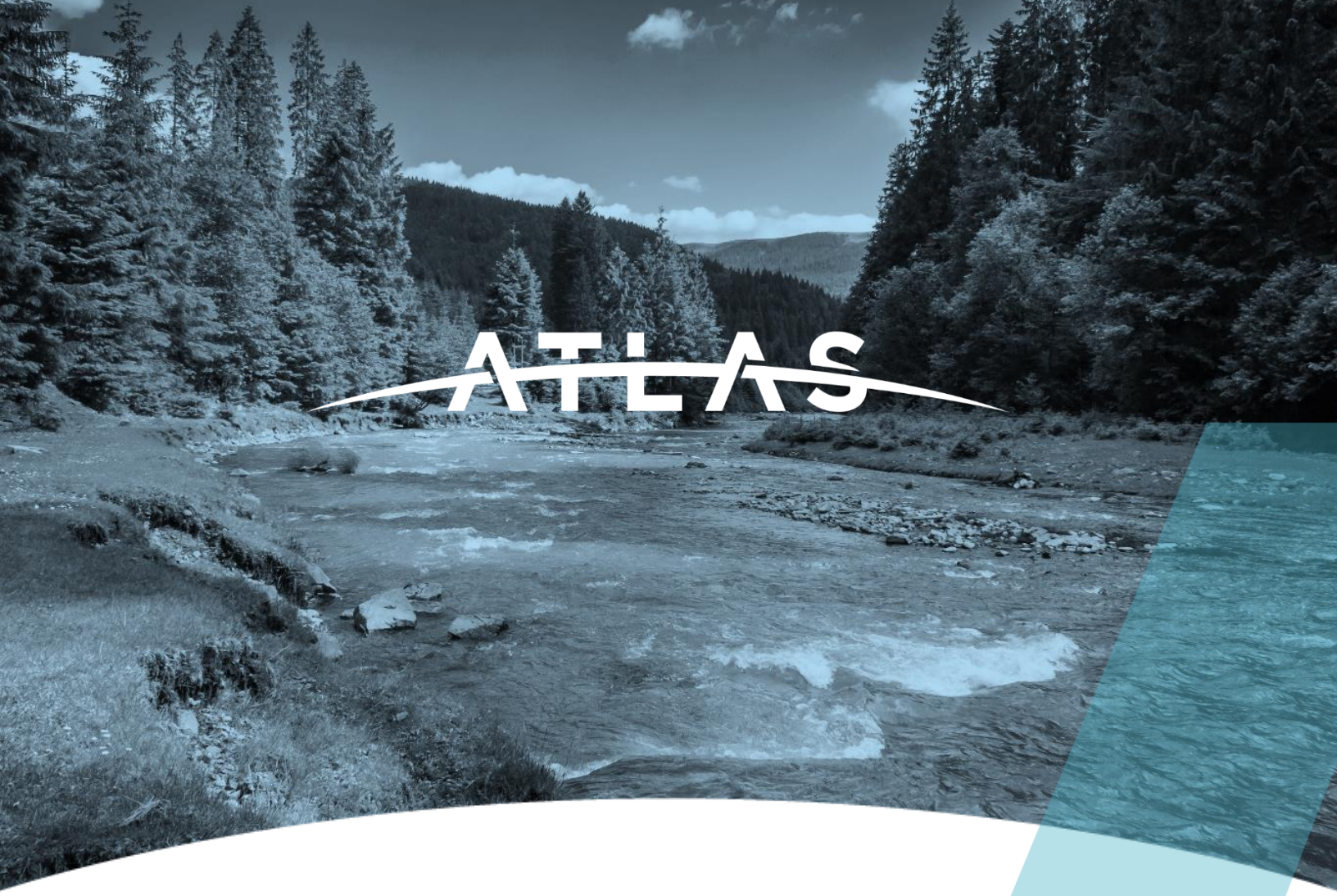

ANNUAL REPORT

TOWN OF GRANBY

JANUARY – DECEMBER 2023

PREPARED BY:

Atlas
290 Roberts Street-Suite 301
East Hartford, Connecticut 06108

January 10, 2024

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APPENDICES

MS4 General Permit
Town of Granby 2023 Annual Report
Permit Number GSM 000029
January 1, 2023 – December 31, 2023

Primary MS4 Contact: Kirk Severance, Director of Public Works, kseverance@granby-ct.gov

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This report documents Granby's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2023 to December 31, 2023.

Part I: Summary of Minimum Control Measure Activities

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

1.1 BMP Summary

BMP	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	*The Town has linked several sources to Stormwater Management page, of which provides several fact sheets pertaining to animal waste and water quality, lawn care, septic system care, pest management and biological controls, and managing household chemicals.*	*Stormwater Management*	*Town Website*	*~10,000 Town Residents*	*Provide public access to stormwater literature.*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	
1-2 Address education/ outreach for pollutants of concern	*The Town has linked a source pertaining to animal waste and water quality, which provides literature on animal waste controls and proper disposal.*	*Pet Waste and Water Quality* *Stormwater Management*	*Town Website*	*~10,000 Town Residents*	*Educate and provide pet waste management to the public.*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	

	The Farmington River Watershed Association (FRWA) held several events for multiple Towns, including Granby. These events included "Meet the Macros", Functional Feeding Groups and River Continuum Concept", "Learn to be River Smart and Protect the Farmington River", and "River Clean-Up".		*Virtual, in-person*			*FRWA*	
Example Additional BMP: *1-3 Hazardous Waste Collection*	*In partnership with Farmington, Canton, Simsbury, and Avon Hazardous Waste Collection days are provided per year.*	*Hazardous Waste Day Collections*	*Town Website*	*~2,000*	*Educate and provide hazardous waste collections.*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	

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

1. Continue Hazardous Waste Collection days with neighboring towns.
2. All of the above-mentioned activities held by the Town of Granby (1-1, 1-2) are planned for 2024, with specific dates to be determined.

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 Stormwater Management Plan publicly available	*Completed*	*Public notice posted via Town website.*	*Provide notice and access to Annual Report*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	*Completed on April 12th, 2017*	*Stormwater Management Plan*	
2-2 Comply with public notice requirements for Annual Reports (annually by 2/15)	*Ongoing*	*Public notice posted via Town website.*	*Provide notice and access to Annual Report*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	*Ongoing- Annual*	*Annual Reports*	
additional BMP: *2-3 Hazardous Waste Collection*	*Ongoing*	*In partnership with Farmington, Canton, Simsbury, and Avon for hazardous waste collection days.*	*Provide hazardous waste collections*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	*March 25th, June 10th, October 7th*	*Hazardous Waste Day Collections*	

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

The annual Hazardous Waste Collection, which is provided annually, will be completed in 2024.

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)	*Completed*	*The Town has completed a written IDDE program.*	*Develop written plan of IDDE program*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	*Completed in November 2017.*	*The Department of Public Works is the central reporting agency for citizen illicit discharge complaint filings.*
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20)	*Completed*	*The Town continues a QA/QC process of reviewing GIS systems and editing as necessary.*	*All outfalls mapped*	*Department of Public Works/ Kirk A. Severance, Director of Public Works/Atlas*	*Completed prior to July 2019*	*Mapping and data will be continually maintained as outfalls are tested, repaired, etc.*
3-3 Implement citizen reporting program (Ongoing)	*Completed*	*The general public may report suspected illicit discharges through the Department of Public Works or online.*	*Provide a reporting mechanism and log*	*Board of Selectmen/ Town Manager*	*Completed November 2018*	*Citizen Reporting Program*
3-4 Establish legal authority to prohibit illicit discharges (Due 7/1/19)	*Completed*	*An Illicit Discharge Detection and Elimination Ordinance was enacted in 2016.*	*Adopt ordinance*	*Board of Selectmen/Town Manager*	*Completed November 2016*	*Illicit Discharge Ordinance*
3-5 Develop record keeping system for IDDE tracking (Due 7/1/17)	*Ongoing*	*The Department of Public Works has developed a record keeping system. Utilizing Excel, illicit discharges are tracked.*	*Maintain IDDE list.*	*Department of Public Works/ Kirk A. Severance, Director of Public Works*	*Completed in November 2017- ongoing for throughout permit life.*	
3-6 Address IDDE in areas with pollutants of concern	*Ongoing*	*Wet weather screening was conducted at six (6) priority outfalls.* *Dry weather inspections were conducted at sixty-one (61) outfalls throughout the Town.*	*Wet weather testing and additional investigation as necessary.*	*Department of Public Works/ Kirk A. Severance, Director of Public Works/Atlas*	*Ongoing Started in 2020*	*Atlas assists the Town with sampling and inspections at outfalls to impaired waterbodies, as well as dry weather inspections at outfalls related to the Town MS4 infrastructure.*

		Catchment Rankings have been completed. SSOs are under investigations.				

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

1. Continue wet weather sampling at priority outfalls to impaired waters
2. Continue dry weather inspections throughout the entire Town
3. Respond to any illicit discharge complaints
4. Conduct Catchment Investigations of Outfalls where bacteria exceed benchmark criteria

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 July 2017 through end of reporting period 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)
286 West Granby Road	*4/9/2021*	*Approximately 195 ft. from OF-152*	*Unknown*	*Underground spring*	*Atlas was called to investigate a potential illicit discharge in the Town. Upon arrival, water was found to be discharging from a driveway at a steady, bubbling rate, with heavy algae growth. Discharge lead down the driveway into an adjacent ditch. This runoff discharge is in the vicinity of OF-152, which in turn discharges to the West Branch Salmon Brook. A sample of the discharge was submitted for the analysis of E. coli, T. coli, nitrite, nitrate, and phosphorus to assess potential illicit discharge sources. A review of sampling data from the nearby MS4 outfall (OF-152) did not indicate illicit discharges were entering this catchment. Laboratory analytical results were indicative of groundwater, and it is suspected an underground spring had worked its way to the surface.*	***E. coli**-<10 MPN/100mL* ***T. Coli**- 10 MPN/100mL* ***Nitrite** - <0.010 mg/L* ***Nitrate**- 0.55 mg/L* ***Phosphorus**- 0.304 mg/L*
Canal Street	*Unknown*	*None.*	*Unknown*	*Property Owner*	*A property owner diverted discharge from a sump pump. The discharge was directed down the driveway and into the road. The Town*	***None.***

					Engineer and Director of Public Works met with the property owner, and discussed redirecting the discharge, as well as icing concerns on the road. The property owner was responsive and redirected the discharge onto a grassy area on the property.	
23 Glen Road	*12/15/2021*	*None.*	*Unknown*	*80-year-old septic system- end of life*	*An evaluation by FVHD led to the replacement of the septic system due to old age and being at the end of its life. Installation of a new 1250-gallon septic tank and leaching field was completed and a permit to discharge was granted, recommending the daily discharge should not exceed 2/3 of the permitted flow.*	***None.***
2022						
21 Oakwood Drive	*3/21/2022*	*None.*	*Unknown*	*Unknown cause for replacement of septic system*	*Following site evaluation by FVHD, installation of a new septic system was recommended for unknown reasons. Approval and a permit were provided by FVHD for replacement with a new 1000-gallon septic tank and 495 septic leach field.*	***None.***
31 Harmony Hill Road	*4/11/2022*	*East Branch Salmon Brook*	*Unknown*	*Failed septic system inspection*	*Site evaluation by FVHD resulted in a failed inspection of the septic system. Installation of a new 1000-gallon septic tank and 495 septic leaching area was recommended. A proposal for septic system repair was submitted by a licensed installer.*	***None.***
73 Silkey Road	*6/15/2022*	*Mountain Brook/ Moosehorn Brook*	*Unknown*	*Unknown reason for septic system replacement*	*FVHD evaluated the site for installation of a new septic system for unknown reasons. A replacement plan was provided by the installer, which includes a two compartment 1000-gallon septic tank and a 495 septic leaching field. FHVD approved the plan and provided a permit for replacement.*	***None.***
6 Glen Road	*9/21/2022*	*None.*	*Unknown*	*Leaking tank due to invasive roots*	*FVHD evaluated the septic system where the tank was leaking due to invasive roots. Recommendations for repair included installation of a new 1000-gallon septic tank and 495 septic leaching area. Awaiting installation and permit to repair.*	***None.***
80 Canal Road	*2022*	*MS4 System*	*Unknown*	*A sump pump was reported as discharging to the road and into a nearby catch basin. Icing on the*	*The Town investigated this report. Following investigation, the resident rerouted the sump pump.*	***None.***

				road was also prevalent following this discharge.		
2023						
Moosehorn Road cul-de-sac	*7/18/2023*	*MS4 System, Adjacent Stream*	*Unknown*	*It appears that silt, sediment, and gravel from the driveway entered the Town's MS4 system and an adjacent stream and can therefore be considered an illicit discharge.*	*Site evaluation by Atlas resulted in a determination that the discharge was illicit. Washout from the shared driveway at 30, 31, 33, and 54 Moosehorn Road was determined to have been the cause of the discharge. No corrective action has been done at this time.*	***None***
The Town coordinated with the Farmington Valley Health District (FVHD) in October 2023 regarding addresses in the Town where septic system repairs were completed. According to the FVHD, approximately 27 septic repairs/replacements were conducted in 2023. Evaluation of these repairs are being conducted in coordination with Atlas to determine if certain sections of the Town have patterns of septic repairs and/or failures.						

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
Farmington Valley Health District (FVHD)	*3 Hampton Village Drive- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*15 Woodland Drive- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*176 Lost Acres Road- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*18 Kearns Circle- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*32 Zimmer Road- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*

Farmington Valley Health District (FVHD)	*210 Barn Door Hills Road- Unknown*	*Soil testing done.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*250 Barkhamstead Road- Overflow*	*Soil testing done.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*109 Bushy Hill Road- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*17 Stardust Drive- Unknown*	*Soil testing done.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*22R Intervale- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*330 North Granby Road- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*24 Heather Lane- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*6 Pine Hill Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*189 Day Street- Unknown*	*Soil testing done.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*58 Barn Door Hills Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*473 Salmon Brook Street- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*

Farmington Valley Health District (FVHD)	*4 Pond Lane- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*63 Higley Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*39 Strong Road- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*96 West Granby Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*68 Canal Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*11 Rondure Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*146 North Granby Road- Unknown*	*Soil testing done.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*22 Pendleton Road- Unknown*	*Septic tank replacement only.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*20 Peterson Road- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*35 Shelley Drive- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*
Farmington Valley Health District (FVHD)	*5 Nestor Way- Unknown*	*Full system replacement.*	*Unknown*	*FVHD*

The Farmington Valley Health District (FVHD) received and maintains records of septic failures along with actions taken. All sanitary sewer connections and system extensions are managed by the Building Department. The Town will begin to formally coordinate with Building Department regarding records of septic failures. In coordination with Atlas, the Town is currently investigating any septic repairs and/or failures through the FVHD as well.

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

Residents of the Town can report illicit discharges directly to the Department of Public Works, or via https://www.granby-ct.gov/DocumentCenter/View/217/Illicit-Discharge-Reporting-Form-PDF?bidId= . The Department of Public Works staff then performs investigations. Digital records on the Town server are used for tracking illicit discharges in excel format.

3.6 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	185
Estimated or actual number of interconnections	Under investigation
Interconnection mapping complete	In progress
System-wide mapping complete (detailed MS4 infrastructure)	100%
Outfall assessment and priority ranking	(100%) *Eight (8) outfalls were chosen as priority outfalls in 2022. All eight (8) outfalls were sampled in 2023. Priority rankings have also been mapped and may change throughout the lifetime of the permit based on future data.*
Dry weather screening of all High and Low priority outfalls complete	(65%) *All dry weather screening at outfalls in high priority outfalls and discharging to impaired waterbodies have been investigated. Outfalls throughout the entirety of the Town are continued to be investigated. 62 outfalls throughout the Town were dry weather screened in 2023.*
Catchment investigations complete	90% *All catchments (utilizing basins for assessment purposes), have been ranked and prioritized. Due to the lengthy time needed to investigate all septic repairs and/or failures, refer to* ***Attachment IV*** *for the completed Catchment Investigations)*
Estimated percentage of MS4 catchment area investigated	50% (est.)

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).

Best Management Practice training is provided to all DPW staff for new procedures, as determined by the Director of Public Works. Annual training for all Department of Public Works and applicable staff was provided by Atlas on November 28, 2023.

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 throughout permit lifetime.*	*There have been no updates in land-use regulations or other legal authority as it pertains to the MS4 permit in the Town of Granby in 2023.*	*Revise land-use regulations.*	*Community Development Department/Abigail Kenyon/ AICP and Land Use Commission Members*	*Completed in 2018-continues annually*	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing)	*Completed*	*Kevin W. Clark, P.E., L.S., Town Engineer prepares land use review letters for most applications to the Inland Wetlands Commission, Planning Commission and Zoning Commission.*	*Utilize interdepartmental coordination in site plan review and approval as it pertains to the MS4 permit.*	*Land Use Commission Members*	*Completed in 2017-continues annually*	
4-3 Review site plans for stormwater quality concerns (Ongoing)	*Completed*	*Kevin W. Clark, P.E., L.S., Town Engineer encourages the use of LID and Stormwater BMPs practices as contained in the 2004 Connecticut Stormwater Quality Manual.*	*Issue review comments and review revised plans for MS4 compliance.*	*Town Engineer/Kevin W. Clark, P.E., L.S.*	*Completed in 2017-continues annually*	
4-4 Conduct site inspections (Ongoing)	*Ongoing*	*The Town conducts construction site inspections for the proper implementation and maintenance of soil erosion and sediment control measures.*	*Document inspections and actions.*	*Community Development Department Director/Abigail Kenyon, AICP/Town*	*Completed in 2017-continues annually*	

				Engineer/Kevin. W. Clark, P.E., L.S.		
4-5 Implement procedure to allow public comment on site development (Ongoing)	*Ongoing*	*The land use application process allows for public comment on land use applications. Applications are submitted to the Inland Wetlands Agency, Planning Commission, Zoning Commission during the Public Hearing Process, when applicable.*	*Provide an opportunity for public comment/involvement.*	*Community Development Department Director/ Abigail Kenyon, AICP and Land Use Commission Members*	*Completed in 2017-continues annually*	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing)	*Ongoing*	*During engineering reviews, letters are typically prepared as part of the land use application process. These letters are used to make developers aware of the need to register for the Construction Stormwater General Permit.*	*Include comments to applications.*	*Community Development Department Director/Abigail Kenyon, AICP and Town Engineer/Kevin W. Clark, P.E., L.S.*	*Completed in 2017-continues annually.*	

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

1. The Town will continue to utilize zoning regulations and inspections as a means to ensure BMPs are utilizing be site developers.

2. Several construction site runoff-control activities occurred in 2023, and are as follows:

- *Station 280 is currently under construction (280 Salmon Brook Street—235-unit apartment development). The Town has checked the E&S measures and will continue to monitor during development in 2024.*
- *76 West Granby Road—residential subdivision, under construction. The Town has checked the E&S measures and will continue to monitor as homes are constructed.*

  508 Salmon Brook Street—10K SF car storage building was approved. It is expected site work will start in 2023. The Town will check E&S measures and monitor during development.
- *18 Mill Pond Drive—nursery/landscape business being constructed. E&S measures checked, will continue to monitor in 2024.*
- *Various single-family homes being constructed, have E&S bonds in place and will monitor in 2024 (3 Tow Path, 33 Cider Mill Heights, 34 Wells Road, 95 Hungary Road, 11 Clemons Spring Road).*

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)	*In Progress*	*Current Town Building and Planning & Zoning regulations generally meet LID/runoff reduction requirements for development and redevelopment projects.*	*Adopt BMPs for any activity, operation, or facility which may cause or contribute to the pollution or contamination of stormwater, the storm drain system, or waters of the U.S.*	*Community Development Department Director/ Abigail Kenyon, AICP and Land Use Commission Members*	*In progress- Started in 2019*	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects (Due 7/1/22)	*In Progress*	*Current Town Building and Planning & Zoning regulations generally meet LID/runoff reduction requirements for development and redevelopment projects. As such, enforcement for such activities would be followed as any other Town coding violation would be.*	*Enforce regulations and guidelines of LID and runoff reductions.*	*Community Development Department Director/Abigail Kenyon, AICP, Town Engineer/Kevin W. Clark, P.E., L.S. and Land Use Commission Members*	*In progress- Started in July 2019*	

5-3 Identify retention and detention ponds in priority areas (Due 7/1/20)	*Completed*	*A GIS layer of retention ponds was added to an ArcGIS layer for the Town.*	*Compile a list and complete mapping of Town-owned detention basins.*	*Department of Public Works/ Atlas, Town Engineer/Kevin W. Clark, P.E., L.S.*	*Completed*	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures (Ongoing)	*Completed*	*A Long-Term Operation and Maintenance Plan was developed for the Town. This plan includes regular inspections and the documentation of all Town-owned retention basins on an as-needed basis, with a minimum full inspection once every five (5) years.*	*Annually inspect and maintain facilities.*	*Department of Public Works/ Kirk A. Severance, Director and Town Engineer/Kevin W. Clark, P.E., L.S.*	*Completed*	
5-5 DCIA mapping (Due 7/1/20)	*Completed*	*The DCIA was calculated for the Town with assistance from Nathan L. Jacobson & Associates. Atlas has mapped the DCIA areas through ArcGIS.*	*Provide an understanding of the Town's overall DCIA to the MS4 infrastructure.*	*Nathan L. Jacobson & Associates/Atlas*	*Completed*	
5-6 Address post-construction issues in areas with pollutants of concern	*In Progress*	*In post-construction areas, if erosion or high accumulation of sedimentation are found during the annual inspections conducted under the long-term maintenance plan, the Town of Granby will prioritize these areas for DCIA retrofit projects.*	*Address post-construction areas where erosion or high accumulation of sedimentation are found during annual inspections.*	*Community Development Department Director/Abigail Kenyon, AICP and Town Engineer, Kevin W. Clark, P.E., L.S.*	*In Progress-Started in 2021*	

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

The Town will continue to monitor, clean, and repair settling/silting basins, catch basins, outfalls, swales, etc.

5.3 Post-Construction Stormwater Management reporting metrics

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

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	*21. 19 acres*
DCIA disconnected (redevelopment plus retrofits)	*acres this year (TBD) / acres total (TBD)*
Retrofit projects completed	*Under Development*
DCIA disconnected	*% This year (TBD) / % total since 2012 (TBD)*
Estimated cost of retrofits	*$TBD*
Detention or retention ponds identified	*4 /4*

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

The DCIA Mapping was conducted in substantial accordance with the methodologies presented in the October 25, 2017 UConn CLEAR Webinar entitled CT MS4 Mapping Details, Clarifications and Tools, the October 19, 2018 UConn CLEAR Workshop entitled CT MS4 Mapping Workshop as well as information contained in the EPA reference entitled Estimating Change in Impervious Area (IA) and Directly Connected Impervious Area (DCIA) for Massachusetts Small MS4 Permit utilizing Sutherland equations.

The DCIA computations were prepared utilizing Connecticut Environmental Conditions Online MS4 base mapping prepared by UConn.
CLEAR.

Impaired waters were determined from the report entitled 2018 Integrated Water Quality Report, dated August 01, 2019, prepared by the State of Connecticut Department of Energy and Environmental protection.

The method to determine the 2012 baseline DCIA was to first compile the CT DEEP drainage basin characteristics in a Microsoft Excel spreadsheet. Information on the Connecticut Environmental Conditions Online MS4 Mapping was used to determine the impervious area breakdown as Buildings, Roads and Other. For CT DEEP drainage basins that fell in two or more municipalities the advanced mapping tab of Connecticut Environmental Conditions Online was used to delineate and determine the applicable town CT DEEP basin area. It was assumed that the entire drainage basin characteristics were directly proportional to the applicable town CT DEEP drainage basin area.

In that ConnDOT has a MS4 Stormwater Program which applies to state owned roads and facilities which the town has no control over, it was decided that the impervious state road area would be determined and deducted from the total impervious road area for each CT DEEP drainage basin as the impervious road areas associated with state highways and facilities constitutes a considerable portion of the total town impervious road area.

The ConnDOT state highway, parking lot and facility impervious road areas were then determined for each CT DEEP drainage basin. The ConnDOT state highway, parking lot and facility impervious road areas were then deducted from the total town impervious road area to determine a town owned impervious road area for each CT DEEP drainage basin. Subsequent to the above deduction, the total impervious area in acres and percentage was then recomputed for each CT DEEP drainage basin.

The DCIA formula for each of four development types was then utilized to compute the DCIA. The impervious area in acres was assigned to each of the four Sutherland equations which were modified for the northeastern United State. The Sutherland equation to be utilized was determined using the following methodology:

For impervious percentage less than 6%:
100% of the impervious area was assigned to the slight connectivity Sutherland Equation where DCIA% = 0.01*(IA%)2.0

For an impervious area between 6% and 12 %:
50% of the area was assigned to the partial connectivity Sutherland Equation where DCIA% = 0.04*(IA%)1.7
and

50% was assigned to the average connectivity Sutherland Equation where DCIA% = 0.10*(IA%)1.5

For an impervious area between 12% and 18 %:
50% of the area was assigned to the average connectivity Sutherland Equation where DCIA% = 0.10*(IA%)1.5
and
50% was assigned to the high connectivity Sutherland Equation where DCIA% = 0.40*(IA%)1.2

For an impervious area of greater than 18 %:
100% of the area was assigned to the high connectivity Sutherland Equation where DCIA% = 0.40*(IA%)1.2

The DCIA for each CT DEEP drainage basin was then summed to determine the entire town DCIA. Subsequent to completion of 2012 Baseline DCIA computations, UConn CLEAR Mapping available on Connecticut Environmental Conditions Online (CT ECO) was revised to separate road impervious area into State Road Impervious Area (Acres) and Town Road Impervious Area (Acres).

The original 2012 Baseline DCIA computations were revised utilizing the UConn CLEAR State Road Impervious Area (Acres) and Town Road Impervious Area (Acres).

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*	*Annual training related to the MS4 permit was conducted in November 2023 by Atlas to the Town's Department of Public Works and other applicable staff.*	*Eliminate non-stormwater discharges into the storm sewers*	*Department of Public Works/Atlas*	*Ongoing Completed Annually*	
6-2 Implement MS4 property and operations maintenance (Ongoing)	*Ongoing*	*The Public Works maintains outdoor maintenance at the Town's parks, school grounds, and all other Town-owned land. Additionally, the Public Works manages roads, including maintenance, resurfacing, drainage repairs, signage, winter plowing, street sweeping, etc.*	*Eliminates/minimizes spills and/or pollutant releases to the environment and navigable waterways.*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing throughout permit life.*	
6-3 Implement coordination with interconnected MS4s	*Ongoing*	*Coordination of the MS4 interconnection mapping began in 2019. CTDOT interconnections are currently under investigation by the CTDOT and will be added to the Town's GIS system once this information is available. Interconnections of surrounding Towns are pending investigation.*	*Update the GIS system with interconnected locations.*	*Department of Public Works/ Kirk A. Severance, Director/Atlas*	*Ongoing Started in 2019*	
6-4 Develop/implement program to control other sources of pollutants to the MS4	*Completed*	*A spill response team has been developed in coordination between the Town and Atlas.*	*Reduce other possible pollutants to the MS4.*	*Department of Public Works/ Kirk A. Severance, Director/Atlas*	*Ongoing throughout permit life.*	*A plan of action for emergency spills has been created and is as follows: The Town will immediately notify Atlas of a spill. Atlas will provide spill response and guidance, including but not limited to coordinating the elimination of any spill flow to navigable*

						waterways, spill cleanup, reporting, etc.
6-5 Evaluate additional measures for discharges to impaired waters*	*Ongoing*	*Wet weather sampling events have been conducted, and priority outfalls were identified throughout the Town. Dry weather inspections are continuing for the entirety of the Town. As catchments are investigated, the Town will coordinate with Atlas on future measures pertaining to the reduction of bacteria discharge to impaired waters.*	*Pending further investigations, create a program or plan of action to reduce bacterial discharge to impaired waters.*	*Department of Public Works/ Kirk A. Severance, Director/Atlas*	*Ongoing-Started in 2018*	*Based on wet and dry weather testing, the Town will implement additional measures including but not limited to a retrofit program or source management to correct the problem at municipally owned or operated facilities, as well as IDDEs, where applicable.*
6-6 Track projects that disconnect DCIA (Ongoing)	*Ongoing*	*A Stormwater Retrofit Program has been drafted and will be utilized as a method of tracking future DCIA disconnects.*	*Track DCIA disconnects.*	*Department of Public Works/ Kirk A. Severance, Director/Atlas*	*Ongoing Started in 2021*	*The Town will utilize the Impervious Cover Tracking Sheet created by NEMO. This will allow the Town to track Project information, new developments, redevelopment, retrofits, changes in impervious cover, and cumulative totals.*
6-7 Implement infrastructure repair/rehab program (Due 7/1/21)	*Ongoing*	*Inspections and maintenance are continually implemented throughout the Town's MS4 infrastructure.*	*Reduce/ eliminate causes or contributions of pollution or contamination of stormwater, the storm drain system, or waters of the U.S.*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing-Started in 2021*	
6-8 Develop/implement plan to identify/prioritize retrofit projects (Due 7/1/20)	*Ongoing*	*A Stormwater Retrofit Program has been drafted. Prioritized areas and/or sites were identified based off of DCIA calculations, impaired waterbodies, current stormwater infrastructure, and the MEP of the Town.*	*Develop retrofit projects*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing-Started in 2021*	

6-9 Implement retrofit projects to disconnect 2% of DCIA (Due 7/1/22)	*Ongoing*	*As Retrofit Projects are identified, the Town will utilize the Impervious Cover Tracking Sheet to track and work towards disconnecting 2% of DCIA, or the MEP of the Town.*	*Track and reduce DCIA impacts.*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing-Started in 2021*	
6-10 Develop/implement street sweeping program (Ongoing)	*Ongoing*	*The Town currently implements a road sweeping program to address known areas of high sediment accumulation.*	*Track swept lane miles.*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing throughout permit life*	
6-11 Develop/implement catch basin cleaning program (Ongoing)	*Ongoing*	*The Town currently cleans catch-basins in areas where known conditions warrant sediment removal.*	*Track material usage, and update plan as needed.*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing throughout permit life.*	
6-12 Develop/implement snow management practices (Due 7/1/18)	*Ongoing*	*The Town utilizes alternative road de-icing mixtures. These mixtures are modified on a yearly basis based on costs and emerging technologies.*	*Track material usage, and update plan as needed.*	*Department of Public Works/ Kirk A. Severance, Director*	*Ongoing throughout permit life.*	

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

1. Continue snow management and road sweeping activities

2. Begin implementation of the Stormwater Retrofit Program

3.Update Catch Basin Cleaning Program and schedule basin cleanings for 2024

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	*Yes / November 28, 2023*
Street sweeping	
Curb miles swept	*120 miles*
Volume (or mass) of material collected	*370 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)	*1,227*
Total catch basins town- (or institution-) wide	*1,538*
Catch basins inspected	*1,538*
Catch basins cleaned	*483*

Volume (or mass) of material removed from all catch basins	*140 tons*
Volume removed from catch basins to impaired waters (if known)	*N/A*
Snow management	
Type(s) of deicing material used	*Treated Salt*
Total amount of each deicing material applied	*1,200 tons*
Type(s) of deicing equipment used	1. *One (1) 10-Wheeler Plow/Spreader* 2. *Seven (7) 6-Wheeler Plows/Spreaders* 3. *One (1) Mason Plow/Spreader* **Application rate is 200 lbs. per lane mile*
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	*188 lane-miles*
Snow disposal location	*Site specific-no Town snow yard*
Staff training provided on application methods & equipment	*At the time of this report, the Town of Granby has not provided this information.*
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	*Not applicable*
Reduction in turf area (since start of permit)	*Not applicable*
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	*$TBD*

6.4 Catch basin cleaning program

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

There are 1,538 catch basins in the Town of Granby.

2017 - Approximately 480 catch basins were cleaned in 2017 by a subcontracted catch basin cleaning company. The catch basin cleanings are screened and recycled at the former town landfill site in conformance with CT DEEP regulatory guidance.

2018 - No catch basins were vacuumed. The sump depth (sump bottom to lowest pipe invert out) and accumulated sediment/debris depth was measured for more than 700 catch basins.

2019 - No catch basins were vacuumed. The sump depth (sump bottom to lowest pipe invert out) and accumulated sediment/debris depth was measured for more than 500 catch basins. Catch basins to be cleaned in early 2020 where applicable.

2020 - Approximately 844 catch basins were cleaned in spring of 2020 by a subcontracted catch basin cleaning company (including some dry wells). The catch basin cleanings are screened and recycled at the former Town landfill site, in conformance with CT DEEP regulatory guidance.

2021: Approximately 555 catch basins were cleaned in the spring of 2021 by a subcontracted catch basin cleaning company. The catch basin cleanings are screened and recycled at the former Town landfill site, in conformance with CTDEEP regulatory guidance.

2022: No catch basins were vactored. The sump depth (sump bottom to lowest pipe invert out) and accumulated sediment/debris depth was measured for 91 catch basins. Catch basins will be cleaned in early 2023 where applicable.

2023: Approximately 483 catch basins were cleaned in the spring of 2023 with an approximate material volume of 140 tons removed.

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)

The Stormwater Retrofit Program was drafted by the Town and Atlas in 2021. The Program was designed to provide guidance on implementing LID, runoff reduction measures, or other means to disconnect or improve stormwater quality. To meet the 2% MEP disconnection goal, DCIA calculations, Urbanized areas, Impaired Waterbodies, and Catchment Rankings were utilized in identifying and prioritizing areas and/or projects to be selected for retrofits.

DCIA by Catchment was identified utilizing the following formulas:

High Connectivity
DCIA%=0.4*(IA %) ^1.2
Directly Connected Area= (DCIA) (IC Acres)
Average Connectivity
DCIA%=0.1*(IA%) ^1.5
Directly Connected Area= (DCIA) (IC Acres)

Partial Connectivity
DCIA%=0.04*(IA%) ^1.7
Directly Connected Area= (DCIA) (IC Acres)

Slight Connectivity
DCIA%=0.01*(IA%) ^2.0
Directly Connected Area= (DCIA) (IC Acres)

The Average Connectivity calculation was utilized in assessing the Town's DCIA connectivity, based on the majority of land utilizing defined as agricultural and/or rural, minor residential communities, and minor-to-moderate commercial or industrialized areas. Based on the Average Connectivity calculations for each catchment, no catchments were identified with a connectivity of 11% or greater.

Catchments were then prioritized utilizing the total urbanized area per catchment. Atlas was provided with a shapefile of the 2010 Urbanized Areas for the Town from the 2010 Census or Urban Classification, which was imported into ArcGIS for calculation purposes. Utilizing the Overlay-Intersect Tool, Atlas was able to extract the total Urbanized Area acreage per catchment, and then calculate the Urbanized area percentage per catchment utilizing the following formula: Based on these calculations, 28 catchments were identified with Urbanized Areas

*Urbanized Area (Ac.)/Basin Total Acreage*100*

28 catchments containing impaired waterbodies were identified for the Town.

Catchment Priority Rankings were conducted for all Sub-Basins in the Town. Multiple factors were taken into consideration when scoring each catchment, including but not limited to DCIA calculations, previous screening results, age of development/structures, density of generating sites, nearby sewer repairs, urbanized areas, and impaired waterbodies. 52 catchments were identified as Problem or High Priority.

Specific criteria were utilizing in defining priority areas for the implementation of non-municipal retrofit projects. The criteria utilized in defining priority areas of non-municipal retrofit projects included High or Problem catchment priority rankings, catchments containing an impaired waterbody, and catchments identified with an urbanized area. Utilizing ArcGIS, Atlas extracted catchments where two (2) or more of the aforementioned criteria were found. Community outreach or project redevelopment is encouraged in these defined catchments.

Municipal-owned retrofit projects were identified for several schools, and other municipal-owned sites such as the Fire Department, Town Hall, etc. These locations were selected based on location and plausibility of future disconnects. Refer to the attached Stormwater Retrofit Program for further information on these projects.

The draft Stormwater Retrofit Program is attached in the 2021 Annual Report.

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)

The Stormwater Retrofit Program, included in Attachment V of the 2021 Annual Report**,** is designed to comply with *Section (6) (B) (ii)* of the CTDEEP 2017-2022 MS4 Permit. The Town of Granby will work towards disconnecting existing DCIA. The initial focus of the Stormwater Retrofit Program will first be applied to Town-owned properties, parks, and other facilities, followed by a focus of non-municipal facilities, parks, communities, or other redevelopments. Progress towards the DCIA disconnects will be tracked and continuously updated, with a goal to disconnect one percent (1%) of DCIA or to the MEP each year following the fifth year of the MS4 permit.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

For details on this requirement, visit https://nemo.uconn.edu/2020/02/26/monitoring-requirement-for-bacteria-impaired-waters/. 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.

2018 - Wet weather samples were collected from nine (9) outfalls (13, 14, 15, 73, 74, 102, 103, 104 and 105) on September 10, 2018. Wet Weather Sampling: Wet weather samples were collected from sixteen (16) outfalls (13, 14, 15, 44, 73, 74, 86, 102, 103, 104, 105, 109, 152, 153, 154 and 155) on December 28, 2018. Nine (9) of the samples were resampled during the September 10, 2018 sampling event. One (1) wet weather sample was also obtained from Salmon Brook proximal to outfalls 103 and 104 on December 28, 2018.

2020 - Wet weather samples were collected from fifteen (15) outfalls (13, 14, 15, 44, 73, 74, 86, 102, 103, 104, 103/104 Stream, 109, 152, 153 and 155) on March 19, 2020. On September 10, 2020, wet weather samples were collected from eight (8) outfalls (14, 15, 73, 74, 102, 103, 104 and 105).

2021-Wet weather samples were collected from eight (8) priority outfalls in September 2021.

2022-Wet weather samples were collected from eight (8) priority outfalls in August and September of 2022.

*2023-Wet weather samples were collected from six (6) priority outfalls in August of 2023 and from eight (8) priority outfalls in September of 2023. Bacteria was comparable to the previous year in both sampling events. Refer to **Attachment VI for** wet weather sampling data. Further catchment investigation is underway, including SVFs, SSOs, and septic repairs/failures in the vicinity of these outfalls. Refer to **Attachment IV** to review the Town Catchment Assessment and Priority Ranking.*
*The Town of Granby, with the assistance of Atlas, has completed all dry weather inspections and wet weather sampling at outfalls to impaired waterbodies. Dry weather screening of 62 outfalls throughout the Town were completed in 2023. These screenings documented the condition of the outfalls, erosion control, material, subtype, and diameter of the outfalls. The condition and erosion control of these outfalls and/or surrounding areas were ranked with the following descriptors: Excellent, Good, Fair, and Poor. Outfalls found with poor to fair conditions and/erosion controls were recommended for repair or implementation of additional erosion controls. Refer to **Attachment II** for the documented dry weather screenings. Changes to the Stormwater Management Plan are not recommended at this time.*

*In July of 2023, one (1) dry weather sample was collected from OF-65 and analyzed for residual chlorine, ammonia, MBAS, conductivity, salinity, and bacteria. This outfall was sampled due to previous sampling results indicating further investigation was needed. This outfall was a suspected illicit discharge due to a dry weather inspection on 7/20/2023 finding a large volume of water discharging from a house pipe suspected of coming from 12 Byron Drive. The discharging water had an organic smell and foam was observed. Total coliforms were reported above 500 col/100ml at this outfall. All other parameters were either below the reporting limit or below applicable criteria. Refer to **Attachment II** for dry weather sampling data. Due to the total coliforms being reported above the 500 col/100mL limit, this discharge was determined to have been illicit. Further investigation may be necessary to determine the source behind the discharge.*

*In September of 2023, OF-15 was further investigated by sampling the outfall and two upgradient catch basins to determine the source of the bacteria found in previous sampling events. The results of this sampling event found that catch basin 742 (CB-742) has high total coliforms, while catch basin 753 (CB-753-PIPE) has lower total coliforms. Based on these results, catch basin 742 is likely the source of the bacteria found in previous sampling events. Refer to **Attachment IV** for catchment investigation sampling data.*

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.

Outfall ID	**Latitude / Longitude**	**Sample date**	**Parameter** (Nitrogen, Phosphorus, Bacteria, or other pollutant of concern)	**Results**	**Name of Laboratory (if used)**	**Follow-up required? ***
OF-13	*41.95783989/ -72.78437469*	*09/10/18*	*Bacteria*	*E. Coli 20 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-14	*41.95707475/ -72.78068224*	*09/10/18*	*Bacteria*	*E. Coli >24,200 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*09/10/18*	*Bacteria*	*E. Coli 269 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-73	*41.99012475/ -72.82173222*	*09/10/18*	*Bacteria*	*E. Coli 6,870 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-74	*41.98422475/ -72.82008222*	*09/10/18*	*Bacteria*	*E. Coli 13,000 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*09/10/18*	*Bacteria*	*E. Coli 9,210 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*09/10/18*	*Bacteria*	*E. Coli 12,000 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*09/10/18*	*Bacteria*	*E. Coli 4,880 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-105	*41.97032138/ -72.80427953*	*09/10/18*	*Bacteria*	*E. Coli 9,210 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-13	*41.95783989/ -72.78437469*	*12/28/18*	*Bacteria*	*E. Coli 4,110 Total 7,270*	*Phoenix Environmental*	*Yes*
OF-14	*41.95707475/ -72.78068224*	*12/28/18*	*Bacteria*	*E. Coli >24,200 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*12/28/18*	*Bacteria*	*E. Coli <10 Total 8,660*	*Phoenix Environmental*	*Yes*
OF-44	*41.95012476/ -72.83546555*	*12/28/18*	*Bacteria*	*E. Coli 10 Total 2,910*	*Phoenix Environmental*	*Yes*
OF-73	*41.99012475/ -72.82173222*	*12/28/18*	*Bacteria*	*E. Coli 256 Total 9,210*	*Phoenix Environmental*	*Yes*
OF-74	*41.98422475/ -72.82008222*	*12/28/18*	*Bacteria*	*E. Coli <10 Total 17,300*	*Phoenix Environmental*	*Yes*
OF-86	*41.94182471/ -72.83427937*	*12/28/18*	*Bacteria*	*E. Coli <10 Total 1,620*	*Phoenix Environmental*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*12/28/18*	*Bacteria*	*E. Coli 41 Total 1,790*	*Phoenix Environmental*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*12/28/18*	*Bacteria*	*E. Coli 120 Total 5,480*	*Phoenix Environmental*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*12/28/18*	*Bacteria*	*E. Coli 10 Total 14,100*	*Phoenix Environmental*	*Yes*
OF-105	*41.97032138/ -72.80427953*	*12/28/18*	*Bacteria*	*E. Coli <10 Total >2,610*	*Phoenix Environmental*	*Yes*
OF-109	*41.97384142/ -72.87186554*	*12/28/18*	*Bacteria*	*E. Coli 433 Total 17,300*	*Phoenix Environmental*	*Yes*
OF-152	*41.95585809/ -72.84359888*	*12/28/18*	*Bacteria*	*E. Coli <10 Total 1,840*	*Phoenix Environmental*	*Yes*
OF-153	*41.95514142/ -72.84341555*	*12/28/18*	*Bacteria*	*E. Coli <10 Total 8,160*	*Phoenix Environmental*	*Yes*
OF-154	*41.95330809/ -72.84114888*	*12/28/18*	*Bacteria*	*E. Coli 20 Total 305*	*Phoenix Environmental*	*No*

OF-155	*41.94902476/ -72.83758222*	*12/28/18*	*Bacteria*	*E. Coli 20 Total 11,200*	*Phoenix Environmental*	*Yes*
OF-103/104	*41.97025533/ -72.80552466*	*12/28/18*	*Bacteria*	*E. Coli 216 Total 4,350*	*Phoenix Environmental*	*Yes*
2020						
Stream		*3/19/20*	*Bacteria*	*E. Coli 201 Total 2,490*	*Phoenix Environmental*	*Yes*
OF-103/104	*41.97025533/ -72.80552466*	*3/19/20*	*Bacteria*	*E. Coli 31 Total 1,920*	*Phoenix Environmental*	*Yes*
Stream		*3/19/20*	*Bacteria*	*E. Coli 563 Total 17,300*	*Phoenix Environmental*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*3/19/20*	*Bacteria*	*E. Coli <10 Total 8,660*	*Phoenix Environmental*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*3/19/20*	*Bacteria*	*E. Coli 798 Total 19,900*	*Phoenix Environmental*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*3/19/20*	*Bacteria*	*E. Coli 20 Total 12,000*	*Phoenix Environmental*	*Yes*
OF-14	*41.95707475/ -72.78068224*	*3/19/20*	*Bacteria*	*E. Coli 10 Total 3,650*	*Phoenix Environmental*	*Yes*
OF-153	*41.95514142/ -72.84341555*	*3/19/20*	*Bacteria*	*E. Coli 10 Total 13,000*	*Phoenix Environmental*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*3/19/20*	*Bacteria*	*E. Coli 233 Total 14,100*	*Phoenix Environmental*	*Yes*
OF-13	*41.95783989/ -72.78437469*	*3/19/20*	*Bacteria*	*E. Coli 20 Total 3,650*	*Phoenix Environmental*	*Yes*
OF-86	*41.94182471/ -72.83427937*	*3/19/20*	*Bacteria*	*E. Coli <10 Total 6,490*	*Phoenix Environmental*	*Yes*
OF-74	*41.98422475/ -72.82008222*	*3/19/20*	*Bacteria*	*E. Coli 20 Total 8,660*	*Phoenix Environmental*	*Yes*
OF-73	*41.99012475/ -72.82173222*	*3/19/20*	*Bacteria*	*E. Coli 20 Total 4,880*	*Phoenix Environmental*	*Yes*
OF-109	*41.97384142/ -72.87186554*	*3/19/20*	*Bacteria*	*E. Coli 2,480 Total 4,110*	*Phoenix Environmental*	*Yes*
OF-155	*41.94902476/ -72.83758222*	*3/19/20*	*Bacteria*	*E. Coli 249 Total 2,600*	*Phoenix Environmental*	*Yes*
OF-152	*41.95585809/ -72.84359888*	*9/10/20*	*Bacteria*	*E. Coli 5790 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-44	*41.95012476/ -72.83546555*	*9/10/20*	*Bacteria*	*E. Coli 110 Total 7,270*	*Phoenix Environmental*	*Yes*
OF-14	*41.95707475/ - 72.78068224*	*9/10/20*	*Bacteria*	*E. Coli 173 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*9/10/20*	*Bacteria*	*E. Coli 389 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-73	*41.99012475/ - 72.82173222*	*9/10/20*	*Bacteria*	*E. Coli 860 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-74	*41.98422475/ -72.82008222*	*9/10/20*	*Bacteria*	*E. Coli 122 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*9/10/20*	*Bacteria*	*E. Coli 30 Total >24,200*	*Phoenix Environmental*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*9/10/20*	*Bacteria*	*E. Coli 74 Total >24200*	*Phoenix Environmental*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*09/10/20*	*Bacteria*	*E. Coli 20 Total >24,200*	*Phoenix Environmental*	*Yes*
2021						

OF-14	*41.95707475/ -72.78068224*	*9/1/2021*	*Bacteria*	*E. Coli- 813 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*9/1/2021*	*Bacteria*	*E. Coli- 1,430 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-73	*41.99012475/ -72.82173222*	*9/1/2021*	*Bacteria*	*E. Coli- 24,200 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-74	*41.98422475/ -72.82008222*	*9/1/2021*	*Bacteria*	*E. Coli- 1,400 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*9/1/2021*	*Bacteria*	*E. Coli- 1,790 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*9/1/2021*	*Bacteria*	*E. Coli- 3,450 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*9/1/2021*	*Bacteria*	*E. Coli- 2,380 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-105	*41.97032138/ -72.80427953*	*9/1/2021*	*Bacteria*	*E. Coli- 7,700 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
2022						
OF-14	*41.95707475/ -72.78068224*	*9/22/2022*	*Bacteria*	***E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*8/22/2022*	*Bacteria*	***E. Coli-** 17,300 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-73	*41.99012475/ -72.82173222*	*9/22/2022*	*Bacteria*	***E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-74	*41.98422475/ -72.82008222*	*8/22/2022*	*Bacteria*	***E. Coli-** 712 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*8/22/2022*	*Bacteria*	***E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*9/22/2022*	*Bacteria*	***E. Coli-** 6,130 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*8/22/2022*	*Bacteria*	***E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
OF-105	*41.97032138/ -72.80427953*	*8/22/2022*	*Bacteria*	***E. Coli-** 9,210 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)*	*Phoenix Environmental*	*Yes*
SB-WBC	*41.945072/ -72.79615*	*6/21/2022*	*Bacteria*	***E. Coli-** 64.4 (MPN/100 mls) **T. Coli-** >2419.6 (MPN/100 mls)*	*Unknown-FRWA*	*Yes*

		7/12/2022		***E. Coli**- 58.3 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		7/26/2022		***E. Coli**- 90.9 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		8/9/2022		***E. Coli**- 161.9 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		8/23/2022		***E. Coli**- 76.3 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		9/8/2022		***E. Coli**- 143.9 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
SB-EB1	*41.945676/ -72.779364*	*6/28/2022*	*Bacteria*	***E. Coli**- 410.6 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*	*Unknown-FRWA*	*Yes*
		7/19/2022		***E. Coli**- 547.5 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		8/2/2022		***E. Coli**- 517.2 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		8/16/2022		***E. Coli**- 172.5 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		8/30/2022		***E. Coli**- 344.8 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
		9/17/2022		***E. Coli**- 261.3 (MPN/100 mls)* ***T. Coli**- >2419.6 (MPN/100 mls)*		
SB-2	*41.93632/ -72.77418*	*3/21/2022*	*Chloride, Turbidity*	***Chloride**- Not sampled.* ***Turbidity**- 100.5 NTU*	*Unknown-FRWA*	*Yes*
		5/31/2022		***Chloride**- 38 mV* ***Turbidity**- 93 NTU*		
		6/21/2022		***Chloride**- 22 mV* ***Turbidity**- 98.5 NTU*		
		7/27/2022		***Chloride**- 56 mV* ***Turbidity**- 109.6 NTU*		
		8/17/2022		***Chloride**- 56 mV* ***Turbidity**- 109.6 NTU*		
		11/14/2022		***Chloride**- 183.4 mV* ***Turbidity**- 1.18 NTU*		
EBSB-540	*41.9547/ -72.77935*	*6/21/2022*	*Chloride, Turbidity*	***Chloride**- 36 mV* ***Turbidity**- 94.2 NTU*	*Unknown-FRWA*	*Yes*
		7/27/2022		***Chloride**- 61 mV* ***Turbidity**- 93.9 NTU*		
		8/17/2022		***Chloride**- 69 mV* ***Turbidity**- 100.9 NTU*		
		11/14/2022		***Chloride**- 184.2 mV* ***Turbidity**- 0.65 NTU*		
SB-WB3	*41.945072/ -72.79615*	*6/21/2022*	*Chloride, Turbidity*	***Chloride**- 34 mV* ***Turbidity**- 94.7 NTU*	*Unknown-FRWA*	*Yes*
		7/27/2022		***Chloride**- 44 mV* ***Turbidity**- 93.4 NTU*		

		8/17/2022		***Chloride-*** *40 mV* ***Turbidity-*** *92 NTU*		
		11/14/2022		***Chloride-*** *157.1 mV* ***Turbidity-*** *2.24 NTU*		
2023						
OF-14	*41.95707475/ -72.78068224*	*8/25/2023*	*Bacteria*	***E. Coli****- 4,880 (MPN/100mls)* ***T. Coli****- >24,000 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*8/25/2023*	*Bacteria*	***E. Coli****- 1,290 (MPN/100mls)* ***T. Coli****- >24,000 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*8/25/2023*	*Bacteria*	***E. Coli****- 2,010 (MPN/100mls)* ***T. Coli****- >24,000 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*8/25/2023*	*Bacteria*	***E. Coli****- 2,610 (MPN/100mls)* ***T. Coli****- >24,000 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*8/25/2023*	*Bacteria*	***E. Coli****- 19,900 MPN/100mls)* ***T. Coli****- >24,000 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-150	*41.97032138/ -72.80427953*	*8/25/2023*	*Bacteria*	***E. Coli****- 11,200 (MPN/100mls)* ***T. Coli****- >24,000 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
SB-EB1	*41.945676/ -72.779364*	*6/5/2023*	*Bacteria*	***E. Coli****- 77.1 (MPN/100 mls)* ***T. Coli****- 1732.9 (MPN/100 mls)*	*Unknown-FRWA*	*Yes*
		6/19/2023		***E. Coli****- 275.5 (MPN/100 mls)* ***T. Coli- >****2419.6 (MPN/100 mls)*		
		7/17/2023		***E. Coli****- 648.8 (MPN/100 mls)* ***T. Coli- >****2419.6 (MPN/100 mls)*		
		7/31/2023	*Bacteria, Chloride*	***E. Coli****- 275.5 (MPN/100 mls)* ***T. Coli- >****2419.6 (MPN/100 mls)* ***Chloride****- 184.6 (mV)*		
		8/14/2023	*Bacteria*	***E. Coli****- 261.3 (MPN/100 mls)* ***T. Coli- >****2419.6 (MPN/100 mls)*		
		8/28/2023		***E. Coli****- 224.7 (MPN/100 mls)* ***T. Coli- >****2419.6 (MPN/100 mls)*		
EBSB-540	*41.9547/ -72.77935*	*2/6/2023*	*Chloride, Turbidity*	***Chloride****- Not Sampled* ***Turbidity- 1.03*** *NTU*	*Unknown-FRWA*	*Yes*
		2/27/2023		***Chloride****- Not Sampled* ***Turbidity****- 0.7 NTU*	*Unknown-FRWA*	
		4/6/2023		***Chloride****- 168 mV* ***Turbidity****- Not analyzed*	*Unknown-FRWA*	
		5/1/2023		***Chloride****- 202.7 mV* ***Turbidity****- 6 NTU*	*Unknown-FRWA*	
		6/14/2023		***Chloride****- 175 mV* ***Turbidity****- Not analyzed*	*Unknown-FRWA*	
		7/17/2023		***Chloride****- 190.7 mV* ***Turbidity****- 5.91 NTU*	*Unknown-FRWA*	
		8/14/2023		***Chloride****- 173.2 mV* ***Turbidity****- 5.12 NTU*	*Unknown-FRWA*	

SB-WB3	*41.945072/ -72.79615*	*6/12/2023*	*Bacteria*	***E. Coli-** 52.1 (MPN/100 mls)* **T. Coli-** >2419.6 *(MPN/100 mls)*	*Unknown-FRWA*	*Yes*
		3/23/2023		***E. Coli-** 261.3 (MPN/100 mls)* **T. Coli-** >2419.6 *(MPN/100 mls)*	*Unknown-FRWA*	
		7/12/2023		***E. Coli-** 77.6 (MPN/100 mls)* **T. Coli-** >2419.6 *(MPN/100 mls)*	*Unknown-FRWA*	
		7/24/2023		***E. Coli-** 75.9 (MPN/100 mls)* **T. Coli-** >2419.6 *(MPN/100 mls)*	*Unknown-FRWA*	
		8/7/2023		***E. Coli-** 210.5 (MPN/100 mls)* **T. Coli-** >2419.6 *(MPN/100 mls)*	*Unknown-FRWA*	
		8/21/2023		***E. Coli-** 27.9 (MPN/100 mls)* **T. Coli-** >2419.6 *(MPN/100 mls)*	*Unknown-FRWA*	
		2/6/2023	*Turbidity*	***Turbidity-** 0.65 NTU*	*Unknown-FRWA*	
		2/27/2023		***Turbidity-** 0.33 NTU*	*Unknown-FRWA*	
		4/6/2023	*Chloride, Turbidity*	***Chloride-** 179.4 mV* ***Turbidity-** Not analyzed*	*Unknown-FRWA*	
		5/1/2023		***Chloride-** 203.1 mV* ***Turbidity-** 8.69 NTU*	*Unknown-FRWA*	
		6/14/2023		***Chloride-** 181.4 mV* ***Turbidity-** 0.31 NTU*	*Unknown-FRWA*	
		7/17/2023		***Chloride-** 198.5 mV* ***Turbidity-** 7.68 NTU*	*Unknown-FRWA*	
		8/14/2023		***Chloride-** 179 mV* ***Turbidity-** 0.66 NTU*	*Unknown-FRWA*	
OF-14	*41.95707475/ -72.78068224*	*9/18/2023*	*Bacteria*	***E. Coli-** 19,900 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-15	*41.95555698/ -72.77987999*	*9/18/2023*	*Bacteria*	***E. Coli-** 2,920 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-73	*41.990151/ -72.821726*	*9/18/2023*	*Bacteria*	***E. Coli-** 520 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-74	*41.984247/ -72.820065*	*9/18/2023*	*Bacteria*	***E. Coli-** 1,970 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-102	*41.98150808/ -72.80684889*	*9/18/2023*	*Bacteria*	***E. Coli-** 1,990 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-103	*41.97025533/ -72.80552466*	*9/18/2023*	*Bacteria*	***E. Coli-** 24,200 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-104	*41.9703202/ -72.80493613*	*9/18/2023*	*Bacteria*	***E. Coli-** 842 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*
OF-105	*41.97032138/ -72.80427953*	*9/18/2023*	*Bacteria*	***E. Coli-** 6,490 (MPN/100mls)* ***T. Coli-** >24,200 (MPN/100mls)*	*Phoenix Environmental Laboratories, Inc.*	*Yes*

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

Pollutant of concern	Pollutant threshold
Nitrogen	Total N > 2.5 mg/l
Phosphorus	Total P > 0.3 mg/l
Bacteria (fresh waterbody)	• E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others • Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	• Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB • Enterococci > 104 col/100ml for swimming areas or 500 col/100 for all others
Other pollutants of concern	Sample turbidity is 5 NTU > in-stream sample.

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

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall ID	Status of drainage area investigation	Control measure to address impairment
All above listed outfalls	*Investigations are being conducted on the surrounding drainage area, with a focus on surrounding runoff from agricultural land, septic repairs, and septic failures.*	*Potential measures that may be used in addressing bacterial impairments include aquatic vegetative buffers, control runoff measures implemented. Discussions are underway within the Town on how to address potential septic failures or repairs at privately-owned properties.*

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.

Outfall	Latitude / Longitude	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
OF-14	41.95707475/ -72.78068224	09/10/20	Bacteria	E. Coli – 5790 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
OF-15	41.95555698/ -72.77987999	09/10/20	Bacteria	E. Coli – 110 Total Coliforms – 7270	Phoenix Environmental Laboratories, Inc.
OF-73	41.99012475/ -72.82173222	09/10/20	Bacteria	E. Coli – 173 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
OF-74	41.98422475/ -72.82008222	09/10/20	Bacteria	E. Coli – 389 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
OF-102	41.98150808/ -72.80684889	09/10/20	Bacteria	E. Coli – 860 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
OF-103	41.97025533/ -72.80552466	09/10/20	Bacteria	E. Coli – 122 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
OF-104	41.9703202/ -72.80493613	09/10/20	Bacteria	E. Coli – 30 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
OF-105	41.97032138/ -72.80427953	09/10/20	Bacteria	E. Coli – 74 Total Coliforms - >24200	Phoenix Environmental Laboratories, Inc.
2021					
OF-14	41.95707475/ -72.78068224	9/1/2021	Bacteria	E. Coli- 813 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-15	41.95555698/ -72.77987999	9/1/2021	Bacteria	E. Coli- 1,430 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.

OF-73	41.99012475/ -72.82173222	9/1/2021	Bacteria	E. Coli- 24,200 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-74	41.98422475/ -72.82008222	9/1/2021	Bacteria	E. Coli- 1,400 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-102	41.98150808/ -72.80684889	9/1/2021	Bacteria	E. Coli- 1,790 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-103	41.97025533/ -72.80552466	9/1/2021	Bacteria	E. Coli- 3,450 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-104	41.9703202/ -72.80493613	9/1/2021	Bacteria	E. Coli- 2,380 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-105	41.97032138/ -72.80427953	9/1/2021	Bacteria	E. Coli- 7,700 (MPN/100 mls) T. Coli- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
2022					
OF-14	41.95707475/ -72.78068224	9/22/2022	Bacteria	**E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-15	41.95555698/ -72.77987999	8/22/2022	Bacteria	**E. Coli-** 17,300 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-73	41.99012475/ -72.82173222	9/22/2022	Bacteria	**E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-74	41.98422475/ -72.82008222	8/22/2022	Bacteria	**E. Coli-** 712 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-102	41.98150808/ -72.80684889	8/22/2022	Bacteria	**E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-103	41.97025533/ -72.80552466	9/22/2022	Bacteria	**E. Coli-** 6,130 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-104	41.9703202/ -72.80493613	8/22/2022	Bacteria	**E. Coli-** >24,200 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
OF-105	41.97032138/ -72.80427953	8/22/2022	Bacteria	**E. Coli-** 9,210 (MPN/100 mls) **T. Coli**- >24,200 (MPN/100 mls)	Phoenix Environmental Laboratories, Inc.
2023					
OF-14	41.95707475/ -72.78068224	8/25/2023	Bacteria	**E. Coli**- 4,880 (MPN/100mls) **T. Coli**- >24,000 (MPN/100mls)	Phoenix Environmental Laboratories, Inc.
OF-15	41.95555698/ -72.77987999	8/25/2023	Bacteria	**E. Coli**- 1,290 (MPN/100mls) **T. Coli**- >24,000 (MPN/100mls)	Phoenix Environmental Laboratories, Inc.
OF-102	41.98150808/ -72.80684889	8/25/2023	Bacteria	**E. Coli**- 2,010 (MPN/100mls) **T. Coli**- >24,000 (MPN/100mls)	Phoenix Environmental Laboratories, Inc.
OF-103	41.97025533/ -72.80552466	8/25/2023	Bacteria	**E. Coli**- 2,610 (MPN/100mls) **T. Coli**- >24,000 (MPN/100mls)	Phoenix Environmental Laboratories, Inc.
OF-104	41.9703202/ -72.80493613	8/25/2023	Bacteria	**E. Coli**- 19,900 MPN/100mls) **T. Coli**- >24,000 (MPN/100mls)	Phoenix Environmental Laboratories, Inc.
OF-150	41.97032138/ -72.80427953	8/25/2023	Bacteria	**E. Coli**- 11,200 (MPN/100mls) **T. Coli**- >24,000 (MPN/100mls)	Phoenix Environmental Laboratories, Inc.

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
4001-00-1*	Low Priority	4
4300-44-1-L1	Problem	8
4309-00-1	Low Priority	3
4309-01-1	High Priority	10
4309-02-1	Low Priority	3
4319-00-2-R1	High Priority	16
4319-00-2-R2	High Priority	14
4319-00-3-R1	Problem	7
4319-00-3-R2	Problem	8
4319-00-3-R3	Low Priority	5
4319-00-3-R4	Problem	8
4319-00-3-R5	High Priority	19
4319-00-3-R6	High Priority	12
4319-02-1	Problem	8
4319-03-2-R1	Low Priority	2
4319-03-2-R2	Problem	9
4319-04-1	Problem	9
4319-05-1	Problem	8
4319-06-1	Low Priority	4
4319-07-1	Problem	8
4319-08-1	Problem	8
4319-09-1	Problem	7
4319-10-2-L1	Problem	9
4319-10-2-L2	Low Priority	2
4319-10-2-R1	Low Priority	2
4319-11-1	Low Priority	3
4320-00-1	Low Priority	3
4320-00-2-R1	Low Priority	5
4320-00-2-R2	Problem	6
4320-00-2-R3	Problem	5
4320-00-2-R4	Problem	4
4320-00-3-L1	Problem	8
4320-00-3-R1	Problem	7
4320-00-3-R2	Problem	9
4320-00-3-R3	High Priority	8

4320-00-3-R4	Problem	8
4320-00-3-R5	High Priority	16
4320-00-3-R6	Problem	9
4320-00-4-R1	High Priority	16
4320-00-4-R2	Problem	8
4320-00-4-R3	Problem	6
4320-00-4-R4	Low Priority	3
4320-01-1	Problem	7
4320-02-1	Problem	8
4320-03-1	High Priority	11
4320-04-1	Problem	7
4320-05-2-R1	Low Priority	3
4320-05-2-R2	High Priority	10
4320-07-1	Low Priority	3
4320-08-1	Problem	6
4320-09-1	High Priority	11
4320-10-1	High Priority	12
4320-10-2-R1	Low Priority	5
4320-11-1	Problem	7
4320-12-1	High Priority	12
4320-12-2-R1	Low Priority	2
4320-13-1	Problem	9
4320-13-1-L1	High Priority	13
4320-14-1	High Priority	13
4320-15-2-R1	High Priority	10
4320-15-3-R1	High Priority	12
4320-16-1	Problem	10
4320-17-1	High Priority	12
4320-17-2-R1	Problem	6
4320-17-3-R1	Low Priority	3
4320-21-1	Problem	4
4320-21-1-L1	Problem	8
4320-22-1	Problem	9
4320-26-1-L1	Problem	9

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/2020/02/26/monitoring-requirement-for-bacteria-impaired-waters/. 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
OF-65	*41.92879933/ -72.79992546*	*7/20/2023*	*<0.05 mg/L*	*<0.02 mg/L*	*80 umhos/cm*	*<0.5ppt*	*41 MPN/100m T. Coli 2,360 MPN/100mls*	*--*	*22.0*	*Total Coliforms*	
System Vulnerability Factors are currently under investigation and will be added to the next annual report. Refer to Section 1: Catchment Investigation Data, 3.1 System Vulnerability Factor Summary for more information.											

2.2 Wet weather sample and inspection data

For details on this requirement, visit https://nemo.uconn.edu/2020/02/26/monitoring-requirement-for-bacteria-impaired-waters/. 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.

Outfall / Interconnection ID	Latitude / Longitude	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern
OF-15	41.9553519/ -72.7795483	9/27/2023	<0.05 mg/L	--	--	--	52 MPN/100mL T. Coli 5,480 MPN/100mls	--	--	Bacteria
*System Vulnerability Factors are currently under investigation and will be added to the next annual report. Refer to **Section 1: Catchment Investigation Data, 3.1 System Vulnerability Factor Summary** for more information.*										

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
OF-6	Farmington River	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-36	Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-47	East Branch Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-50	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-65	Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-66	Kendall Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-70	Farmington River	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-90	Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-96	Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-102	East Branch Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-122	Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-134	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-135	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-138	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-61	Kendall Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-171	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-173	Farmington River	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-178	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-179	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-180	Bradley Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.

OF-185	West Branch Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
OF-188	Salmon Brook	This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.
The Town of Granby's sanitary sewer is currently managed by the Town of Simsbury's Water Pollution Control Authority (WPCA). The storm sewer and sanitary sewer have historically been separated and remain so in the present day. Therefore, SVFs 4, 5, 6, 7, 8, and 9 are not applicable to the Town. ***Other SVFs are currently under investigation and will be updated in the next annual report.*** *These investigations include coordination between the Town of Simsbury WPCF, Granby Health Department, as well as the Farmington Valley Health District.*		

Where SVFs are:

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

3.2 Key junction manhole dry weather screening and sampling data

You may also attach an excel spreadsheet with the same data rather than copying it to this table. 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
The identification of key junction manholes that may narrow the location of suspected illicit discharges or SSOs to an isolated pipe segment between two manholes, or key junction manholes that may be located or show evidence of illicit discharges or SSOs that may not be evident at the outfall under all circumstances, or to confirm or identify potential system vulnerability factors is underway. Once identified, these key junction manholes will be inspected during dry weather events for evidence of illicit discharges or SSOs.						

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
Following the identification of key junction manholes during dry weather inspections, follow-up wet weather sampling will be completed where inspections indicate the presence of one or more SVF, SSO, or illicit discharge.					

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
286 W. Granby Rd (OF-152)	*Underground spring*	*Atlas was called to investigate a potential illicit discharge in the Town. Upon arrival, water was found to be discharging from a driveway at a steady, bubbling rate, with heavy algae growth. Discharge lead down the driveway into an adjacent ditch. This runoff discharge is in the vicinity of OF-152, which in turn discharges to the West Branch Salmon Brook. A sample of the discharge was submitted for the analysis of E. coli, T. coli, nitrite, nitrate, and phosphorus to assess potential illicit discharge sources. A review of sampling data from the nearby MS4 outfall (OF-152) did not indicate illicit discharges were entering this catchment. Laboratory analytical results were indicative of groundwater, and it is suspected an underground spring had worked its way to the surface.*	*Citizen report*	*4/7/2021*	*N/A*	*None.*	*N/A*
80 Canal Road	*Residential sump pump*	*A sump pump discharging to the road and running into a nearby catch basin, which in turn lead to icy road conditions, was reported.*	*Citizen report*	*2022*	*2022*	*Following investigation, the Town required the resident to relocate the sump pump discharge, which was complied with.*	*Unknown.*

Moosehorn Road	*Washout from shared gravel driveway*	*It appears that silt, sediment, and gravel from the driveway entered the Town's MS4 system and an adjacent stream and can therefore be considered an illicit discharge. Washout from the shared driveway at 30, 31, 33, and 54 Moosehorn Road was determined to have been the cause of the discharge. No corrective action has been done at this time. Refer to* ***Attachment V*** *for the investigation report.*	*Citizen report*	*7/18/2023*	*7/21/2023*	*None.*	*Unknown.*

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: Kirk Severance, Director of Public Works	Print name: Danielle Whitcomb, Senior Environmental Technician
Signature / Date: 4-9-2024	Signature / Date: Danielle Whitcomb January 8, 2024
Email: kseverance@granby-ct.gov	Email: danielle.whitcomb@oneatlas.com