private property, screened at CB -Cheryl Dr.	Grand View Dr

Bold result indicates finding above potential sewage input indicator level
BDL indicates value not detected above laboratory/equipment reporting limit
Footnotes:

⁽¹⁾ Parameter List from MS4 General Permit - Appendix B - Section 5(c)
⁽²⁾ Threshold Indicators of a potential sanitary discharge to stormwater (Ref.: MS4 * if ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and E. Coli > 410 MPN/100mls * If all three conditions are exceeded, the catchment area would be considered a 'High-priority catchment', with further investigation required.
⁽³⁾ Parameter measures taken, but not required by MS4 General Permit
⁽⁴⁾ Detectable levels of chlorine
⁽⁵⁾ From MS4 General Permit - Appendix D - table of 'Water Quality Targets for
⁽⁶⁾ The methylene blue active substances (MBAS) method is a standard method for
⁽⁷⁾ Where quality of evidence measured parameter or field indicators (visual or olfactory) results indicate a potential pollutant source impairing waters of the State
⁽⁸⁾ Samples of Concern rated as 'high' level exceeded thresholds for ammonia, surfactants and e-coli; as 'mid' level with multiple parameters above thresholds; as 'low' level with high total coliforms; and otherwise 'Negligible'.

Test Method:	Other:
Laboratory Analysis	Result in Question
Field Equipment	2021 Sampling