



# ANNUAL REPORT

TOWN OF CANTON  
JANUARY – DECEMBER 2023

**PREPARED BY:**

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

January 25, 2024



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# 2023 MS4 ANNUAL REPORT

Town of Canton, Connecticut

MS4 General Permit  
Town of Canton 2023 Annual Report  
Permit Number GSM 000091  
January 1, 2023 – December 31, 2023  
Primary MS4 Contact: Robert J. Martin, Director of Public Works  
860-693-7863, [rmartin@townofcantonct.org](mailto:rmartin@townofcantonct.org)

This report documents Canton'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	1.Virtual Film Festival  2.Earth Day Celebration	1.Online  2. DPW – Mills Pond Park	1. Farmington River Watershed Association (FRWA) in Mills Pond Park 2. Planting of an elm tree.	1. 120 attendees  2. 12 attendees	Provide access to stormwater literature.	FRWA	Virtual Film Festival held on November 17, 2023.
1-2 Address education/outreach for pollutants of concern	1. The impact of impervious cover, septic systems, illicit discharges, and fertilizer use was discussed in a brochure and distributed at the Canton Department of Public Works Town Hall.	1.Distribution of hardcopies	1.Brochures	1.~21 distributed	Educate and provide stormwater quality management policies and practices.	Director of Public Works, Land Use, Farmington River Watershed Association	

<b>Additional BMP:</b> 1-3 Hazardous Waste Collection	<i>In partnership with Farmington, Granby, and Simsbury. Collection days are provided per year.</i>	<i>Multiple websites. See "Additional Details".</i>	<i>Announcements through CTDEEP, Facebook, and Town website.</i>	<i>≥500</i>	<i>Educate and provide hazardous waste collections.</i>	<i>Director of Public Works.</i>	
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**1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.**

- 1. Continue with Hazardous Waste collection days with the neighboring towns.*
- 2. All of the above-mentioned activities (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

<b>BMP</b>	<b>Status (Complete, Ongoing, In Progress, or Not started)</b>	<b>Activities in current reporting period</b>	<b>Measurable Goal</b>	<b>Department / Person Responsible</b>	<b>Date completed or projected completion date (Include the start date for anything that is 'in progress')</b>	<b>Location Posted</b>	<b>Additional details</b>
2-1 Final Stormwater Management Plan publicly available	Completed	Not Applicable.	Provide public notice and access to the Town's Stormwater Management Plan.	Town Engineer/Town Planner	April 1, 2017	At the time of this report, the Town of Canton did not provide this information.	
2-2 Comply with public notice requirements for Annual Reports (annually by 2/15)	Completed Annually	Public notice posted on Town Website.	Provide public notice and access to the MS4 Annual Report.	Town Engineer	Feb. 15, 2023	<a href="#">Annual Reports</a>	Previous Annual Reports were submitted by February 15 <sup>th</sup> .
<b>Additional BMP:</b> 2-3 Hazardous Waste Collection	Ongoing	In partnership with Farmington, Granby, and Simsbury. Collection days are provided per year.	Educate and provide hazardous waste collections	Department of Public Works.	Annually	<a href="#">2024 Disposal Days</a> <a href="#">DEEP 2023</a>	
<b>Additional BMP:</b> 2-4 Establish Stormwater Committee.	Ongoing throughout permit lifetime.	This committee meets frequently with Atlas (consultant) over stormwater management techniques, implementation, and BMPs.	Coordinate and implement the Stormwater Management Plan across departments and commissions.	Department of Public Works/Land Use Departments	Established June 2017-Ongoing.	Not Applicable	
<b>Additional BMP:</b> 2-5 General Public Involvement	Ongoing throughout permit lifetime.	Earth Day Celebration	Planted an elm tree.	DPW	14-21-2023	Mills Pond Park	

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

1. Annual Spring Clean-up Event
2. Earth Day Celebration
3. Brochures to be distributed on the Stormwater Retrofit Program.



### 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	Not Applicable	Develop written plan of IDDE program	Chief Administrative Officer/Town Engineer/Town Planner	October 24 <sup>th</sup> , 2018	The Town completed a written IDDE Program, which can be located through the <a href="#">Town's website</a> .
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20)	Complete	Atlas has completed mapping of all outfalls and priority area mapping. The Town, with the assistance of Atlas, will continue QA/QC processes of reviewing GIS systems and editing as necessary.	All outfalls mapped.	Town Engineer/Atlas	Fall 2021	Mapping and data will be continually maintained as outfalls are tested, repaired, etc.
3-3 Implement citizen reporting program (Ongoing)	Complete	Citizen Reporting is maintained electronically by the Canton Town Planner.	Provide a reporting mechanism and log.	Chief Administrative Office, Town Engineer, Town Planner	Ongoing - started in Nov. 2018.	Citizens may report illicit discharges by contacting the Land Use Department or reporting dry weather discharges via the Q-Notify System.
3-4 Establish legal authority to prohibit illicit discharges (Due 7/1/19)	Complete	The Town has written and adopted a Stormwater Connection Ordinance.	Establish legal authority to prohibit illicit discharges.	Chief Administrative Officer, Town Engineer, Town Planner.	October 24 <sup>th</sup> , 2018	<a href="#">Stormwater Ordinance Connection</a>
3-5 Develop record keeping system for IDDE tracking (Due 7/1/17)	Ongoing	The Town continues to maintain a list of reports that include the IDDE.	Maintain list.	Chief Administrative Officer, Town Engineer, Town Planner	October 24 <sup>th</sup> , 2018	Maintaining of records of reported IDDEs is maintained by the Town Department of Public Works.
3-6 Address IDDE in areas with pollutants of concern	Ongoing	Dry Weather screening was conducted at 110 outfalls throughout the Town of Canton.	Wet weather testing and additional investigation as necessary.	Town Engineer, Atlas	Ongoing- Started in 2021	Atlas assists the Town with impaired outfall sampling and inspections. All outfalls to impaired waterbodies have been inspected and sampled. Dry weather

						screenings of 110 outfalls throughout the Town were completed in 2023. IDDEs area documented and investigated as needed, if observed during dry weather screenings.
<b>Additional BMPs:</b> 3-7 Consolidate IDDE Tracking Spreadsheets	Ongoing	Continuously working towards developing a master IDDE tracking spreadsheet.	Compile all IDDE tracking requirements into one spreadsheet.	Town Engineer, Town Planner	Ongoing- Started in 2021	Tracking of reported IDDEs is maintained by the Town Department of Public Works

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

1. Continue wet weather testing at outfalls to impaired waters
2. Continue follow-up dry weather screening/testing
3. Respond to any illicit discharge complaints
4. 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 July 2021 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)
OF-105	4/13/2021	Yes	Unknown	Unknown	Pending SSOs investigation. Sampling data was indicative of elevated concentrations of bacteria; however, it is unclear whether the bacteria concentrations are indicative of a septic failure or natural background conditions.	Refer to <b>Part II: Impaired Waters Investigation and Monitoring</b> of this report.
OF-107	4/13/2021	Yes	Unknown	None	Based on analytical results, this discharge is groundwater influence.	Refer to <b>Part II: Impaired Waters Investigation and Monitoring</b> of this report.
50 Bristol Drive	7/22/2021	Unnamed Brook	Unknown	Breakout of septic system	Evaluation by FVHD showed a breakout of the septic system. A replacement 1,250-gallon septic tank and 538 sq. ft leach field was installed and approved by FVHD in October 2021.	None.



<b>2022</b>						
35 Trailsend Drive	4/8/2022	Unnamed Brook	Unknown	The septic tank was reported in poor condition.	The septic system was evaluated by the FVHD, and a permit for tank replacement was granted. An engineering plan is shown for the installation of a new 1,000-gallon septic tank.	None.
9 Noja Trail	5/10/2022	Unnamed Brook	Unknown	Out-of-level and cracked at outlet side.	A 1,250-gallon septic tank was installed, and the existing tank was abandoned. Other corrective measures were listed as the installation of a 6-hole D-Box.	None.
21 Bristol Drive	5/8/2022	Unnamed Brook	Unknown	Not stated.	Installation of a new septic system, including sewer-piping, septic tank, and leaching area was completed for the real estate sale of the property. The original septic tank was reported as abandoned.	None.
24 Bristol Drive	6/10/2022	None.	Unknown	Not stated.	An application for a site evaluation of the septic system was requested in May 2022. The site was evaluated, and the evaluation found that the system could be repaired; however, system failures were not listed. Recommendations listed included the proper abandonment of the old septic tank and other hollow structures, installation of a new septic tank with an outlet baffle filter, and to provide a total of 495 square feet of leaching area.	None.
50 Bristol Drive	7/22/2022	None.	Unknown	Breakout	A site evaluation was completed due to septic breakout at this property (See 2021). Subsequently, a new septic tank was installed. The leaching system was found non-compliant relative to the MLSS requirements, however, an exception was granted, as it was unlikely to result in a health hazard.	None.
<b>2023</b>						
At the time of this report, the Town of Canton has not provided this information.						

**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
<b>2021 Septic Failures</b>				
Farmington Valley Health District (FVHD)	14 Sweetheart Mountain-Septic tanks in poor condition	New tank installed	Unknown	FVHD
	52 Country Lane-no failure	New tank & fields installed	None.	FVHD

12B Freedom-Truck damaged septic tank	New tank installed	Unknown	FVHD
32 E Mountain-Unknown nature	Site evaluation, and new tank installed	Unknown	FVHD
13 Sweetheart Mountain- Pool installation	New tank installed	None.	FVHD
17 Pond Rd.- Real Estate Inspection	New tank & fields installed	Unknown	FVHD
19 Deer Run- House sale	New tank and fields installed	Unknown	FVHD
57 Sterling- Addition	New building sewer line installed	Unknown	FVHD
17 Mohawk- Deteriorated septic tank	New tank and d-box installed	Unknown	FVHD
50 Bunker Hill- "old"	Site evaluation completed no repair work.	Unknown	FVHD
23 Pine Acres- "leach field is full"	New tank and fields installed	Unknown	FVHD
144 Indian Hill- fields failing	New tank and fields installed	Unknown	FVHD
620 Albany- "tank needs replacement"	New tank installed	Unknown	FVHD
6 Erickson- septic tank in poor condition	New tank installed	Unknown	FVHD
111 Wright- tank collapse	New tank installed	Unknown	FVHD
51 Breezy Hill- Addition request	No action	Unknown	FVHD
8 Silver Mine Acres- septic tank in poor condition	New tank installed	Unknown	FVHD
17 Woodland- tank in poor condition	New tank and d-box installed	Unknown	FVHD
50 Bristol- "breakout"	PE required to design repair	Unknown	FVHD
82 Washburn- new barn	Building sewer pipe installed	None.	FVHD
25 Old Canton- failure	New tank and fields installed	Unknown	FVHD
70 Trailsend- failure	New tank and fields installed	Unknown	FVHD
11 Country- cracked tank	New tank installed	Unknown	FVHD
50 Cherry Brook- tank in poor condition	New tank installed	Unknown	FVHD
5 Uplands- tank in poor condition	New tank and d-box installed	Unknown	FVHD
7 Woodridge Circle- failed inspection	New tank and fields installed	Unknown	FVHD
6 West View- aged	New tank and fields installed	Unknown	FVHD
21 Birch Knoll- addition	New building sewer line installed	Unknown	FVHD
81 Morgan- failure	New fields installed	Unknown	FVHD

	139 Indian Hill- tank in poor condition	New tank and d-box installed	Unknown	FVHD
	10 Shagbark- septic tank in poor condition	New tank and d-box installed	Unknown	FVHD
	308 East Hill- leach fields wet	Site evaluation complete-no repair work	Unknown	FVHD
	30 Morgan- septic breakout	Effluent pipe and fields installed	Unknown	FVHD
	5 Shagbark- system saturated	New tank and fields installed	Unknown	FVHD
	9 Erickson- leaching fields not working	New fields installed	Unknown	FVHD
	4 Noja- septic tank in poor condition	New tank installed	Unknown	FVHD
	115 Indian Hill- clog in grey water	Pipe replaced	Unknown	FVHD
	121 Indian Hill- needs new leach field	No action yet	Unknown	FVHD
	50 Dry Bridge- old	Site evaluation completed-no repair work	Unknown	FVHD
	41 Country- unknown	New tank installed	Unknown	FVHD
	760 Cherry Brook- addition	New tank installed.	Unknown	FVHD
<b>2022 Septic Failures</b>				
Farmington Valley Health District (FVHD)	35 Trailsend Drive- The septic tank was reported in poor condition.	The septic system was evaluated by the FVHD, and a permit for tank replacement was granted. An engineering plan is shown for the installation of a new 1,000-gallon septic tank.	Unnamed brook and wetlands area nearby with potential for impact.	FVHD
Farmington Valley Health District (FVHD)	9 Noja Trail- Out-of-level and cracked at outlet side.	A 1,250-gallon septic tank was installed, and the existing tank was abandoned. Other corrective measures were listed as the installation of a 6-hole D-Box.	Unnamed brook and wetlands area susceptible to impact.	FVHD
Farmington Valley Health District (FVHD)	21 Bristol Drive- Not stated.	Installation of a new septic system, including sewer-piping, septic tank, and leaching area was completed for the real estate sale of the property. The original septic tank was reported as abandoned.	Potential impact to unnamed brook.	FVHD
Farmington Valley Health District (FVHD)	24 Bristol Drive- Not stated.	An application for a site evaluation of the septic system was requested in May 2022. The site was evaluated, and the evaluation found that the system could be repaired; however, system failures were not listed. Recommendations listed included the proper abandonment of the old septic tank and other hollow structures, installation of a new septic tank with an outlet baffle filter, and to provide a total of 495 square feet of leaching area.	None.	FVHD
Farmington Valley Health District (FVHD)	50 Bristol Drive- Breakout	A site evaluation was completed due to septic breakout at this property. Subsequently, a new	None.	FVHD

		septic tank was installed. The leaching system was found non-compliant relative to the MLSS requirements, however, an exception was granted, as it was unlikely to result in a health hazard.		
<b>2023 Septic Failures</b>				
Farmington Valley Health District (FVHD)	35 Bahre Corner – Slow drainage	A full evaluation was done by the FVHD, and no replacements were made.	Potential impact to Jim Brook.	FVHD
	11 Freedom Drive – Sewage overflow	A new tank and leach field was installed.	Potential impact to the Nepaug Reservoir.	FVHD
	65 Cherry Brook Road – Sewage overflow	A new leaching field was installed.	Potential impact to Cherry Brook.	FVHD
	42 Country Lane – End of life	A new tank and leaching field were installed.	Potential impact to the Nepaug River.	FVHD
	148 Gracey Road – Cracked tank	A new tank was installed.	Potential impact to Jim Brook.	FVHD
	115 North Mountain – Slow drainage	A full evaluation was done by the FVHD, and no replacements were made.	None.	FVHD
	650 Albany Turnpike – Old age	A full evaluation was done by the FVHD, and no replacements were made.	Potential impact to Farmington River.	FVHD

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

Residents of the Town of Canton can report illicit discharges directly to the Land Use Department or through the Q-Notify System. Staff then perform investigations on the illicit discharges. Digital Records on the Town server are used for tracking illicit discharges. While illicit discharge reporting from the public has remained low, the current system in place is adequate to meet the requirements of the MS4 Permit. Illicit discharges relating to septic systems are reported/documentated by the Farmington Valley Health District (FVHD).

### 3.6 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	225 (est.)
Estimated or actual number of interconnections	11 (est.)
Outfall mapping complete	95% (ongoing)
Interconnection mapping complete	90%

System-wide mapping complete (detailed MS4 infrastructure)	60%
Outfall assessment and priority ranking	100%
Dry weather screening of all High and Low priority outfalls complete	100%
Catchment investigations complete	5%
Estimated percentage of MS4 catchment area investigated	5%

**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 is provided to all DPW staff for new procedures, as determined by the Stormwater Committee, utilizing the Stormwater Management Plan and information provided by NEMO to train Town employees. Town employees are also trained on an annual basis by Atlas Technical Consultants, reviewing the Stormwater Management Plan, illicit discharge identification, and other applicable information of the MS4 GP.*

## 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)	Completed	<i>In early January 2022, the Town and Atlas met to discuss aspects of the MS4 Permit. The Town is continuing to research tools and options to enforce land use regulations or other legal authority of privately owned properties to meet the requirements of the MS4 Permit.</i>  <i>The ZEO maintains records of identifiable</i>	Revise land-use regulations.	Town Planner, Zoning Enforcement Officer, Wetlands Agents	<i>The updated Zoning Regulations were adopted on April 2<sup>nd</sup>, 2014. These regulations incorporated a detailed <b>Stormwater Management Plan Requirement</b>, (Section 7.13 of the Town's Zoning Regulations), to address all new developments or other disturbances to an existing development that disturbs ten thousand square feet or more of an area exposed to rainfall.</i>  <i>Enforcement under the Town's Zoning Regulation is as follows: "The ZEO is authorized to issue a stop work order,</i>	<a href="#">Zoning Regulations</a>

		complaints, inspections, and notices of violations served, orders issued, or any other actions taken in relation to Section 7.13 of the Zoning Regulations.			cease and desist order, cease and correct order, or any order to undertake specified actions if in his or her judgement the use of land, buildings and other structures, or the construction, reconstruction, enlargement, extension, moving or structural alteration of a building or other structure, are not being carried out in compliance with these regulations, or any permit or variance” (pp 230 of Canton Zoning Regulations, effective 2014, revised October 29, 2021) issued.	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing)	Completed-Ongoing for permit lifetime.	A Stormwater Management Plan is to be included as part of site plans for all applicable developments. All site plans are submitted to a commission for review. According to these regulations, “Other technical and minor modifications may be approved jointly by the Zoning Enforcement Officer, Building Official and Fire Marshal, or with the consultation of other relevant Town Staff when proposed changes are limited to...drainage; grading; erosion and sedimentation controls...” (Zoning Regulations, effective 2014, revised October 29, 2021).	Develop/implement plan for interdepartmental coordination in site plan review and approval.	Town Engineer	Town municipal departments have coordinated since the beginning of the MS4 Permit in 2017. In 2019, the WPCF and DPW redeveloped their facilities in compliance with MS4 construction requirements and retain stormwater drainage on-site.	<a href="#">Planning and Zoning Commission</a>  In 2019, the WPCF and DPW redeveloped their facilities in compliance with MS4 construction requirements and retain stormwater
4-3 Review site plans for stormwater quality concerns (Ongoing)	Completed-Ongoing for permit lifetime.	The Town continues to utilize zoning regulations and processes as a way of reviewing site plans for stormwater quality concerns.	Issue review comments and review revised plans for compliance.	Zoning Enforcement Officer, Wetlands Agents, Town Engineer	Completed in June 2018. This process is continued to present.	



		<i>This year, five (5) site plans were reviewed by the Town with applicable stormwater quality concerns.</i>				
4-4 Conduct site inspections (Ongoing)	<i>Ongoing throughout permit lifetime.</i>	<i>Active sites are monitored throughout the year by the Zoning Enforcement Officer and/or Wetlands Agents.</i>	<i>Document Inspections and Actions</i>	<i>Zoning Enforcement Officer, Wetlands Agents</i>	<i>Completed in 2018-Continued throughout permit lifetime.</i>	
4-5 Implement procedure to allow public comment on site development (Ongoing)	<i>Completed</i>	<i>The procedure of which allows for public comment on site development is as follows; dependent on zoning area type or regulations, a public hearing may be posted through newspaper or by public hearing signs. During this public hearing, comments or concerns may be voiced on site development.</i>	<i>Provide an opportunity for public comment/involvement.</i>	<i>Town Planner</i>	<i>Completed under previous permit.</i>	<a href="#">Planning and Zoning Commission</a>
4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing)	<i>Completed</i>	<i>Compliance with the DEEP construction stormwater permit is required through the Town and is a standard condition of local land use approval. The DEEP permitting requirements are supplied to applicants in a pre-empted application checklist.</i>	<i>Notify developers about DEEP permitting obligations.</i>	<i>Town Planner/Town Engineer</i>	<i>Completed-continued throughout permit lifetime.</i>	

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

*There are several sites with proposed improvements that will affect stormwater runoff in 2024. The Town will continue to utilize zoning regulations and inspections as a means to ensure BMPs are utilized by site developers.*

38-43 Dowd Avenue: Development of multifamily and commercial uses. It was scheduled to be heard by the Planning and Zoning Commission on December 20<sup>th</sup>, 2023.

Applegate Village (Lawton Rd and Washburn Rd): Construction of 34 single-family homes began in 2023 and will continue well into 2024.

115 Albany Turnpike: Multifamily development proposal.

375 Albany Turnpike: Recently approved for multifamily development. No construction plans as of yet.

75 Old Canton Road: Recently approved for multifamily development. No construction plans as of yet.

## 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	At the December 20th, 2023, meeting the Planning and Zoning Commission held a public hearing on stormwater management requirements, and adopted a comprehensive rewrite of its stormwater management regulations in anticipation of the release of the new state stormwater quality manual.	Adopt updated Reference Standards 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.	Planning and Zoning Commission	December 20 <sup>th</sup> , 2023	<a href="#">Stormwater Management Regulations</a>
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects (Due 7/1/22)	Ongoing	Adopted Zoning Regulations and current Subdivision Regulations incorporate provisions for narrow travel-way widths, alternative cul-de-sac configurations, permeable pavers, and utilizing ditches for stormwater conveyance. These regulations also allow for the permanent reduction of required parking.	Enforce regulations and guidelines of LID and runoff reductions.	Town Planner	In progress- Started in 2021 and to be adopted 2022-2023. At the time of this report, the Town of Canton has not provided a progress update on this project.	
5-3 Identify retention and detention ponds in priority areas (Due 7/1/20)	Ongoing	The Town is currently working towards compiling a complete list of retention and detention basins, as well as dry wells. Atlas will then convert this data into a GIS stormwater mapping software.	Compile a list and complete mapping of Town-owned detention basins.	Town Engineer/Director of Public Works	In Progress- Started 2021. At the time of this report, the Town of Canton has not provided a	

					progress update on this project.	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures (Ongoing)	Ongoing	At the December 20th, 2023, meeting the Planning and Zoning Commission held a public hearing on stormwater management requirements, and adopted a comprehensive rewrite of its stormwater management regulations in anticipation of the release of the new state stormwater quality manual.	Inspect and maintain facilities.	Town Engineer/Director of Public Works	In progress- Started July 1 <sup>st</sup> , 2019.	
5-5 DCIA mapping (Due 7/1/20)	Completed	DCIA for the Town was calculated with the assistance of Nathan L. Jacobson & Associates. Atlas has mapped the DCIA areas.	Provide an understanding of the Town's overall DCIA as related to the MS4 system.	Town Engineer, Director of Public Works, Town Planner, Atlas	Completed in December 2021	
5-6 Address post-construction issues in areas with pollutants of concern	Ongoing through life of permit	It is planned to implement that in post-construction areas, if erosion or high accumulation of sedimentation are found during annual inspections conducted under the long-term post-construction maintenance plan, the Town will prioritize these areas for DCIA retrofit projects.	Address post-construction areas where erosion or high accumulation of sedimentation are found during annual inspections.	Town Engineer, Director of Public Works, Town Planner	Ongoing Started in 2018	The Stormwater Retrofit Program was drafted in late 2021 and is continuously updated as information is gathered/retrofits are put in place. This Retrofit Program will help the Town address areas with pollutants of concern.

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

1. Develop process for annual inspections of Post-Construction Stormwater Management activities.
2. Develop and implement the monitoring, cleaning, and repairing of settling/silt basins, catch basins, outfalls, swales, etc.
3. 31 Garrett Road: Ongoing situation monitoring turbid runoff during rain events. Runoff has caused property damage and ultimately discharges into a watercourse. Town Attorney is getting involved.
4. Planning and Zoning Commission held a public hearing on December 20<sup>th</sup>, 2023 to adopt a rewrite of stormwater regulations in anticipation of the stormwater quality manual being updated in 2024.

## 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 (2021) Directly Connected Impervious Area (DCIA)	32.14
DCIA disconnected (redevelopment plus retrofits)	TBD
Retrofit projects completed	TBD
DCIA disconnected	TBD
Estimated cost of retrofits	TBD
Detention or retention ponds identified	7 /~7 total (TBD)

#### 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 (2) 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 of 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 States. 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  $DCIA\% = 0.04 \cdot (IA\%)^{1.7}$   
and

50% was assigned to the average connectivity Sutherland Equation where  $DCIA\% = 0.10 \cdot (IA\%)^{1.5}$

For an impervious area between 12% and 18 %:

50% of the area was assigned to the average connectivity Sutherland Equation where  $DCIA\% = 0.10 \cdot (IA\%)^{1.5}$   
and

50% was assigned to the high connectivity Sutherland Equation where  $DCIA\% = 0.40 \cdot (IA\%)^{1.2}$

For an impervious area of greater than 18 %:

100% of the area was assigned to the high connectivity Sutherland Equation where  $DCIA\% = 0.40 \cdot (IA\%)^{1.2}$

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)	Completed Annually	Meetings and correspondence were held over the course of the year with Town employees pertaining to the MS4 permit. During these meetings/correspondences, discussions were had on stormwater management procedures, spill controls, etc.	Eliminate non- stormwater discharges into the storm sewers.	Director of Public Works, Town Planner, Town Engineer, Fire Marshall	Completed Annually.	In December of 2023, Atlas completed SWPPP and MS4 Permit training for the Town DPW.
6-2 Implement MS4 property and operations maintenance (Ongoing)	Ongoing through life of permit.	The Public Works maintains outdoor maintenance at the Town's parks, school grounds, and all other Town-owned land. The Highway Division 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.	Director of Public Works	Ongoing Started in 2018.	Several dog waste stations have been installed in parks, along trails, and public places throughout the Town. The Town maintenance staff regularly empties and maintains the pet waste cans. Signs related to pet waste and waterfowl have been erected in parks, playgrounds, and along trails.
6-3 Implement coordination with interconnected MS4s	Ongoing	Atlas has assisted the Town in coordinating between the CTDOT and neighboring municipalities on interconnected MS4s. Currently, 11 interconnections with the CTDOT have been identified and mapped.	Update GIS system with interconnected locations.	Town Engineer/Atlas	Ongoing	



6-4 Develop/implement program to control other sources of pollutants to the MS4	Ongoing	The Town utilizes annual training, a plan of action developed with Atlas, as well as BMPs in reducing other possible pollutants to the MS4.	Reducing other possible pollutants to the MS4.	Land Use Commission/Department of Public Works	Ongoing Started in 2021	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 through life of permit.	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.	Director of Public Works, Town Engineer, Farmington River Watershed Association	Ongoing	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.	Director of Public Works, Town Engineer	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. A Draft Stormwater Retrofit Program is located in Appendix IV of the 2021 Annual Report.

6-7 Implement infrastructure repair/rehab program (Due 7/1/21)	Ongoing through life of permit.	<p>The Town's method for identifying MS4 infrastructure in need of repair or rehab is as follows:</p> <ol style="list-style-type: none"> <li>1. An annual inspection of basins;</li> <li>2. Rehabilitation work on roadways associated with drainage and paving work;</li> <li>3. Notification from Town residents, and follow-up basin inspections.</li> </ol>	Reduce/eliminate causes or contributions of pollution or contamination of stormwater, the storm drain system, or waters of the U.S.	Director of Public Works	Ongoing Started in 2021	The Town has pursued funding for storm drainage improvements that may need to be completed.
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 DCIA calculations, impaired waterbodies, current stormwater infrastructure, and the MEP of the Town.	Develop retrofit projects.	Director of Public Works.	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.	Director of Public Works	Ongoing Started in 2021	
6-10 Develop/implement street sweeping program (Ongoing)	Completed	All Town-owned parking lots and streets are annually swept.	Track swept lane miles and reduce pollutants to the MS4 system.	Director of Public Works.	Completed in 2017-Ongoing throughout permit lifetime.	
6-11 Develop/implement catch basin cleaning program (Ongoing)	Completed	<p>The Town's basin cleaning program is as follows:</p> <p>A yearly bid is put forth to contractors, providing a list of catch basins to be cleaned. A daily account of the total basins cleaned, as well as the weight of the material removed from the basins is required. All collected material is tested, and then disposed of at Canton Village Construction Company.</p>	Track material usage, and update plan as needed.	Director of Public Works	Completed in 2017-ongoing throughout permit lifetime.	Approximately 25% of the Town's catch basins are cleaned annually.

6-12 Develop/implement snow management practices (Due 7/1/18)	Completed	The Town maintains records of applications of sand, anti-icing, or deicing chemicals utilized on an annual basis.	Track material usage and update plan as needed.	Director of Public Works	Completed Annually.	The Town has ceased to utilize road sand during winter road applications. Roadway de-icing and anti-icing procedures are utilized to minimize discharge.
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## 6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

1. General outfall inspections are to be performed throughout the year, with support from Atlas.
2. Training to applicable employees will be completed.
3. Street sweeping, and basin cleanings will continue in 2024.

## 6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	December 2023
Street sweeping	
Curb miles swept	144
Volume (or mass) of material collected	180 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)	714
Total catch basins town- (or institution-) wide	1,648
Catch basins inspected	340
Catch basins cleaned	313
Volume (or mass) of material removed from all catch basins	60 tons
Volume removed from catch basins to impaired waters (if known)	Unknown
Snow management	
Type(s) of deicing material used	Morton – Treated Salt Enhanced Deicer
Total amount of each deicing material applied	1165 tons
Type(s) of deicing equipment used	Truck Spreaders
Lane-miles treated (A lane-mile is a mile of roadway in a single driving lane)	144 miles
Snow disposal location	Mills Pond Park – Parking Area
Staff training provided on application methods & equipment	Yes / dates: November 2023

Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	500 lbs.
Reduction in turf area (since start of permit)	1 acre
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$0

#### 6.4 Catch basin cleaning program

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

*The Town of Canton has found that the current catch basin cleaning program to be more than adequate. Documentation of basins cleaned, amount of material removed, and laboratory-testing parameters is well organized, and provides the Town with a clear focus on priority basins to be cleaned in the next yearly cleaning.*

#### 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

$$DCIA\% = 0.4 * (IA\%)^{1.2}$$

$$\text{Directly Connected Area} = (DCIA) \text{ (IC Acres)}$$

##### Average Connectivity

$$DCIA\% = 0.1 * (IA\%)^{1.5}$$

$$\text{Directly Connected Area} = (DCIA) \text{ (IC Acres)}$$

##### Partial Connectivity

$$DCIA\% = 0.04 * (IA\%)^{1.7}$$

$$\text{Directly Connected Area} = (DCIA) \text{ (IC Acres)}$$

##### Slight Connectivity

$$DCIA\% = 0.01 * (IA\%)^{2.0}$$

$$\text{Directly Connected Area} = (DCIA) \text{ (IC Acres)}$$

The Average Connectivity calculation was utilized in assessing the Town's DCIA connectivity, based on the majority of land use 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 Classifications, 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:

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

Based on these calculations, 25 catchments were identified with Urbanized Areas.

Four (4) 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. 29 catchments were identified as Problem or High Priority.

Specific criteria were utilized 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 Stormwater Retrofit Program for further information on these projects.

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

The Stormwater Retrofit Program is designed to comply with *Section (6) (B) (ii)* of the CTDEEP 2023-2025 MS4 Permit. The Town of Canton 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. At the time of this report, the Town of Canton has not provided information regarding 2023 Retrofit Program activities.

## 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.**

*The Town of Canton, with the assistance of Atlas, has completed all dry weather inspections and wet weather sampling at outfalls to impaired waterbodies. Dry weather screening of 110 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/or erosion controls were recommended for repair or implementation of additional erosion controls. Refer to **Attachment II** for the documented dry weather screenings.*

*Dry weather inspections throughout the entirety of the Town will continue into the following year, to be conducted again in the spring. Further investigations into SSOs is necessary to make determinations on whether the bacterial impairments are the results of IDDE or natural background conditions for outfalls to impaired waterbodies. Changes to the Stormwater Management Plan are not recommended at this time.*

*Wet weather sampling was conducted at six (6) priority outfalls and analyzed for E. coli. All samples collected indicated bacteria results above criteria. Sample results were reported at levels higher than the previous year for E. Coli at all priority outfalls. Samples were also collected by the Farmington River Watershed Association at twelve outfalls. Sampling parameters varied, but included bacteria, chlorine, and other nutrients. Of these twelve outfalls, five (5) were identified as discharging to an impaired waterbody. The twelve outfalls have been flagged for follow-up investigation based on analytical results.*

*Catchment investigation was conducted in the Town of Canton to determine the source of elevated bacteria levels found during sampling events. For more information on these investigations, refer to **Attachment V**.*

### 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](http://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-206	41.865117/ -72.902721	6/14/2021	Bacteria	- E. coli <b>5,480</b> col/100ml - T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-105	41.864327/ -72.911845	6/14/2021	Bacteria	-E. coli <b>2,280</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-103	41.864326/ -72.911968	6/14/2021	Bacteria	No discharge.	Phoenix Environmental Laboratories	Yes
OF-104	41.864327/ -72.911845	6/14/2021	Bacteria	-E. coli <b>15,500</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-108	41.856804/ -72.915978	6/14/2021	Bacteria	-E. coli <b>1,970</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-107	41.856826/ -72.915981	6/14/2021	Bacteria	-E. coli <b>2,060</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-109	41.855805/ -72.921108	6/14/2021	Bacteria	-E. coli <b>275</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-110	41.856027/ -72.920136	6/14/2021	Bacteria	-E. coli <b>988</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-40	41.840474/ -72.924501	6/14/2021	Bacteria	-E. coli <b>24,110</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-39	41.840631/ -72.924348	6/14/2021	Bacteria	-E. coli <b>933</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-104	41.864327/ -72.911845	9/1/2021	Bacteria	-E. coli <b>3,080</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-206	41.865117/ -72.902721	9/1/2021	Bacteria	-E. coli <b>369</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-40	41.840474/ -72.924501	9/1/2021	Bacteria	-E. coli <b>120</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-105	41.864327/ -72.911845	9/1/2021	Bacteria	-E. coli <b>602</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-107	41.856826/ -72.915981	9/1/2021	Bacteria	-E. coli <b>556</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
OF-108	41.856804/ -72.915978	9/1/2021	Bacteria	-E. coli <b>905</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories	Yes
<b>2022</b>						
OF-40	41.840474/ -72.924501	8/26/2022	Bacteria	-E. Coli <b>5,170</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-104	41.864327/ -72.911845	8/26/2022	Bacteria	-E. coli <b>15,500</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-105	41.864327/ -72.911845	8/26/2022	Bacteria	-E. Coli <b>3,450</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-107	41.856826/ -72.915981	9/22/2022	Bacteria	-E. Coli <b>10,500</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-108	41.856804/ -72.915978	9/22/2022	Bacteria	-E. Coli <b>7,270</b> MPN/100 mls	Phoenix Environmental Laboratories	Yes

				-T Coliform >24,200 MPN/100mls		
OF-206	41.865117/ -72.902721	8/26/2022	Bacteria	-E. Coli >24,200 MPN/100mls -T Coliform >24,200 MPN/100mls	Phoenix Environmental Laboratories	Yes
CB-3320	41.85866/ -72.91343	6/6/2022	Bacteria		Unknown - FRWA	Yes
		6/20/2022	Bacteria			
		6/21/2022	Bacteria, Nutrients			
		6/22/2022	Nutrients			
		7/11/2022	Bacteria			
		7/19/2022	Bacteria			
		7/25/2022	Bacteria			
		8/8/2022	Bacteria			
		8/22/2022	Bacteria, Nutrients			
CB-28	41.836164/ -72.929891	9/7/2022	Bacteria		Unknown - FRWA	Yes
		6/6/2022	Bacteria			
		6/20/2022	Bacteria			
		6/21/2022	Nutrients			
		6/22/2022	Nutrients			
		7/1/2022	Bacteria			
		7/25/2022	Bacteria			
		8/8/2022	Bacteria			
		8/22/2022	Bacteria, Nutrients			
CB-1200	41.84525/ -72.92519	9/7/2022	Bacteria		Unknown - FRWA	Yes
		6/6/2022	Bacteria			
		6/21/2022	Bacteria, Nutrients			
		7/11/2022	Bacteria			
		7/25/2022	Bacteria			
		8/8/2022	Bacteria			
		8/22/2022	Bacteria, Nutrients			
		9/7/2022	Bacteria			
		5/27/2022	Chlorine			
CB-3220	41.85866/ -72.91343	6/6/2022	Bacteria		Unknown - FRWA	Yes
		6/20/2022	Bacteria, Nutrients			
		6/22/2022	Chlorine			
		7/11/2022	Bacteria			
		7/19/2022	Chlorine			
		7/25/2022	Bacteria			
		8/8/2022	Bacteria			
		8/16/2022	Chlorine			
		8/22/2022	Bacteria, Nutrients			
		9/7/2022	Bacteria			

CB-4140	41.86497/ -72.90848	11/1/2022	Chlorine		Unknown - FRWA	Yes
		6/6/2022	Bacteria			
		6/20/2022	Bacteria, Nutrients			
		7/11/2022	Bacteria			
		7/25/2022	Bacteria			
		8/8/2022	Bacteria			
		8/22/2022	Bacteria, Nutrients			
		9/7/2022	Bacteria			
2023						
OF-40	41.840474/ -72.924501	9/18/2023	Bacteria	-E. coli <b>106</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-104	41.864327/ -72.911845	9/18/2023	Bacteria	-E. coli <b>8,660</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-105	41.864327/ -72.911845	8/25/2023	Bacteria	-E. coli <b>185</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-107	41.856826/ -72.915981	8/25/2023	Bacteria	-E. coli <b>1,350</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-108	41.856804/ -72.915978	9/18/2023	Bacteria	-E. coli <b>199</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
OF-206	41.865117/ -72.902721	9/18/2023	Bacteria	-E. coli <b>1,160</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories	Yes
CB-3320	41.85866/ -72.91343	2/7/2023	Chloride, Turbidity	<b>Chloride-</b> Not sampled. <b>Turbidity-</b> 0.61 NTU	Unknown - FRWA	Yes
		3/1/2023		<b>Chloride-</b> Not sampled. <b>Turbidity-</b> 0.54 NTU		
		4/5/2023		<b>Chloride-</b> 172.2 mV <b>Turbidity-</b> Not analyzed NTU		
		5/3/2023		<b>Chloride-</b> 189.9 mV <b>Turbidity-</b> 1.44 NTU		
		6/21/2023		<b>Chloride-</b> 181 mV <b>Turbidity-</b> 3.73 NTU		
		7/24/2023		<b>Chloride-</b> 184.4 mV <b>Turbidity-</b> 1.48 NTU		
		8/16/2023		<b>Chloride-</b> 179.6 mV <b>Turbidity-</b> 9.91 NTU		
CB-28	41.836164/ -72.929891	6/13/2023		-E. coli <b>77.6</b> MPN/100 mls -T Coliform <b>1986.3</b> MPN/100mls	Unknown - FRWA	Yes
		7/18/2023		-E. coli <b>410.6</b> MPN/100 mls -T Coliform <b>&gt;24,19.6</b> MPN/100mls		
		8/1/2023		E. coli <b>56.5</b> MPN/100 mls -T Coliform <b>&gt;24,19.6</b> MPN/100mls		
		8/15/2023		Bacteria E. coli <b>1413.6</b> MPN/100 mls		

CB-4140	41.86497/ -72.90848	8/29/2023	Bacteria	-T Coliform >24,19.6MPN/100mls E. coli 54.8 MPN/100 mls	Unknown – FRWA	Yes
		9/6/2023		-T Coliform >24,19.6MPN/100mls E. coli 47.1 MPN/100 mls		
		6/13/2023		-T Coliform >24,19.6MPN/100mls E. coli 206.4 MPN/100 mls		
		7/18/2023		-T Coliform 24,19.6MPN/100mls E. coli 161.6 MPN/100 mls		
		8/1/2023		-T Coliform >24,19.6MPN/100mls E. coli 115.3 MPN/100 mls		
		8/15/2023		-T Coliform >24,19.6MPN/100mls E. coli 1553.1 MPN/100 mls		
		8/29/2023		-T Coliform >24,19.6MPN/100mls E. coli 101.7 MPN/100 mls		
		9/6/2023		-T Coliform >24,19.6MPN/100mls E. coli 344.8 MPN/100 mls		
BA-73	41.86054/ -72.91323	6/13/2023	Bacteria	-T Coliform 24,19.6 MPN/100mls E. coli 387.3 MPN/100 mls	Unknown – FRWA	Yes
		7/18/2023		-T Coliform >24,19.6 MPN/100mls E. coli 201.4 MPN/100 mls		
		8/1/2023		-T Coliform 24,19.6 MPN/100mls E. coli 81.3 MPN/100 mls		
		8/15/2023		-T Coliform >24,19.6 MPN/100mls E. coli >2419.6 MPN/100 mls		
		8/29/2023		-T Coliform >24,19.6 MPN/100mls E. coli 98.7 MPN/100 mls		
		9/6/2023		-T Coliform >24,19.6 MPN/100mls E. coli 103.9 MPN/100 mls		
		2/7/2023		Chloride- Not sampled. Turbidity- 0.38 NTU		
BA-73	41.86054/ -72.91323	3/1/2023	Chloride, Turbidity	Chloride- Not sampled. Turbidity- 1.52 NTU	Unknown - FRWA	Yes
		4/5/2023		Chloride- 181.3 mV Turbidity- Not analyzed		
		5/3/2023		Chloride- 199.8 mV Turbidity- 1.03 NTU		
		6/13/2023		Chloride- 189.2 mV Turbidity- 0.84 NTU		
		6/21/2023		Chloride- 191.1 mV Turbidity- 0.97 NTU		
		7/24/2023		Chloride- 189.2 mV		

CB-8560	41.89439/ -72.89397	8/16/2023	Bacteria	Turbidity- 0.47 NTU Chloride- 185.2 mV Turbidity- 3.64 NTU	Unknown - FRWA	Yes
		6/13/2023		E. coli 118.7 MPN/100 mls -T Coliform 1986.3 MPN/100mls		
		7/18/2023		E. coli 74.4 MPN/100 mls -T Coliform >24,19.6 MPN/100mls		
		8/15/2023		E. coli 1413.6 MPN/100 mls -T Coliform >24,19.6 MPN/100mls		
		8/22/2023		E. coli 151.5 MPN/100 mls -T Coliform 24,19.6 MPN/100mls		
		8/29/2023		E. coli 162.4 MPN/100 mls -T Coliform >24,19.6 MPN/100mls		
		9/6/2023		E. coli 114.5 MPN/100 mls -T Coliform >24,19.6 MPN/100mls		
JB-4120	41.82165/ -72.88339	2/7/2023	Chloride, Turbidity	Chloride- Not sampled. Turbidity- 1.19 NTU	Unknown - FRWA	Yes
		3/1/2023		Chloride- Not sampled. Turbidity- 9.89 NTU		
		4/5/2023		Chloride- 150.1 mV Turbidity- Not analyzed		
		5/3/2023		Chloride- 174.5 mV Turbidity- 1.56 NTU		
		6/21/2023		Chloride- 145.2 mV Turbidity- 18 NTU		
		7/24/2023		Chloride- 148.6 mV Turbidity- 1.75 NTU		
		8/16/2023		Chloride- 163.6 mV Turbidity- 141.02 NTU		

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"> <li>E. coli &gt; 235 col/100ml for swimming areas or 410 col/100ml for all others</li> <li>Total Coliform &gt; 500 col/100ml</li> </ul>
Bacteria (salt waterbody)	<ul style="list-style-type: none"> <li>Fecal Coliform &gt; 31 col/100ml for Class SA and &gt; 260 col/100ml for Class SB</li> <li>Enterococci &gt; 104 col/100ml for swimming areas or 500 col/100 for all others</li> </ul>
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 failures, as well as SVFs.	Potential measures that may be used in addressing bacterial impairments include aquatic vegetative buffer and 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-104	41.864327/-72.911845	6/14/2021	Bacteria	-E. coli <b>15,500</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-206	41.865117/-72.902721	6/14/2021	Bacteria	- E. coli <b>5,480</b> col/100ml - T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-40	41.840474/-72.924501	6/14/2021	Bacteria	-E. coli <b>24,110</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-105	41.864327/-72.911845	6/14/2021	Bacteria	-E. coli <b>2,280</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-107	41.856826/-72.915981	6/14/2021	Bacteria	-E. coli <b>2,060</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-108	41.856804/-72.915978	6/14/2021	Bacteria	-E. coli <b>1,970</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-104	41.864327/-72.911845	9/1/2021	Bacteria	-E. coli <b>3,080</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-206	41.865117/-72.902721	9/1/2021	Bacteria	-E. coli <b>369</b> col/100ml -I Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-40	41.840474/-72.924501	9/1/2021	Bacteria	-E. coli <b>120</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-105	41.864327/-72.911845	9/1/2021	Bacteria	-E. coli <b>602</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-107	41.856826/-72.915981	9/1/2021	Bacteria	-E. coli <b>556</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
OF-108	41.856804/-72.915978	9/1/2021	Bacteria	-E. coli <b>905</b> col/100ml -T Coliform <b>&gt;24,200</b> col/100ml	Phoenix Environmental Laboratories
<b>2022</b>					
OF-40	41.840474/-72.924501	8/26/2022	Bacteria	-E. Coli <b>5,170</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-104	41.864327/-72.911845	8/26/2022	Bacteria	-E. coli <b>15,500</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-105	41.864327/-72.911845	8/26/2022	Bacteria	-E. Coli <b>3,450</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-107	41.856826/-72.915981	9/22/2022	Bacteria	-E. Coli <b>10,500</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-108	41.856804/-72.915978	9/22/2022	Bacteria	-E. Coli <b>7,270</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-206	41.865117/-72.902721	8/26/2022	Bacteria	-E. Coli <b>&gt;24,200</b> MPN/100mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
<b>2023</b>					
OF-40	41.840474/-72.924501	9/18/2023	Bacteria	-E. coli <b>106</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-104	41.864327/-72.911845	9/18/2023	Bacteria	-E. coli <b>8,660</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-105	41.864327/-72.911845	8/25/2023	Bacteria	-E. coli <b>185</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-107	41.856826/-72.915981	8/25/2023	Bacteria	-E. coli <b>1,350</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories



OF-108	41.856804/ -72.915978	9/18/2023	Bacteria	-E. coli <b>199</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories
OF-206	41.865117/ -72.902721	9/18/2023	Bacteria	-E. coli <b>1,160</b> MPN/100 mls -T Coliform <b>&gt;24,200</b> MPN/100mls	Phoenix Environmental Laboratories

### 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
4309-00-1	Low Priority	4
4319-11-1	Low Priority	4
4309-01-1	Problem	7
4309-02-1	Problem	8
4309-00-2-R1	Low Priority	5
4309-00-2-R2	Problem	6
4308-19-2-R1	Low Priority	2
4308-18-1	Low Priority	5
4309-03-1	Problem	6
4318-00-1	Low Priority	4
4308-18-2-R1	Low Priority	1
4309-05-1	Problem	6
4318-04-1-L1	Problem	9
4309-04-1	High Priority	11
4300-14-1	Problem	7
4309-00-2-R4	High Priority	14
4318-04-1	Low Priority	1
4308-00-2-R1	Exempt	0
4309-00-2-R3	Low Priority	4
4300-00-4+R6	Low Priority	2
4317-00-1	Problem	6
4300-15-1	High Priority	12
4312-01-1	High Priority	10
4300-00-4+R7	Exempt	0
4309-00-2-R5	High Priority	16
4300-16-1	Problem	8
4300-00-4+R8	Low Priority	5
4312-00-1	Problem	11
4300-00-4+R9	Problem	7
4300-00-4+R10	High Priority	10
4300-18-1-L1	High Priority	14
4310-00-3-L2	Problem	9
4310-00-3-R5	Low Priority	4
4312-00-2-L2	High Priority	14
4300-17-1	High Priority	11

4300-00-4+R11	High Priority	14
4300-18-1	High Priority	10
4312-00-2-L1	Problem	7
4317-01-1	Problem	7
4300-16-2-R1	High Priority	12
4300-00-4+R12	High Priority	11
4312-02-1	Problem	8

## 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/v>. 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
2021											
OF-105	41.864327/-72.911845	4/13/2021	<0.05 mg/L	<0.02 mg/L	54 umhos/cm	<0.5 ppt	E. coli- 845 col/100ml	0.06 mg/L	-	Bacteria	Results of this flow during dry weather indicated a potential bacterial impact; however, further investigation is needed to confirm whether the bacterial impact is naturally occurring.
OF-107	41.856826/-72.915981	4/13/2021	<0.05 mg/L	<0.02 mg/L	203 umhos/cm	<0.5 ppt	E. coli- 10 col/100ml	<0.06mg/L	-	Bacteria	Results of this dry weather flow are indicative of groundwater influence, and not an Illicit Discharge.
2022											
OF-26	41.820792/-72.889877	6/20/2022	<0.05 mg/L	<0.02 mg/L	378 umhos/cm	<0.5 ppt	<10 MPN/100mls	<0.05 mg/L	-	Bacteria	Results of this dry weather flow are indicative of groundwater influence, and not an Illicit Discharge.

OF-192	41.85974/ - 72.890135	6/20/2022	<0.05 mg/L	<0.02 mg/L	240 umhos/cm	<0.5 ppt	309 MPN/100mls	<0.05 mg/L	-	Bacteria	Results of this flow during dry weather indicated a potential bacterial impact; however, further investigation is needed to confirm whether the bacterial impact is naturally occurring.
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### 2023

Atlas did not observe any instances of illicit discharge and/or flow in outfalls during dry weather inspection activities in 2023. Therefore, no dry weather sampling occurred in 2023 (no flow observed?).

## 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-206	41.865117/- 72.902721	9/1/2021	--	--	213.9 uS/cm	--	-E. coli 369 col/100ml	--	20.2°C	Bacteria
OF-206	41.865117/- 72.902721	8/26/2022	--	--	3.2 uS/cm	--	>24,200 MPN/100mL	--	23.7°C	Bacteria
OF-40	41.840474/- 72.924501	6/14/2021	--	--	179.8 uS/cm	--	4,110 MPN/100mL	--	18°C	Bacteria

## 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](http://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
---------------	-----------------	------------------------------

[illegible]

[illegible]

225

Nepaug River

This outfall was found within 500 ft. of a residential septic failure, and as such, is considered to contribute SVF #12.

*The Town of Canton's sanitary sewer is currently managed by the Town of Canton's Water Pollution Control Facility (WPCF). 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 WPCF, 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 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
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*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. Refer to Appendix III for information regarding 2023 catchment investigation activities, including assessment data/observations, historical sampling data, and catchment maps.*



### 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
--------------------	-----------------	-----------------------	---------------------	-------------------	---------------------	----------------------------------	----------------------------------

#### 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

Print name: Kevin Witkos

Signature / Date:

 2-12-24  
Email: [kwitkos@townofcantonct.org](mailto:kwitkos@townofcantonct.org)

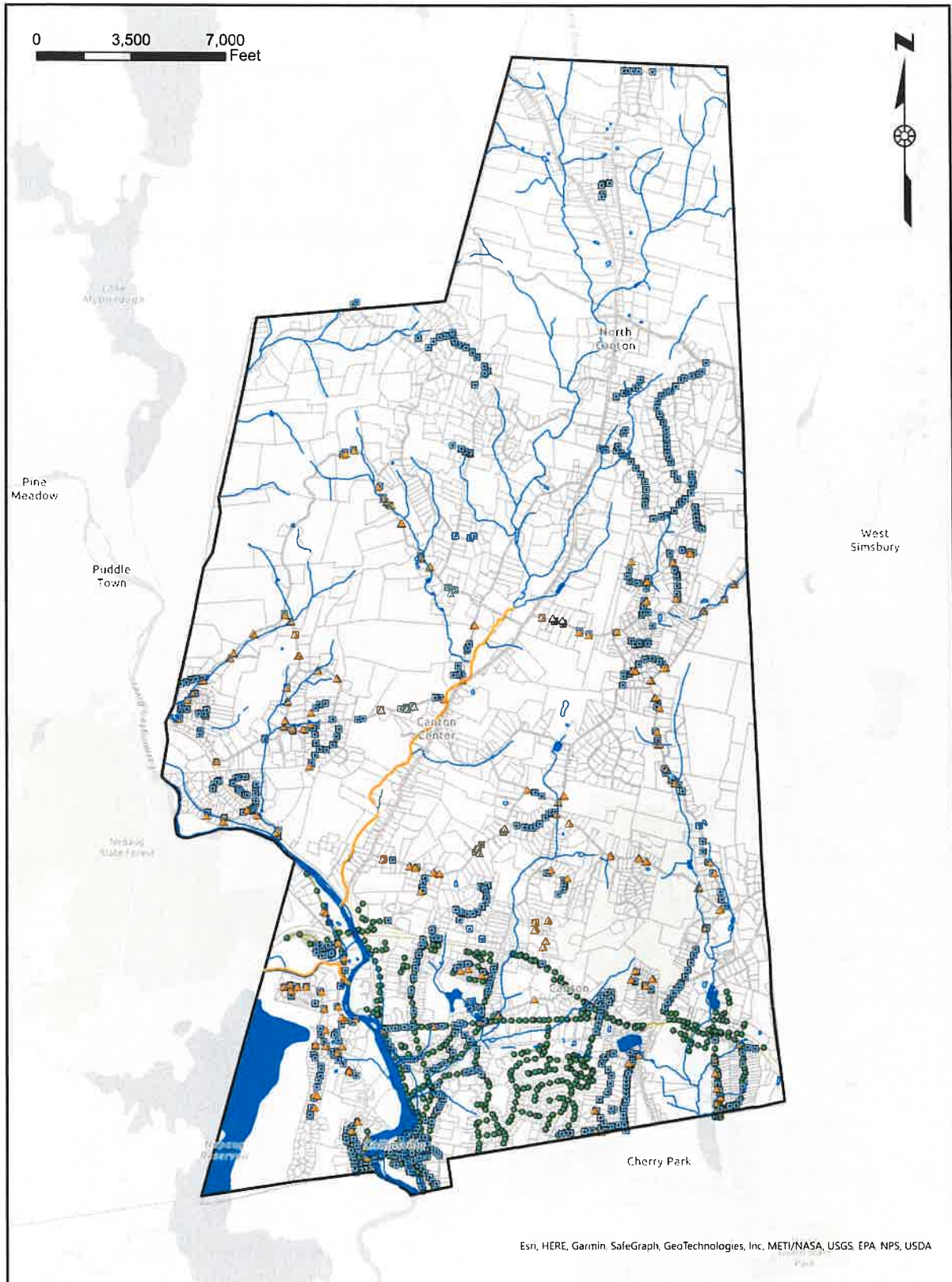
Document Prepared by

Print name: Danielle Whitcomb, Senior Environmental Technician, Atlas

Signature / Date:

 2-13-24  
Email: [danielle.whitcomb@oneatlas.com](mailto:danielle.whitcomb@oneatlas.com)

## FIGURES



### Legend

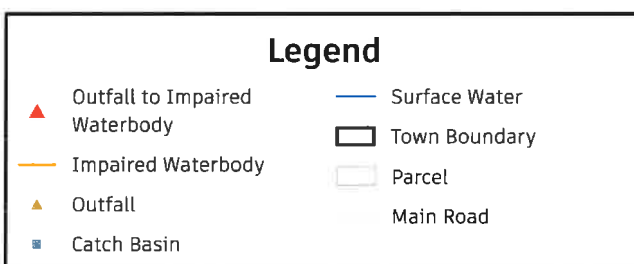
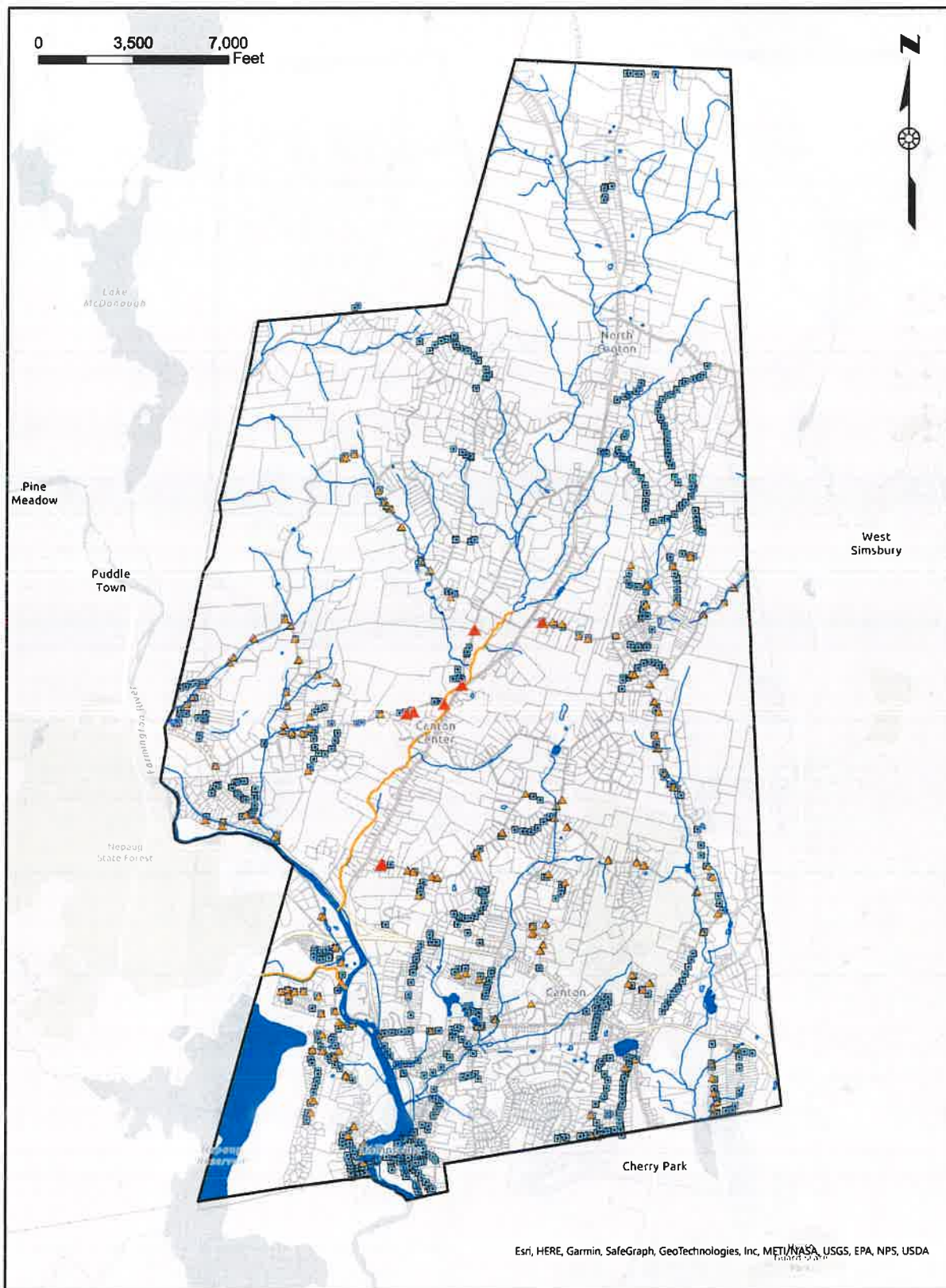
- |                      |                 |
|----------------------|-----------------|
| ▲ Outfall            | — Surface Water |
| ▣ Catch Basin        | ▭ Town Boundary |
| ● Sewer Manhole      | ▨ Parcel        |
| — Sewer Main         | — Main Road     |
| — Impaired Waterbody |                 |

## Town of Canton

### 2023 Annual Report

### MS4 System





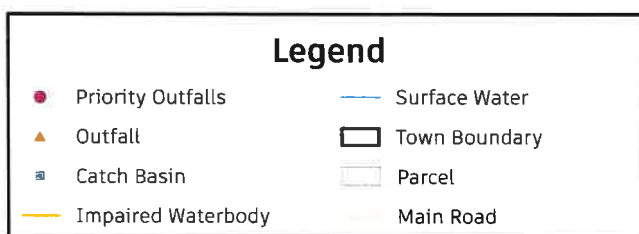
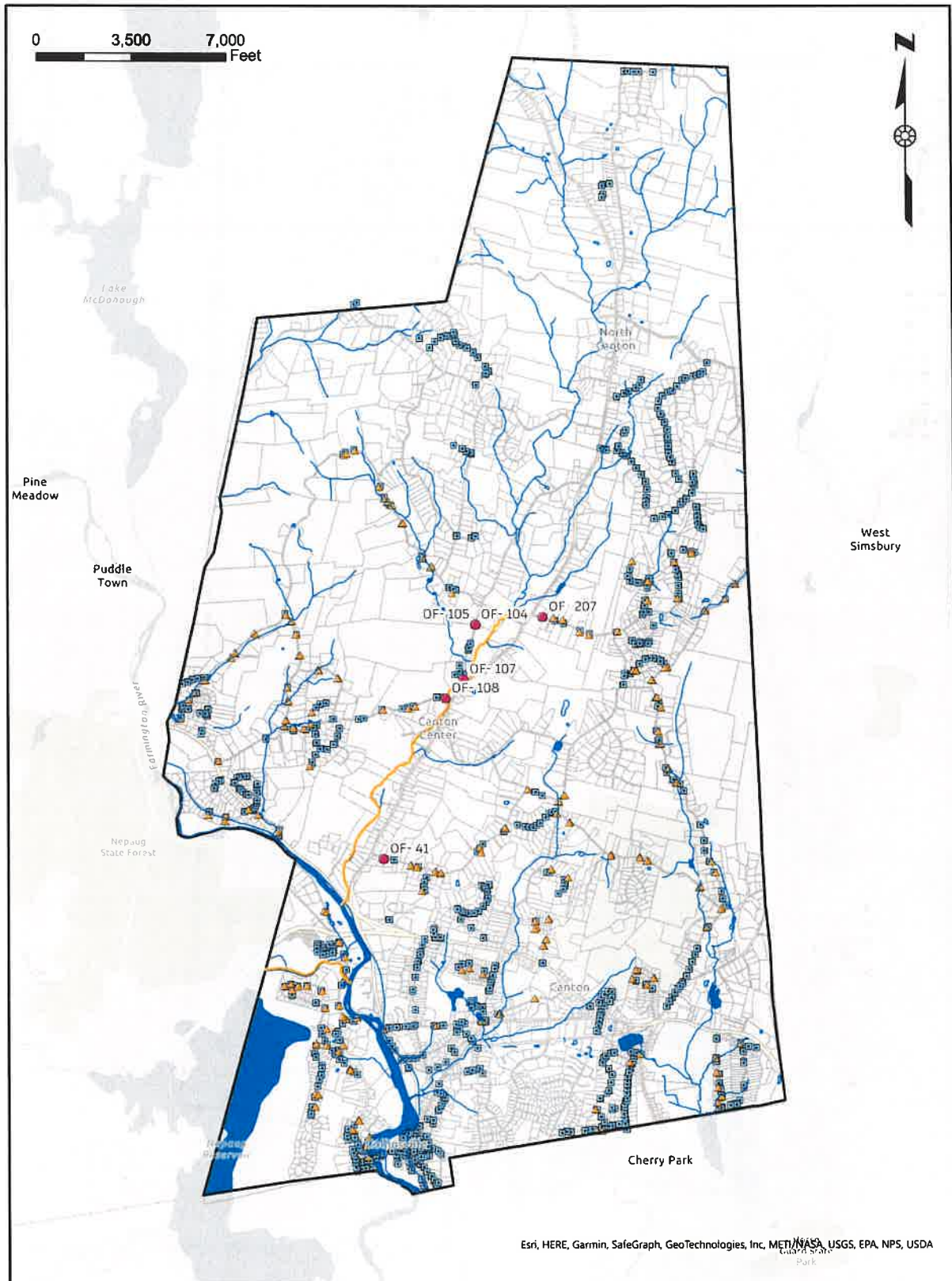
# Town of Canton

## 2023 Annual Report

### Outfalls to Impaired Waters





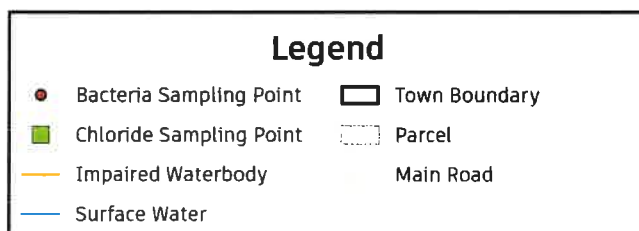
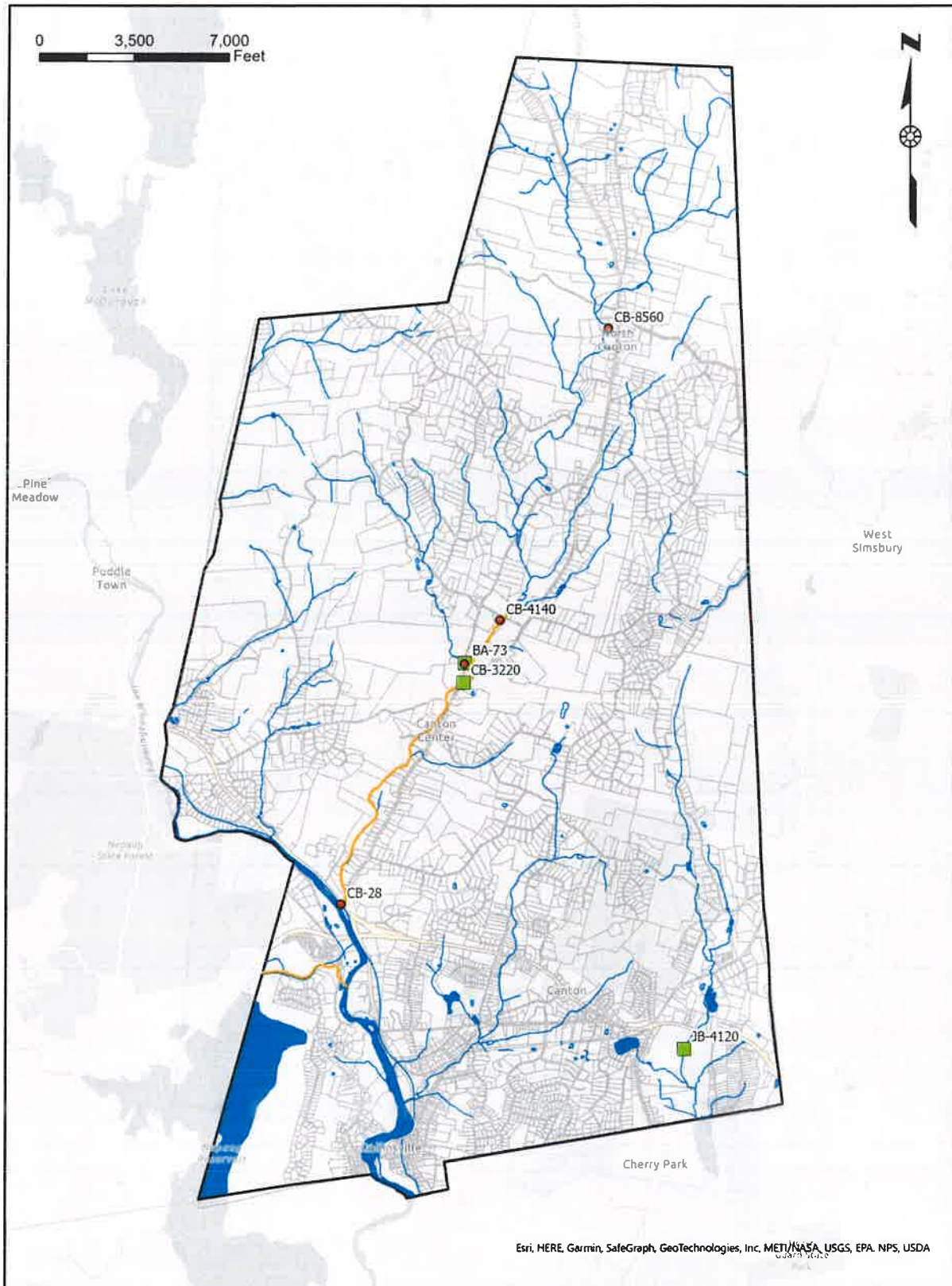


# Town of Canton

## 2023 Annual Report

### Priority Outfalls



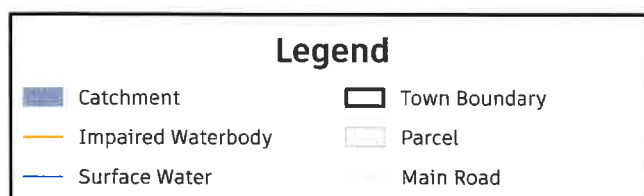
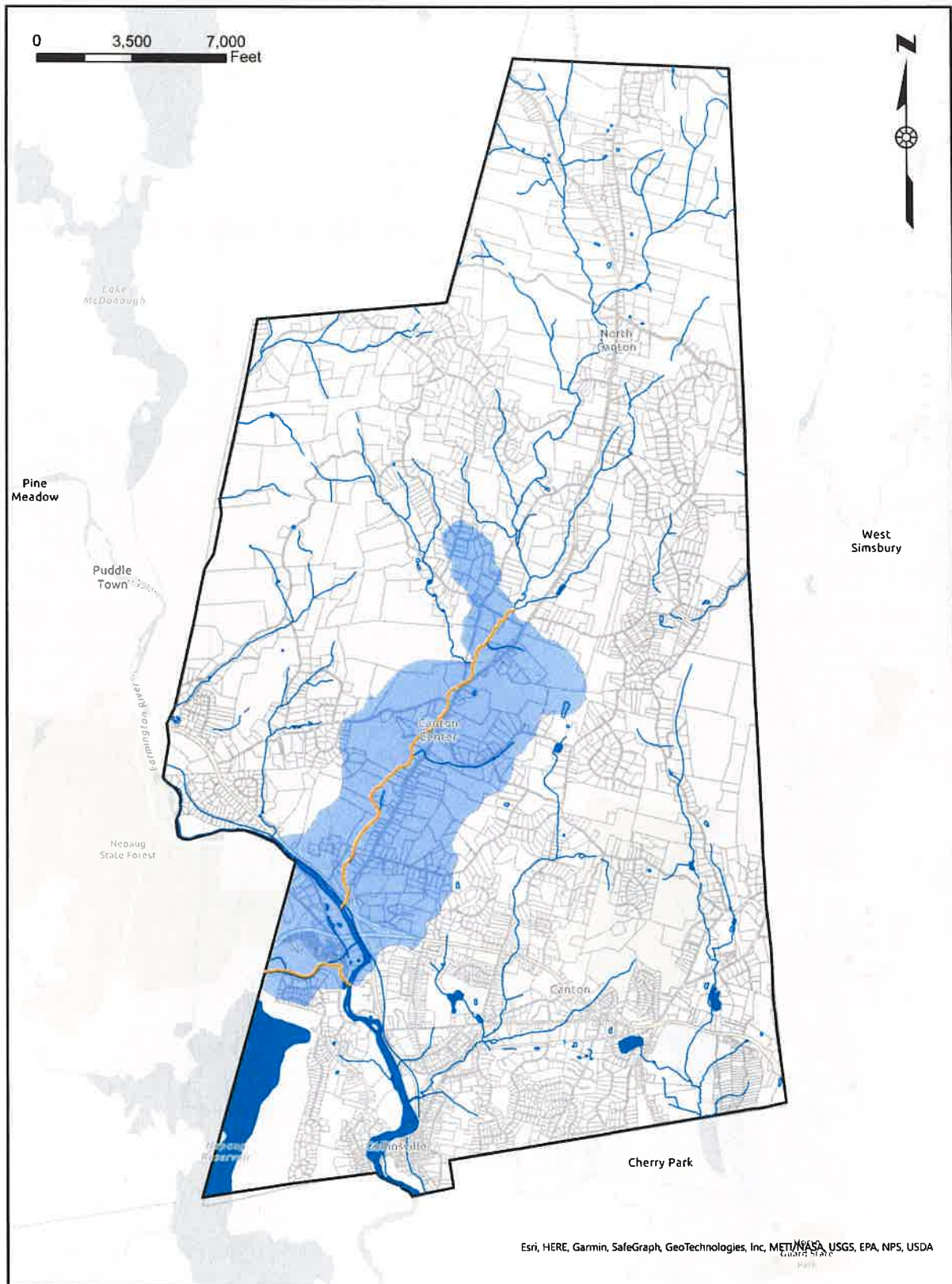


# Town of Canton

## 2023 Annual Report

### FWRA Sampling Points

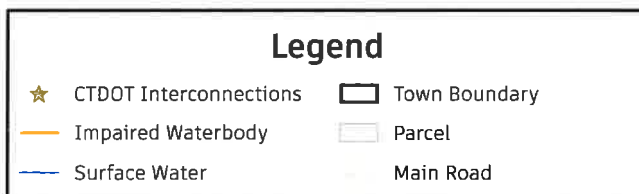
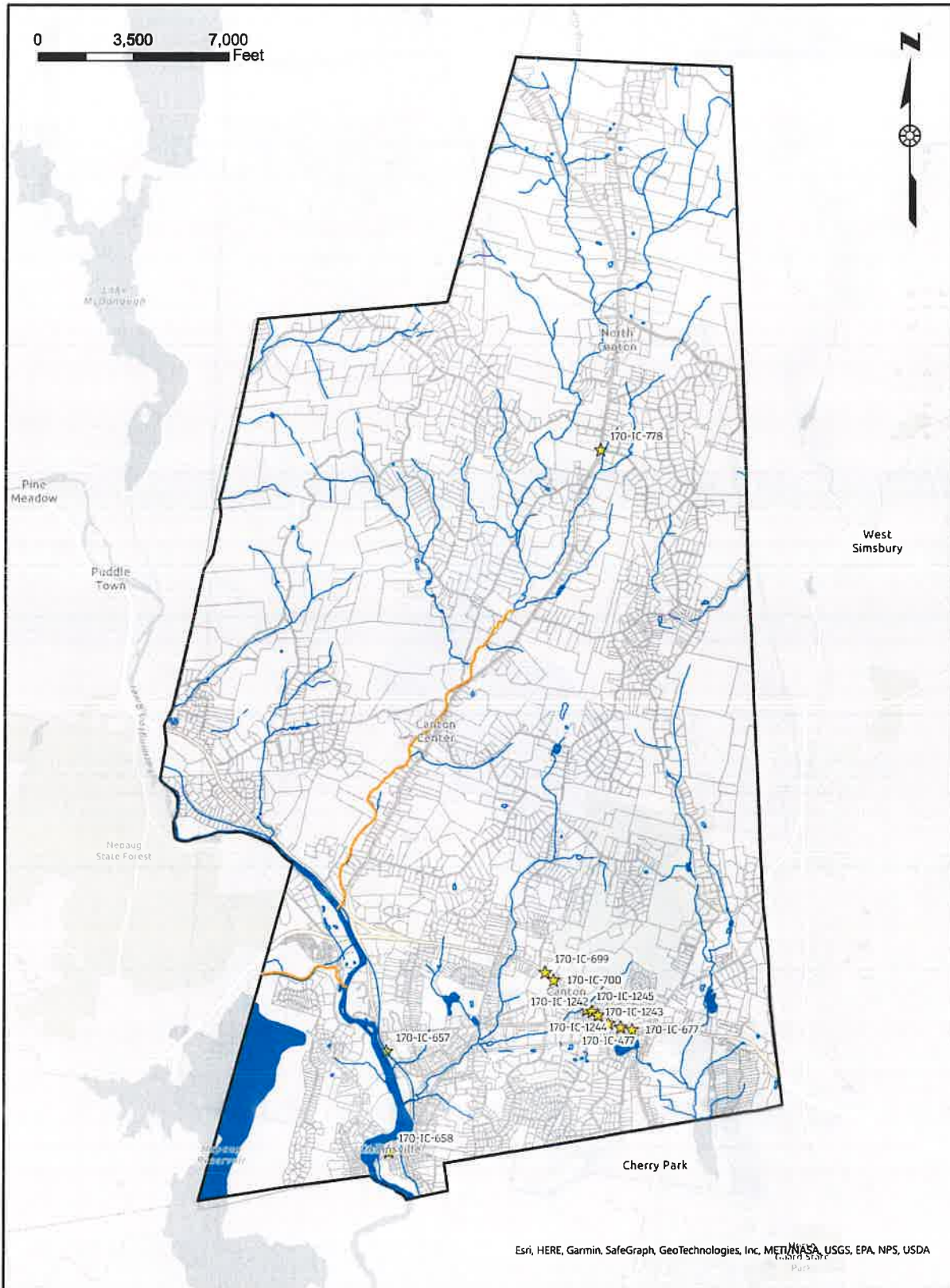




# Town of Canton

## 2023 Annual Report

### Impaired Water by Catchment

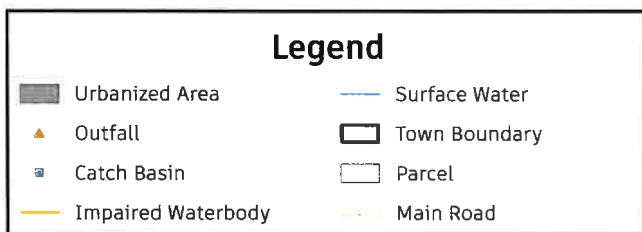
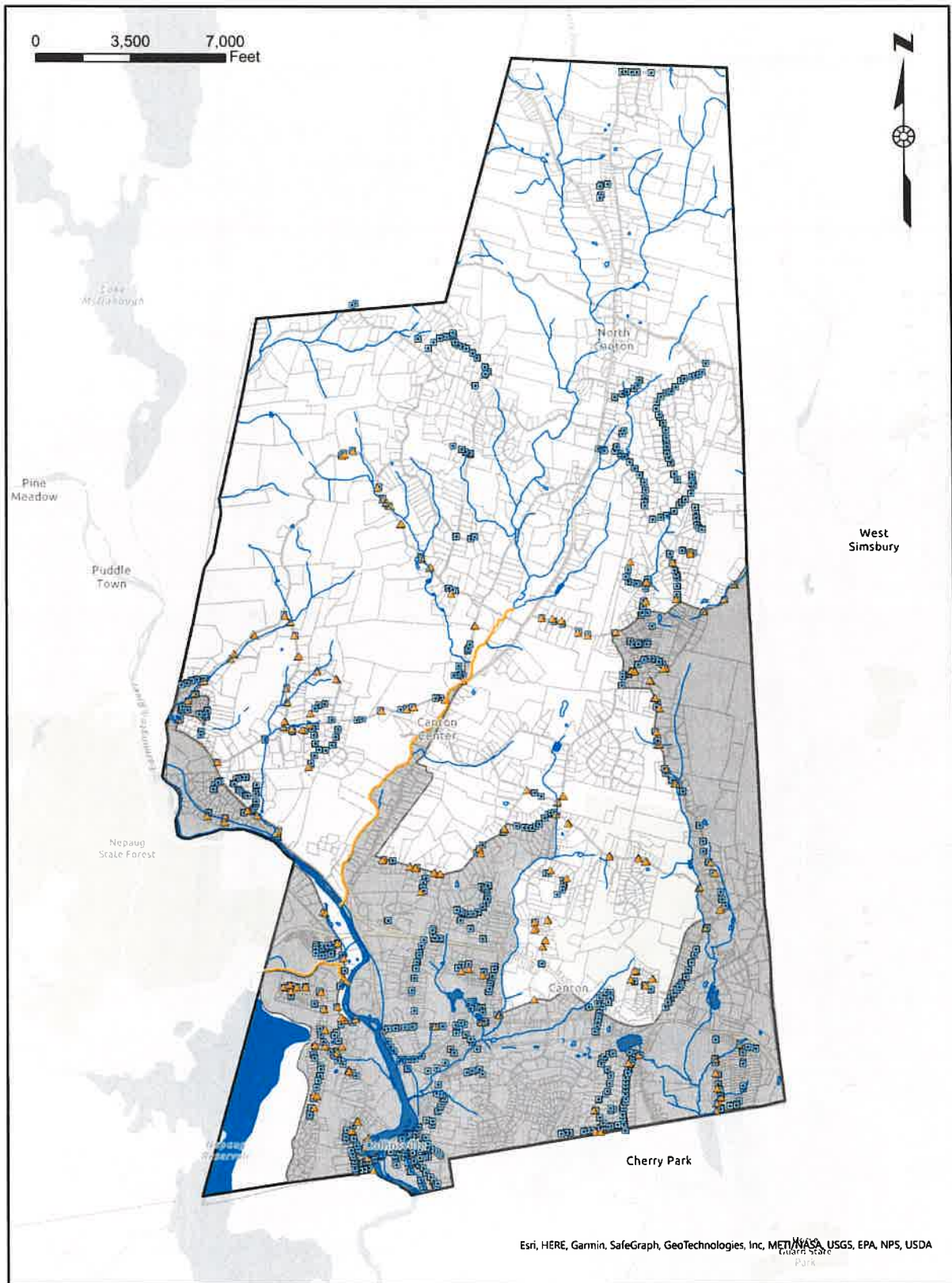


# Town of Canton

## 2023 Annual Report

### CTDOT Interconnections

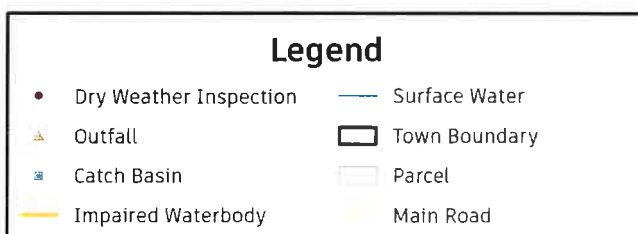
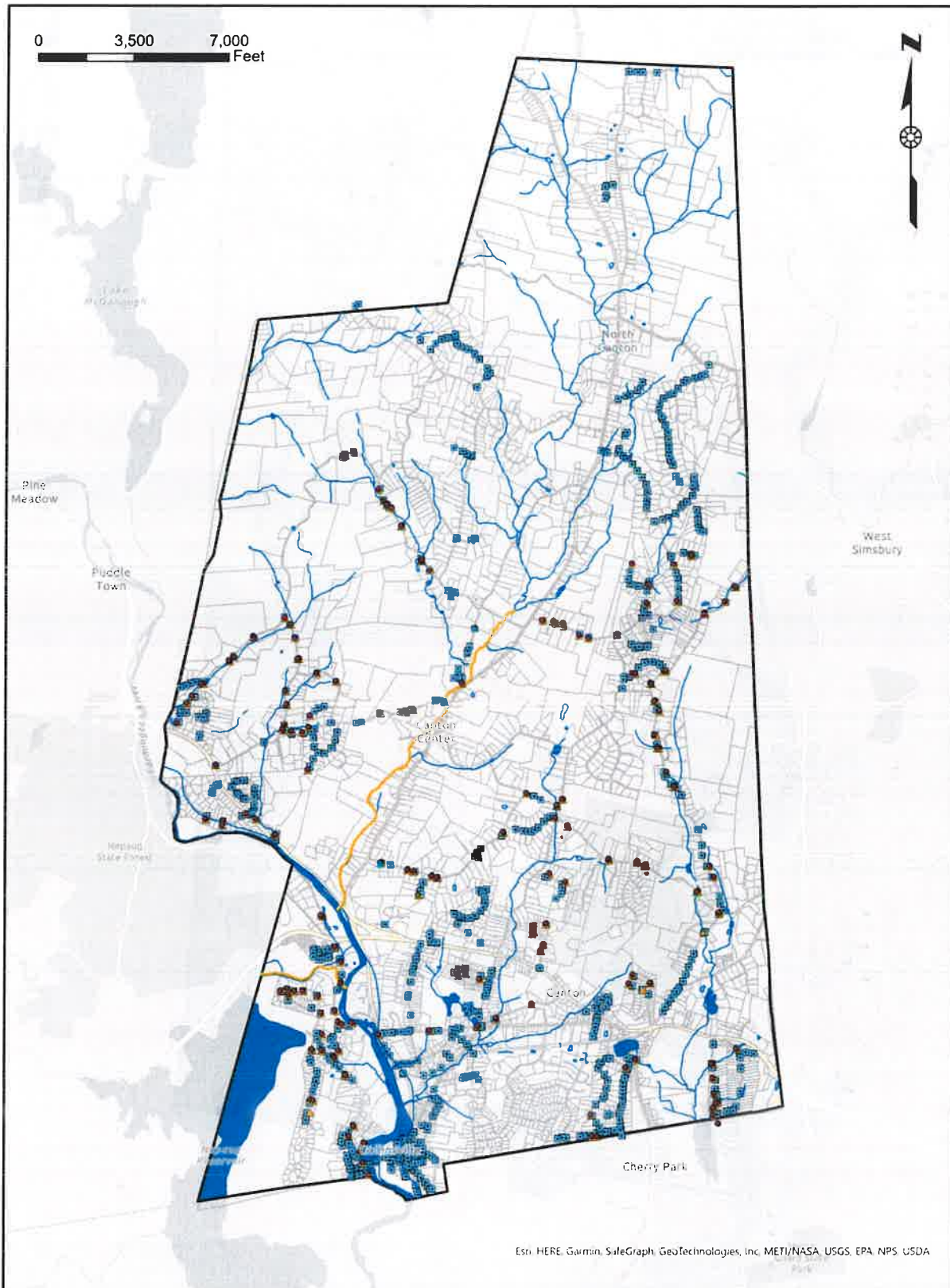




# Town of Canton

## 2023 Annual Report

### Urbanized Area by Catchment

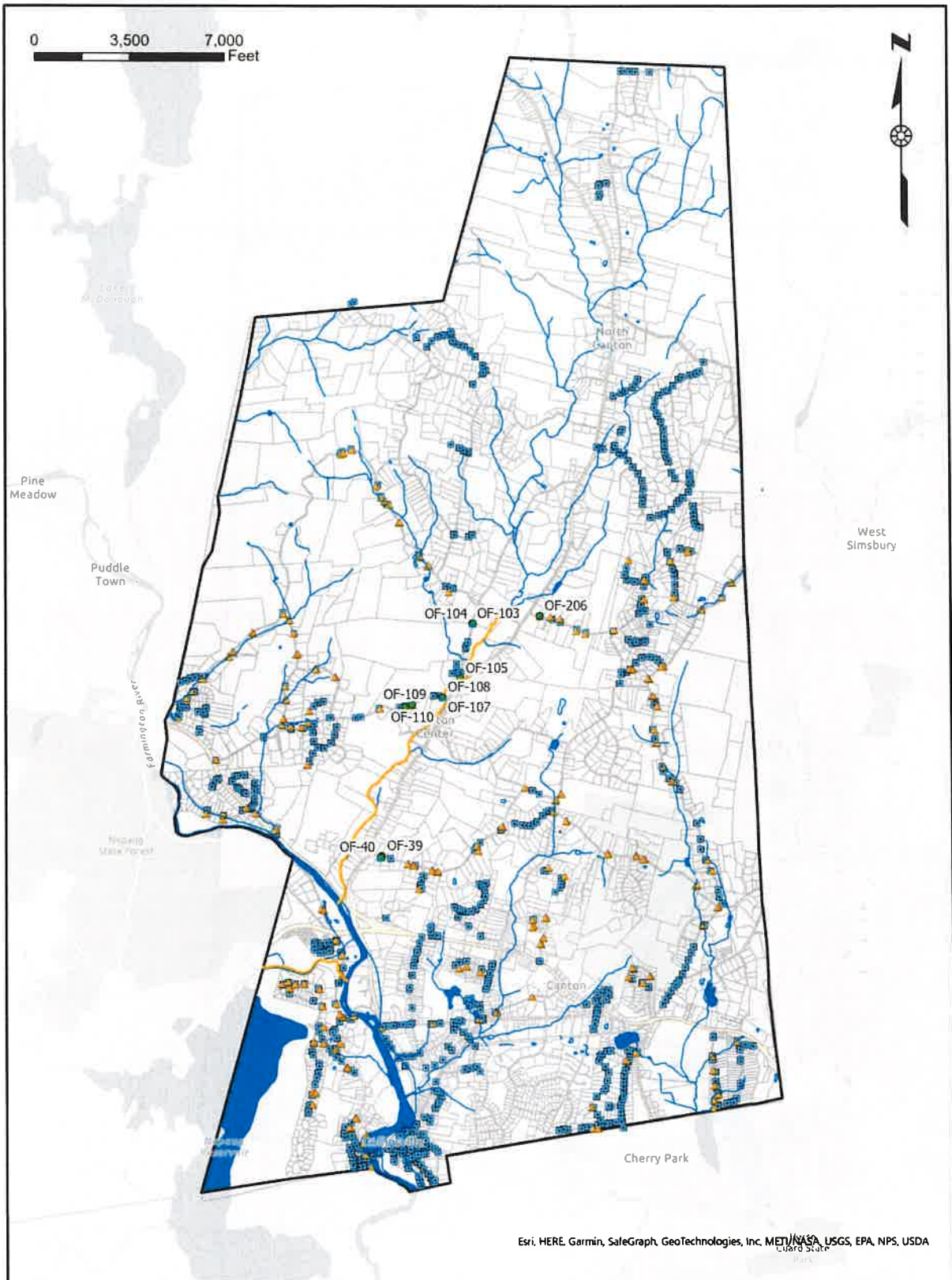


# Town of Canton

## 2023 Annual Report

### Dry Weather Inspections

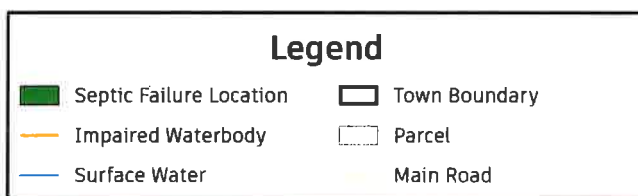
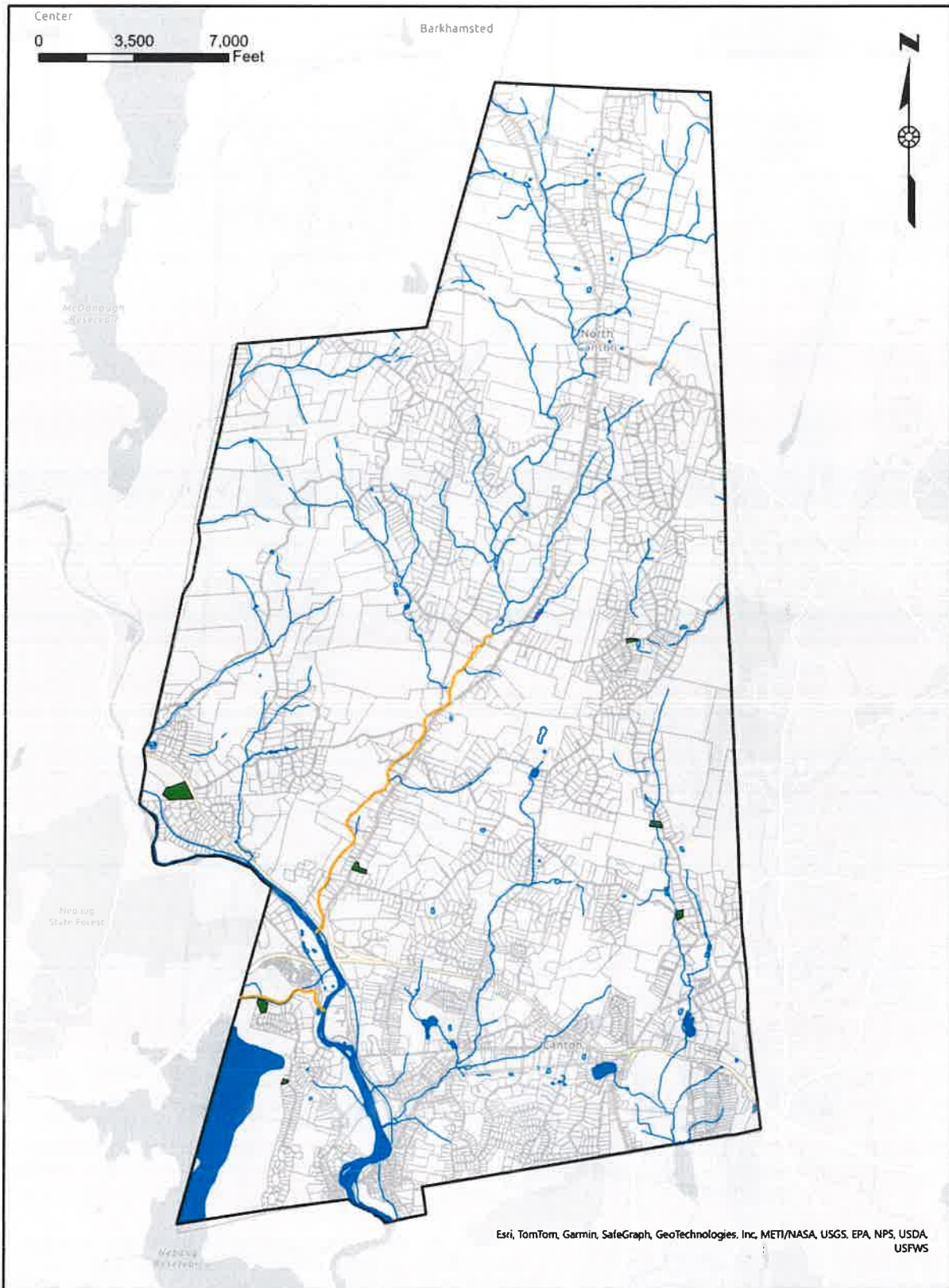




# Town of Canton

## 2023 Annual Report

### Wet Weather Sampling



# Town of Canton

## 2023 Annual Report

### Septic Failures

**APPENDIX I**  
**2023 WET WEATHER SAMPLING RESULTS**



**Town of Canton**  
**2023 Wet Weather Sampling**

Outfall ID	Inspection Date	Condition	Discharge Description	General Parameters							Bacterial	
				Temperature (°C) <sup>[3]</sup>	pH (SU) <sup>[3]</sup>	Dissolved Oxygen (mg/L)	SPC (uS/cm)	ORP (mV)	Turbidity (NTU)	Odor	Escherichia Coli	Total Coliforms
											MPN/100mL	
OF-40	9/18/2023	Excellent	Steady flow observed. Foam observed in discharge area.	20.10	7.73	5.40	16.60	109.60	16.08	No	106	>24,200
OF-104	9/18/2023	Good	Steady flow observed. Yellow tint observed in stormwater collected from catch basin.	19.80	6.93	5.52	35.90	125.20	77.92	No	8,660	>24,200
OF-105	8/25/2023	Good	Steady flow observed. Clear with suspended sediment.	19.80	7.22	5.38	24.32	104.16	12.54	No	185	>24,200
OF-107	8/25/2023	Good	Steady flow observed. Outfall could not be reached, sample taken from catch basin.	19.70	7.35	5.30	18.96	114.21	35.98	No	1,350	>24,200
OF-108	9/18/2023	Good	Steady flow observed. Outfall could not be reached, sample taken from catch basin.	19.70	7.41	5.55	25.30	108.70	18.37	No	199	>24,200
OF-206	9/18/2023	Excellent	Steady flow observed. Foam observed in catch basin and in discharge area.	19.50	7.19	6.60	40.40	120.20	18.32	No	1,160	>24,200

Notes:
* All highlighted bacterial concentrations are required for follow-up investigations.
* Highlighting is based on the following criteria;
1. E. Coli >235/100mL for Swimming Areas, and >410 col/100mL for all others.
2. Total Coliform > 500 col/100mL
3. Fecal Coliform >31 col/100 mL for Class SA and >260 col/100mL for Class SB
4. Enterococci >104 col/100mL for Swimming Areas and >500 col/100mL for all others.

**APPENDIX II**  
**2023 DRY WEATHER INSPECTIONS**

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-57	4/7/2023	Concrete	Other	24	Good	Good	Concrete/ stone outfall that runs under the street to a swale on the other side, in good condition.	No	-72.91674569	41.83914154
OF-45	4/7/2023	Concrete	Endwall	24	Good	Good	Concrete/stone endwall outfall that flows into a swale on the side of the road, in good condition .	No	-72.91687145	41.83905454
OF-46	4/7/2023	Concrete	Endwall	24	Good	Fair	Concrete/stone outfall on side of the road that runs under the street to the other side where there's a swale. Some dead leaves and brush inside outfall.	No	-72.91749129	41.83928878
OF-47	4/7/2023	Concrete	Endwall	24	Good	Fair	Stone/concrete endwall on side of the road that flows into a swale in residential neighborhood.	No	-72.9175901	41.83920177

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-43	4/7/2023	Concrete	Endwall	24	Good	Good	Concrete/ stone endwall outfall that flows under the street in residential neighborhood. Some riprap erosion control.	No	-72.91992572	41.83975726
OF-58	4/7/2023	--	--	--	--	--	Unable to locate OF-58, likely in residential backyard.	--	-72.92005149	41.83969033
OF-41	4/7/2023	Concrete	Endwall	24	Good	Fair	Concrete/stone endwall outfall that flows under road in residential neighborhood, some garbage and brush in outfall, needs to be cleaned out.	No	-72.92079709	41.83991788
OF-42	4/7/2023	Precast	Other	12	Good	Fair	Outfall on the side of road in residential neighborhood, flows into a swale.	No	-72.92086802	41.83984464
OF-44	4/7/2023	--	--	--	--	--	Unable to locate OF-44, in between residential houses on private property.	--	-72.91936841	41.83730527

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-181	8/23/2023	--	--	--	--	--	Could not locate. Discharges into steeply inclined wooded area.	--	-72.88004951	41.8403462
OF-208	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.89999211	41.86487623
OF-207	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.90124975	41.86506355
OF-96	8/23/2023	Plastic	Endwall	12	Excellent	Good	12" plastic pipe discharges into wooded swale which leads to a stream/brook.	No	-72.91805723	41.87016775
OF-89	8/23/2023	Concrete	Endwall	18	Good	Good	18" concrete pipe discharges into wooded area.	No	-72.9250012	41.87826809
OF-90	8/23/2023	Concrete	Endwall	12	Excellent	Excellent	12" concrete pipe discharging into Brook.	No	-72.92432747	41.87709089
OF-92	8/23/2023	Plastic	Endwall	40	Excellent	Excellent	40-48" plastic culvert brings the Brook across the street.	No	-72.92370763	41.87680997
OF-91	8/23/2023	Plastic	Endwall	40	Excellent	Excellent	40-48" plastic culvert brings Brook across the street. No stormwater outfall present.	No	-72.92388729	41.87670964



## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-100	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.91917114	41.8710775
OF-99	8/23/2023	--	--	--	--	--	No linked catch basin on street. Located in area with steep terrain and also possible private property. Likely discharges into nearby stream/brook.	--	-72.91906334	41.87119791
OF-94	8/23/2023	Precast	Endwall	12	Poor	Fair	12" metal pipe discharges into grassy/vegetated area. Pipe is rusting and also misshapen.	--	-72.9217493	41.87465618
OF-93	8/23/2023	Precast	Endwall	12	Poor	Fair	12" metal pipe discharges to outfall on other side of street. Currently transporting a stream/brook. Metal is severely rusted and falling apart.	No	-72.92192896	41.87458929
OF-88	8/23/2023	Concrete	Endwall	12	Excellent	Poor	12" concrete pipe discharges into wooded area. No visible erosion control present.	No	-72.92824412	41.88192661



## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-95	8/23/2023	Concrete	Endwall	18	Fair	Excellent	18" concrete pipe discharges into Brook.	No	-72.92319559	41.87640865
OF-98	8/23/2023	Concrete	Endwall	12	--	--	12" concrete pipe discharges from catch basin to behind fenced private property.	--	-72.9191352	41.87105744
OF-101	8/23/2023	Concrete		12	--	--	12" concrete pipe discharges from catch basin to behind private property / home.	--	-72.91909927	41.87121798
OF-87	8/23/2023	Concrete	Endwall	12	Good	Poor	12" concrete pipe discharges into wooded area. Outfall is clogged with dirt and leaf litter.	No	-72.92936702	41.88161896
OF-86	8/23/2023	Concrete	Endwall	12	Excellent	Fair	12" concrete pipe discharges into wooded area from roadside catch basin.	No	-72.92971736	41.88147851
OF-102	8/23/2023	Concrete	--	12	--	--	12" concrete pipe discharges from catch basin to behind home with fenced yard.	--	-72.91511973	41.86756553



## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-113	8/23/2023	Concrete	--	12	--	--	12" concrete pipe discharges from catch basin to wooded swale alongside home.	--	-72.93431673	41.85423834
OF-62	8/23/2023	--	--	--	--	--	Discharges into heavily wooded/vegetated area from catch basin. Could not locate.	--	-72.93521505	41.85375658
OF-61	8/23/2023	Concrete	Flared End	12	Good	Fair	12" concrete flared end discharges into wooded swale from catch basin.	No	-72.93665235	41.85383018
OF-63	8/23/2023	Plastic	Flared End	24	Excellent	Excellent	24" plastic flared end discharging to stream in wooded area from roadside catch basin.	No	-72.93777525	41.85397739
OF-64	8/23/2023	Plastic	Flared End	24	Excellent	Excellent	24" plastic flared end discharges into stream in wooded area.	No	-72.93789203	41.85401084
OF-65	8/23/2023	Plastic	Flared End	18	Excellent	Excellent	18" plastic flared end discharges into wooded swale.	No	-72.93755067	41.85455951
OF-66	8/23/2023	Plastic	Flared End	18	Excellent	Excellent	18" plastic flared end discharges into wooded swale.	No	-72.9376944	41.85458627
OF-68	8/23/2023	Concrete	Flared End	48	Excellent	Excellent	48" concrete Flared End culvert.	No	-72.93723626	41.85658017

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-35	4/7/2023	Precast	Other	12	Fair	Poor	Outfall on side of road next to a field in residential neighborhood. Filled with dead leaves and brush, needs to be cleaned out. No erosion control.	No	-72.91144563	41.84170477
OF-36	4/7/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.91125797	41.84121611
OF-34	4/7/2023	Concrete	Flared End	36	Good	Good	Flared end outfall on side of road that flows into a rip rap swale between residential houses. In good condition.	No	-72.90787033	41.84363883
OF-136	8/23/2023	Concrete	Endwall	--	--	--	Actual outfall covered by vegetation but based on nearby stormwater manhole, should discharge into reservoir from endwall.	No	-72.92660919	41.81037684
OF-182	8/23/2023	Precast	Endwall	12	Fair	Fair	12 inch steel pipe discharges into wooded swale.	No	-72.87947458	41.83922854

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-67	8/23/2023	Concrete	Flared End	48	Excellent	Excellent	48" concrete flared end culvert.	No	-72.93737999	41.85649988
OF-114	8/23/2023	Plastic	Flared End	24	Excellent	Good	24" plastic flared end discharging into wooded swale from catch basin.	No	-72.93748779	41.85791831
OF-115	8/23/2023	Concrete	Endwall	36	Good	Good	36" concrete culvert discharging into wooded stream.	No	-72.93322079	41.85980505
OF-116	8/23/2023	Concrete	Endwall	36	Excellent	Good	36" concrete culvert discharging into wooded stream.	No	-72.9332657	41.85967793
OF-118	8/23/2023	--	--	--	--	--	No outfall located. No catch basins in the area either. Possibly a hidden culvert connected to the Other side of the road.	--	-72.93065161	41.85887507
OF-117	8/23/2023	--	--	--	--	--	No outfall located. No catch basins in the area either. Possibly a hidden culvert connected to the Other side of the road.	--	-72.93058872	41.85895536
OF-120	8/23/2023	Plastic	Flared End	18	Excellent	Good	18" plastic flared end discharging to wooded swale.	No	-72.93562827	41.86119666
OF-119	8/23/2023	Plastic	Flared End	18	Excellent	Excellent	18" plastic flared end discharging to wooded pond area.	No	-72.9358798	41.86114982

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-83	8/23/2023	Concrete	Endwall	48	Excellent	Excellent	48" concrete culvert discharging to stream	No	-72.93695786	41.86463754
OF-84	8/23/2023	Concrete	Endwall	48	Excellent	Excellent	48" concrete culvert discharging to stream	No	-72.93677812	41.86466884
OF-85	8/23/2023	Concrete	Endwall	18	Excellent	Good	18" concrete endwall discharges to wooded swale	No	-72.93625709	41.86330407
OF-69	8/23/2023	--	--	--	--	--	Located along busy, fast main road. Did not locate. Likely connected to curb inlet pictured.	--	-72.94689315	41.85041763
OF-59	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.90798711	41.84372583
OF-31	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.90168992	41.83952971
OF-32	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.89949803	41.83869983
OF-37	8/23/2023	Concrete	Endwall	18	Excellent	Fair	18" concrete flared end discharges into swale along the side of the road. Linked to catch basin and curb inlet.	No	-72.90483402	41.847654

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-112	8/23/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.93413707	41.85541595
OF-4	8/23/2023	Concrete	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.93442453	41.84993585
OF-82	8/23/2023	--	--	--	--	--	Could not locate due to dense vegetation (poison ivy present). Likely located between two wooden posts.	--	-72.93759558	41.86527763
OF-80	8/23/2023	Concrete	Flared End	8	Good	Fair	8" concrete flared end pipe discharges into seale alongside road. Some cracking observed in the concrete pipe.	No	-72.94189851	41.86344457
OF-78	8/23/2023	Concrete	Endwall	30	Good	Fair	Concrete culvert leading to other side of the road.	No	-72.94460244	41.86146427
OF-79	8/23/2023	Concrete	Endwall	30	Excellent	Poor	30" concrete end wall discharges into wooded area. No erosion control observed.	No	-72.94447668	41.86134384

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-77	8/23/2023	Concrete	Endwall	30	Excellent	Excellent	30" concrete endwall pipe discharges into wooded swale and subsequent stream.	No	-72.9450516	41.8608889
OF-76	8/23/2023	Concrete	Endwall	30	Excellent	Excellent	Roadside drainage swale and stream discharge from OF-76 to OF-77.	Nc	-72.94516838	41.86098926
OF-74	8/23/2023	Concrete	Endwall	30	Good	Good	--	Nc	-72.94862689	41.85862752
OF-72	8/23/2023	Concrete	Endwall	30	Good	Excellent	Concrete Endwall culvert. Transports stream across the street.	Nc	-72.94894131	41.85862083
OF-73	8/23/2023	Concrete	Endwall	30	Good	Excellent	Culvert transporting stream across the street.	Nc	-72.94892334	41.85860745
OF-75	8/23/2023	Concrete	--	12	--	--	Outfall itself is located on private property. Catch basins pictured discharge to outfall.	--	-72.95016301	41.85739644
OF-71	8/23/2023	Concrete	Endwall	18	Good	Excellent	18" concrete pipe leads from catch basin to stream with two culverts.	Nc	-72.95089963	41.85666715
OF-70	8/23/2023	Concrete	Flared End	24	Excellent	Excellent	Pipe discharges from catch basin to swale that leads to a retention pond.	No	-72.95215727	41.85472009



## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-49	8/24/2023	Precast	Endwall	12	Good	--	Can't locate outfall itself, pipe condition and characteristics taken from pipe inside catch basin.	No	-72.93898797	41.84321053
OF-48	8/24/2023	Concrete	Endwall	24	Excellent	Excellent	24" concrete endwall discharges to wooded stream.	No	-72.93871848	41.84337784
OF-50	8/24/2023	--	--	--	--	--	This portion of Swimming Pool Rd appears to have been closed off for some time.	--	-72.94142241	41.84494379
OF-54	8/24/2023	Concrete	Endwall	18	Good	Good	18" concrete endwall discharges into grassy drainage pit.	No	-72.94278785	41.84549253
OF-51	8/24/2023	Concrete	--	18	Good	--	18" concrete pipe discharges to grassy area with a catch basin.	No	-72.94588703	41.8447698
OF-52	8/24/2023	Concrete	--	24	Good	--	24" concrete pipe discharges behind home.	No	-72.94599483	41.84428128
OF-53	8/24/2023	Concrete	--	18	Excellent	--	18" concrete pipe discharges behind home into wooded area.	No	-72.94831248	41.84489695

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-125	8/24/2023	Concrete	Endwall	24	Excellent	Fair	Estimated 24" concrete pipe discharges into Nepaug River.	No	-72.92972634	41.82853284
OF-126	8/24/2023	Concrete	Endwall	24	Excellent	Good	24" concrete endwall discharges into the Nepaug River.	No	-72.92978922	41.82835211
OF-222	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.93000482	41.82161783
OF-132	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.93227756	41.82327804
OF-0	8/24/2023	Concrete	Flared End	12	Excellent	Good	12" concrete flared end discharges into wooded area.	No	-72.93490962	41.82762248
OF-1	8/24/2023	Concrete	Endwall	12	Excellent	Good	12" concrete pipe discharges into wooded area.	No	-72.93606845	41.82759571
OF-2	8/24/2023	Plastic	Endwall	18	Excellent	Excellent	18" plastic pipe discharges into rip rap swale.	No	-72.93702964	41.82782999
OF-3	8/24/2023	Concrete	--	18	--	--	Unable to locate outfall, on residential property.	No	-72.93795491	41.82762248

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-224	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.93685896	41.82718069
OF-217	8/24/2023	--	--	--	--	--	Located in highly vegetated area, could not locate. No catch basin to reference.	--	-72.92906159	41.81928811
OF-216	8/24/2023	--	--	--	--	--	Located in highly vegetated area, could not locate. No catch basin to reference.	--	-72.92915142	41.81921447
OF-218	8/24/2023	--	--	--	--	--	Located in highly vegetated area, could not locate. No catch basin to reference.	--	-72.9290526	41.81911405
OF-145	8/24/2023	Concrete	--	18	Good	--	18" concrete pipe likely discharges into adjacent wetlands area.	No	-72.91770688	41.82365961
OF-147	8/24/2023	Concrete	--	18	Good	--	18" concrete pipe likely discharges into adjacent wetlands area.	No	-72.91766197	41.82365961
OF-149	8/24/2023	Concrete	Endwall	12	Good	Excellent	12" concrete endwall that discharges into wetland area.	No	-72.91121206	41.82410812

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-148	8/24/2023	Concrete	Endwall	12	Good	Excellent	12" concrete endwall that discharges into wetland area.	Nc	-72.91126596	41.82410812
OF-156	8/24/2023	Plastic	Endwall	6	Good	Good	Possible house pipe (no catch basin in area) discharges into stream.	Nc	-72.9087956	41.8248244
OF-155	8/24/2023	--	--	--	--	--	No outfall seen. Could possibly be the culvert that is being called an outfall.	--	-72.90877763	41.82489134
OF-154	8/24/2023	--	--	--	--	--	No outfall seen. Could possibly be the culvert that is being called an outfall	--	-72.90880458	41.82498506
OF-153	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.90397164	41.82643097
OF-151	8/24/2023	Concrete	--	12	Good	--	Unable to locate outfall, on residential property. 12" concrete pipe discharges from catch basin to behind home.	Nc	-72.91105037	41.82884744

## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-152	8/24/2023	Concrete	--	12	--	--	Unable to locate outfall, on residential property. 12" concrete pipe discharges from catch basin to behind home.	No	-72.91288293	41.82948334
OF-150	8/24/2023	Concrete	--	18	Good	--	Unable to locate outfall, on residential property. 18" concrete pipe discharges from catch basin to behind home.	No	-72.91390701	41.82928253
OF-15	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.89038013	41.82934947
OF-16	8/24/2023	Concrete	--	18	Excellent	--	Unable to locate outfall, on residential property. 18" concrete pipe discharges from catch basin to behind home.	--	-72.89090115	41.82844582
OF-7	8/24/2023	Concrete	--	18	--	--	Unable to locate outfall, on residential property.	No	-72.87953747	41.81896677



## Town of Canton - 2023 Dry Weather Inspections

Outfall ID	Inspection Date	Material	Subtype	Diameter (Inches)	Condition	Erosion Control	Notes	Illicit Discharge	Longitude	Latitude
OF-8	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.8793578	41.81742026
OF-9	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.87910627	41.81644949
OF-11	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.87945662	41.81594067
OF-12	8/24/2023	--	--	--	--	--	Unable to locate outfall, on residential property.	--	-72.87948357	41.81520421
OF-13	8/24/2023	--	--	--	--	--	Located behind fenced area behind vegetation in photo.	--	-72.87639336	41.82190569
OF-144	8/24/2023	--	--	--	--	--	Cannot access due to being located on a busy road.	--	-72.92461493	41.82321779



**APPENDIX III**  
**2023 FARMINGTON RIVER WATERSHED ASSOCIATION SAMPLING**  
**RESULTS**

Farmington River Watershed Association  
(FRWA)  
Town of Canton:  
**2023 Chlorine Sampling**

ID	Sampling Date	Latitude	Longitude	Proximity to Location	Location Description	General Parameters							
						Chloride (ppm)	NaCl (%)	Conductivity (uS/cm)	Specific Conductivity	Salinity (psu)	Total Dissolved	Turbidity (NTU)	Chlorine (mV)
BA-73	2/7/2023	41.86063	-72.91324	us	culvert on Barbourtown Rd	--	--	52.4	90.5	0.04	--	0.38	--
	3/1/2023					--	--	72.2	118.1	0.06	--	1.52	--
	4/5/2023					17	--	63	91.6	0.04	--	--	<b>181.3</b>
	5/3/2023					11	--	49.2	69.1	0.03	--	1.03	<b>199.8</b>
	6/13/2023					19	--	82.9	99.8	0.05	--	0.84	<b>189.2</b>
	6/21/2023					10	--	78.9	94.2	0.04	--	0.97	<b>191.1</b>
	7/24/2023					15	--	72.8	82.9	0.04	--	0.47	<b>189.2</b>
	8/16/2023					14	--	70.9	82	0.04	--	3.64	<b>185.2</b>
CB-3220	2/7/2023	41.85866	-72.91343	ds	Barbourtown Rd bridge by CBP School	--	--	64.5	114.4	0.05	--	0.61	--
	3/1/2023					--	--	96.7	166.9	0.08	--	0.54	--
	4/5/2023					25	--	83.1	119.1	0.06	--	--	<b>172.2</b>
	5/3/2023					17	--	62.9	89.6	0.04	--	1.44	<b>189.9</b>
	6/21/2023					16	--	127.6	144.8	0.07	--	3.73	<b>181</b>
	7/24/2023					18	--	86.8	96.9	0.04	--	1.48	<b>184.4</b>
	8/16/2023					18	--	83.1	95.2	0.04	--	9.91	<b>179.6</b>
	8/16/2023					--	--	249	419.9	0.2	--	1.19	--
JB-4120	2/7/2023	41.82165	-72.88339	at	Shops at Farmington Valley	--	--	287.5	457.4	0.22	--	9.89	--
	3/1/2023					70	--	202.9	284	0.14	--	--	<b>150.1</b>
	4/5/2023					36	--	130.4	180.7	0.09	--	1.56	<b>174.5</b>
	5/3/2023					96	--	424.5	499.3	0.24	--	18	<b>145.2</b>
	6/21/2023					90	--	322.5	366.8	0.18	--	1.75	<b>148.6</b>
	7/24/2023					37	--	183.8	209.5	0.1	--	141.02	<b>163.6</b>
	8/16/2023					--	--	183.8	209.5	0.1	--	141.02	<b>163.6</b>
	8/16/2023					--	--	183.8	209.5	0.1	--	141.02	<b>163.6</b>

**Notes:**

\*All highlighted bacterial concentrations are required for follow-up investigation

\*Highlighting is based on the following criteria;

1. Ammonia: >0.5 mg/L
2. Surfactants (MBAS): >0.25 mg/L
3. Chlorine: detectable level
4. Conductivity: >1,500 uS
5. Salinity: ≥ 0.5 ppt
6. Turbidity: >5 NTU

\*ds - downstream, us - upstream, at - At

**Farmington River Watershed Association  
(FRWA)**

**Town of Canton:**

**2023 Bacteria Sampling**

ID	Sampling Date	Latitude	Longitude	Proximity to Location	Landmark/Facility Name	Bacterial	
						Escherichia Coli	Total Coliforms
						MPN/100mL	
CB-28	6/13/2023	41.836164	-72.929891	ds	Rt 44	77.6	<b>1986.3</b>
	7/18/2023					<b>410.6</b>	<b>&gt;2419.6</b>
	8/1/2023					56.5	<b>2419.6</b>
	8/15/2023					<b>1413.6</b>	<b>&gt;2419.6</b>
	8/29/2023					54.8	<b>2419.6</b>
	9/6/2023					47.1	<b>&gt;2419.6</b>
BA-73	6/13/2023	41.86054	-72.91323	ds	Barbourtown Rd	<b>387.3</b>	<b>2419.6</b>
	7/18/2023					201.4	<b>&gt;2419.6</b>
	8/1/2023					81.3	<b>2149.6</b>
	8/15/2023					<b>&gt;2419.6</b>	<b>&gt;2419.6</b>
	8/29/2023					98.7	<b>&gt;2419.6</b>
	9/6/2023					103.9	<b>&gt;2419.6</b>
CB-4140	6/13/2023	41.86497	-72.90848	ds	Meadow Rd	206.4	<b>2419.6</b>
	7/18/2023					161.6	<b>&gt;2419.6</b>
	8/1/2023					115.3	<b>&gt;2419.6</b>
	8/15/2023					<b>1553.1</b>	<b>&gt;2419.6</b>
	8/29/2023					101.7	<b>&gt;2419.6</b>
	9/6/2023					<b>344.8</b>	<b>&gt;2419.6</b>
CB-8560	6/13/2023	41.89439	-72.89397	at	NCVFA Firehouse	118.7	<b>1986.3</b>
	7/18/2023					74.4	<b>&gt;2419.6</b>
	8/15/2023					<b>1413.6</b>	<b>&gt;2419.6</b>
	8/22/2023					151.5	<b>2419.6</b>
	8/29/2023					162.4	<b>&gt;2419.6</b>
	9/6/2023					114.5	<b>&gt;2419.6</b>

**Notes:**

\* All highlighted bacterial concentrations are required for follow-up investigations at associated outfall.

\* Highlighting is based on the following criteria;

1. E. Coli >235/100mL for Swimming Areas, and >410 col/100mL for all others.
2. Total Coliform > 500 col/100mL
3. Fecal Coliform >31 col/100 mL for Class SA and >260 col/100mL for Class SB
4. Enterococci >104 col/100mL for Swimming Areas and >500 col/100mL for all others.

\* ds - downstream, us - upstream, at - At

**APPENDIX IV**  
**2023 CATCHMENT ASSESSMENT AND PRIORITY RANKINGS**



### Field Inspection

**Inspector Name:** Danielle Whitcomb/Rosie Sibilio

**Date:** 12/12/2023

**Weather:** 35-40 °F, Sunny

**Outfall ID:** OF-40/OF-39

**Catchment ID:** 4300-16-1

**Impairment:** Phosphorous, Nitrogen, E Coli, Total Coliform, Other (Circle all that apply)

### Outfall Information:

Item/Condition to be checked	Observations
Outfall description	Two (2) 24" reinforced concrete pipes that discharge directly into a wooded swale along Camille Lane. Both outfalls are in good condition and do not appear to be blocked or compromised.  The outfall on the right (OF-39) collects stormwater from four (4) upgradient catch basins along Morgan Road. The outfall on the left (OF-40) collects stormwater that flows into a curb inlet on the left side of Morgan Road.
Where is the outfall located?	Both outfalls are located at the intersection between Morgan Road and Camille Lane.
Where does the outfall discharge to?	Both outfalls discharge to a wooded swale along Camille Lane.
How many catch basins are connected to the outfall? Where are they located?	Four (4) catch basins that are located on Morgan Road between Overlook Drive and Camille Lane.
What is the direction of flow within the catchment.	Flow within the catchment is southwest along Morgan Road and Camille Lane.
What is the primary land use within the catchment?	The land surrounding the catch basins is primarily wooded with some residential housing. Most of the stormwater is directed to the catch basins and curb inlet from the main road.
What impervious cover is within the catchment?	Impervious cover within the catchment consists of rooftops and driveways of residential properties, and asphalt-pavement on Morgan Road and Camille Lane.

Notes:



**Existing Conditions:**

Item/Condition to be checked	Yes	No	Notes
Were there any illicit discharges observed at the time of inspection?		X	None were observed during the inspection.
Are there any combined sewer systems within the catchment?		X	
Are there any nearby sanitary sewer lines?		X	
Are there any unidentified pipes coming into or going out of any catch basins?	X		Unidentified piping was observed in CB-804, likely connected to a foundation drain at 19 Morgan Road.
Do any catch basins within the connection exhibit signs of impairment?		X	
Any potential MS4 maintenance issues?		X	All the pipes entering and exiting the catch basins were clear of debris.
Are there any manholes located within the catchment?		X	
Any natural contributors?		X	
Are there any business or commercial activities within the catchment that could contribute to outfall impairment?		X	
Any nearby properties with land use / development that could impair the stormwater?		X	
Any additional observations?	X		Foam was observed in CB-804 where an unidentified pipe from 19 Morgan Road property was present.

Notes:





### Connected Catch Basins:

Catch Basin ID	Observations
CB-804	The catch basin was observed to be in good condition with an unidentified pipe connected to 19 Morgan Road discharging into it. Foam was observed on the surface of the discharge.
CB-806	The catch basin was observed to be in good condition and receives discharge from CB-804.
CB-807	The catch basin was observed to be in good condition and discharges stormwater to CB-806.
CB-805	The catch basin was observed to be in good condition and receives discharge from CB-806 and discharges to OF-39 across Camille Lane.
OF-39	The Outfall to the left of OF-40. This outfall collects stormwater discharge from CB-805.
OF-40	The Outfall to the right of OF-39. This outfall collects stormwater runoff coming from the left side of Morgan Road via curb inlet and drainage pipe.

### Contributing Parcels:

Parcel ID	Observations
26-377-0012	Residential house with some wooded areas.
26/377-0016	Residential house with some wooded areas
26-377-0019	Residential house.
26-377-0015	Residential house.
26-377-0013	Access road to electrical substation.

Notes: Most of the parcels were residential houses with some wooded areas. One homeowner indicated (via signage) they are pet owners. Pet owners could possibly contribute to the total coliform in the outfalls by not picking up after the pets.

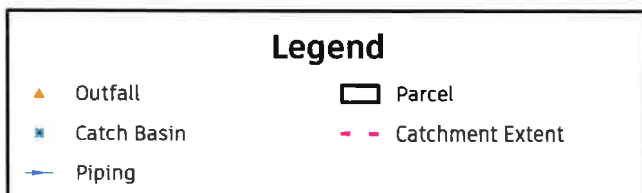


### **Catchment Assessment:**

Further investigation needed? ☒ YES ☐ NO

**Rationale:** Atlas staff noted there were additional pipes discharging into CB-804. Samples collected from OF-40 indicated high levels of Total Coliforms and E. Coli over the past three years. Based on these observations, it is possible there is illicit discharges coming from the pipes. These pipes seem to be connected to the residential houses on Camille Lane, potentially from the house at 11 Camille Lane. In addition, septic failure data was obtained. In 2021, a failing septic tank was replaced 0.1 miles from OF-39 and OF-40. In 2023, a sewage overflow occurred 0.2 miles from the outfalls, with the leaching field needing to be replaced afterwards. These and other potentially aging septic systems may be contributing to the elevated bacteria levels in these outfalls.

Atlas recommends sampling all four catch basins and assessing if there is runoff coming from the additional pipes during a heavy rain event to determine if OF-40 is impacted by illicit discharges.

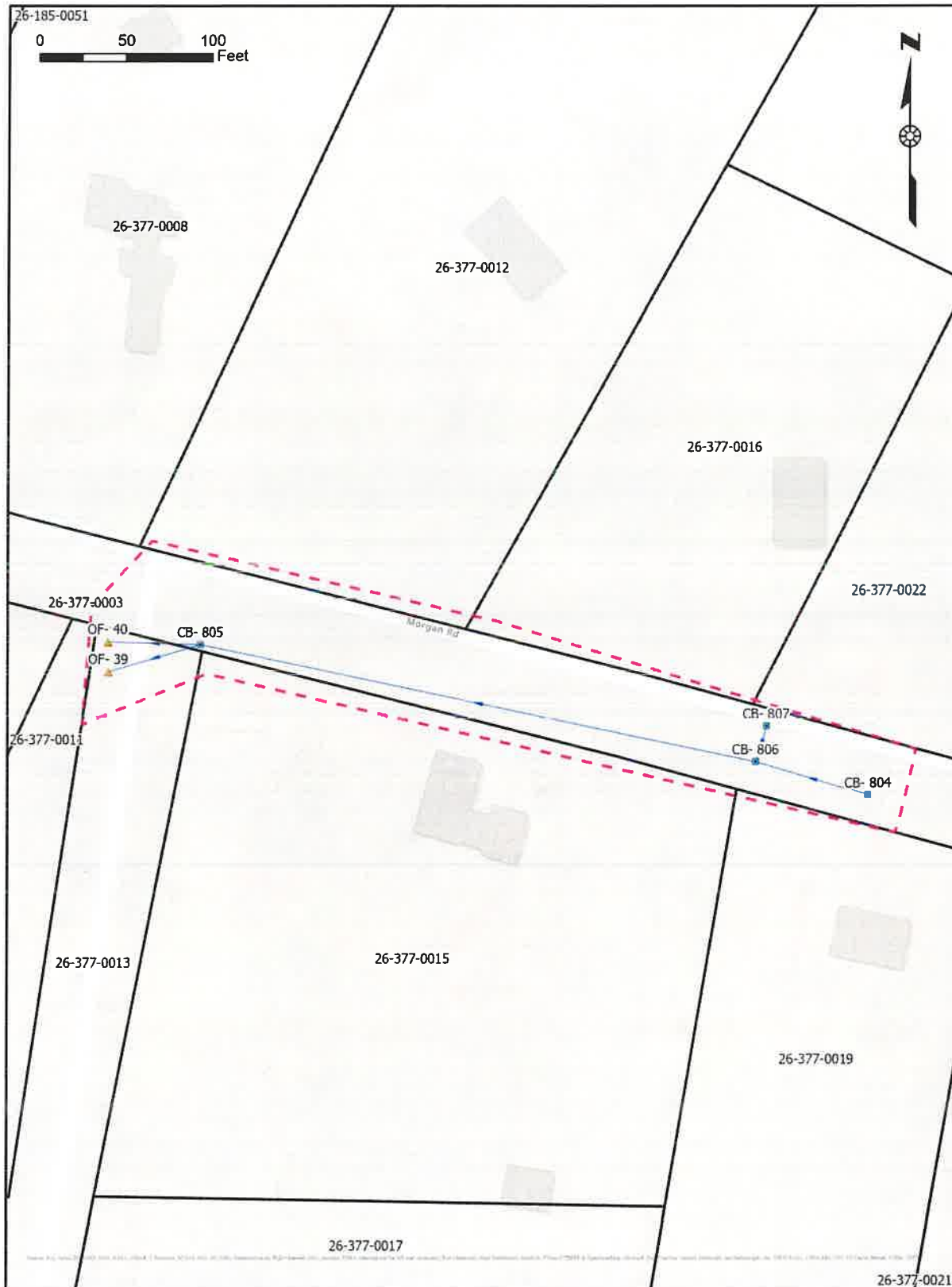


# Town of Canton

2023 Annual Report  
OF-39/40 Catchment  
Investigation







**Legend**

- ▲ Outfall
- Catch Basin
- Piping
- ▭ Parcel
- - Catchment Extent

**TABLE 1**  
**Stormwater Sampling Data**  
Town of Canton MS4  
OF-39/40  
Catchment Investigation

Outfall ID	Inspection Date	Condition	Discharge Description	General Parameters							Bacterial	
				Temperature (°C) <sup>(1)</sup>	pH (SU) <sup>(3)</sup>	Dissolved Oxygen (mg/L)	SPC (uS/cm)	ORP (mV)	Turbidity (NTU)	Odor	Escherichia Coli	Total Coliforms
											MPN/100mL	
OF-39	6/14/2021	Good	Light yellow	17.8	5.76	6.53	85.3	-188.1	9.28	No	<b>933</b>	<b>&gt;24,200</b>
OF-40	6/14/2021	Good	Yellow, foamy	18	5.93	7.01	179.8	-195.6	15.96	No	<b>4,110</b>	<b>&gt;24,200</b>
	9/1/2021	Excellent	Clear, minimal suspended particles, significant foaming	20	6.89	6.01	204.7	142.8	7.45	No	120	<b>&gt;24,200</b>
	8/26/2022	Good	Clear, heavy foam, organic odor	22.9	6.11	5.08	221.2	77.3	18.35	Yes	<b>5,170</b>	<b>&gt;24,200</b>
	9/18/2023	Excellent	Foamy	20.1	7.73	5.4	16.6	109.6	16.08	No	106	<b>&gt;24,200</b>

**Notes:**

- \* All highlighted bacterial concentrations are required for follow-up investigations.
- \* Highlighting is based on the following criteria;
- \* NA = Not Analyzed
- 1. E. Coli >235/100mL for Swimming Areas, and >410 col/100mL for all others.
- 2. Total Coliform > 500 col/100mL.
- 3. Fecal Coliform >31 col/100 mL for Class SA and >260 col/100mL for Class SB
- 4. Enterococci >104 col/100mL for Swimming Areas and >500 col/100mL for all others.



### Field Inspection

**Inspector Name:** Danielle Whitcomb/Rosie Sibilio

**Date:** 12/12/2023

**Weather:** 35-40 °F, Sunny

**Outfall ID:** OF-104

**Catchment ID:** 4309-00-2-R4

**Impairment:** Phosphorous, Nitrogen, E Coli, Total Coliform, Other (Circle all that apply)

### Outfall Information:

Item/Condition to be checked	Observations
Outfall description	A subsurface pipe connected to CB-103 discharges to an inlet on the side of the road. The Outfall is in poor condition. Sediment has accumulated in the inlet swale as well as upgradient along the side of Barbourtown Road.
Where is the outfall located?	On Barbourtown Road, northeast of Cow's Coop (24 Barbourtown Road).
Where does the outfall discharge to?	The outfall discharges directly to an ephemeral stream (unnamed) and eventually to the Cherry Brook to the east.
How many catch basins are connected to the outfall? Where are they located?	CB-103 is located immediately west of the outfall across Barbourtown Road.
What is the direction of flow within the catchment.	Water flows south along Barbourtown Road via sheet flow towards CB-103 and the outfall.
What is the primary land use within the catchment?	The surrounding land consists of residences and agricultural land. The property directly east of the outfall houses cattle and horses.
What impervious cover is within the catchment?	The impervious cover is the result of the residential houses, outbuildings, and farm buildings. They include paved roads, driveways, roofs, and barns.

Notes: During the inspection cow hoofprints were found in the mud where the inlet discharges the stormwater. The proximity of the cows and horses is likely the cause for the high total coliforms detected at this outfall.





### Existing Conditions:

Item/Condition to be checked	Yes	No	Notes
Were there any illicit discharges observed at the time of inspection?		X	None were observed during the inspection.
Are there any combined sewer systems within the catchment?		X	
Are there any nearby sanitary sewer lines?		X	
Are there any unidentified pipes coming into or going out of any catch basins?		X	
Do any catch basins within the connection exhibit signs of impairment?		X	
Any potential MS4 maintenance issues?	X		CB-103 was observed to contain significant leaf litter.
Are there any manholes located within the catchment?		X	
Any natural contributors?		X	Areas upgradient of OF-104 were observed to have cattle and horses.
Are there any business or commercial activities within the catchment that could contribute to outfall impairment?	X		
Any nearby properties with land use / development that could impair the stormwater?		X	Residential farms with livestock upgradient of the outfall and catch basin.
Any additional observations?	X		Cattle hoofprints were observed in the mud where the inlet discharges the stormwater.

Notes: During the inspection cow hoofprints were found in the mud where the inlet discharges the stormwater. The proximity of the cows and horses is likely the cause for the high total coliforms detected at this outfall.



### Connected Catch Basins:

Catch Basin ID	Observations
CB-103	Flows east to OF-104.

### Contributing Parcels:

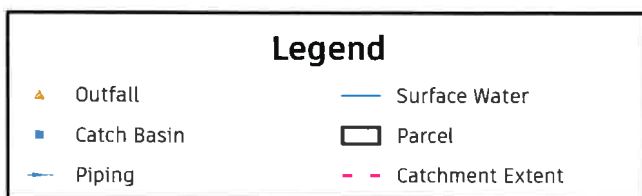
Parcel ID (MBL)	Observations
19/119/0035	Pastures for cows and horses with residential houses and some wooded area.
18/119/0022	Cow's Coop agricultural plot containing cow pasture and a farm stand.
19/119/0035	Residential house with wooded land.
19/119/0059	Cleared plot of land with small residential house.
18/119/0054	Small residential house on cleared plot of land.
15/557/0137	Small residential house.
18/119/0044	Large plot of wooded land.

Notes:

### Catchment Assessment:

Further investigation needed? ☒ YES ☐ NO

**Rationale:** Atlas staff noted there was a pasture with cattle and horses on land adjacent to the outfall (Parcel No. 19/119/0059). Samples collected from OF-104 indicated high levels of Total Coliforms and E. Coli over the past three years. Based on these observations, it is likely the runoff from the pastures is flowing to CB-103 and then eventually OF-104. Atlas recommends sampling CB-103 and assessing the runoff coming from the pastures during a heavy rain event to determine if OF-104 is impacted by the livestock.

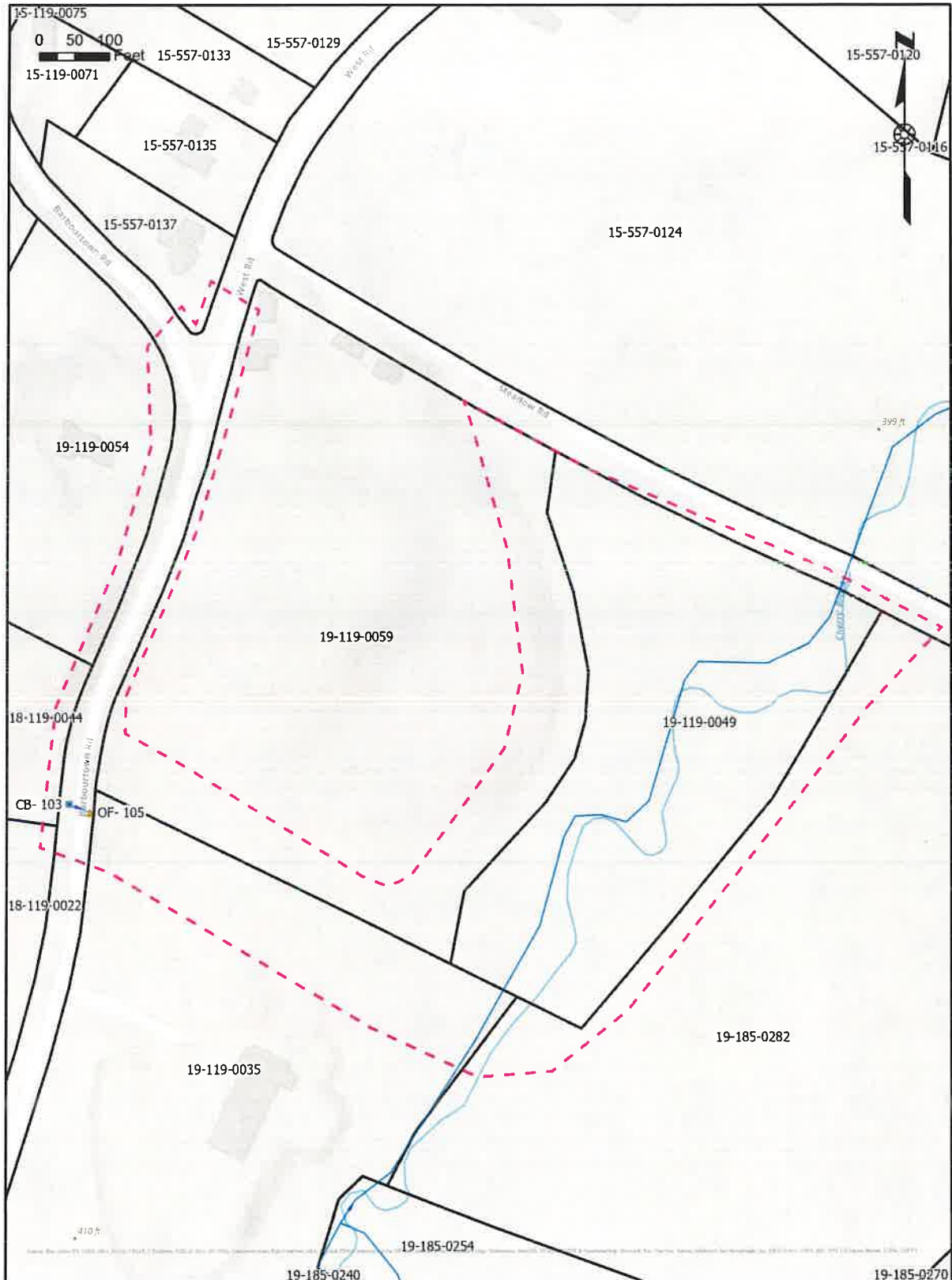


# Town of Canton

## 2023 Annual Report

### OF-104 Catchment Investigation





# Town of Canton

## 2023 Annual Report

### OF-104 Catchment Investigation





TABLE 1  
Stormwater Sampling Data  
Town of Canton MS4  
OF-104  
Catchment Investigation

Outfall ID	Inspection Date	Condition	Discharge Description	General Parameters							Bacterial	
				Temperature (°C) <sup>(3)</sup>	pH (SU) <sup>(3)</sup>	Dissolved Oxygen (mg/L)	SPC (uS/cm)	ORP (mV)	Turbidity (NTU)	Odor	Escherichia Coli	Total Coliforms
											MPN/100mL	
OF-104	6/14/2021	Poor	Dark yellow, foamy	17.3	5.79	17.3	61.4	-194.2	51.17	No	15,500	>24,200
	9/1/2021	Good	Clear/lightly opaque, suspended solids, slight septic odor	19.9	6.69	6.27	49.2	159.7	151	Yes	3,080	>24,200
	8/26/2022	Excellent	Mostly clear, little seidment, light brown color	24.5	6.06	4.92	27.8	156.4	39.73	No	15,500	>24,200
	9/18/2023	Good	Yellow tint	19.8	6.93	5.52	35.9	125.2	77.92	No	8,660	>24,200

**Notes:**

- \* All highlighted bacterial concentrations are required for follow-up investigations.
- \* Highlighting is based on the following criteria;
- \* NA = Not Analyzed
- 1. E. Coli >235/100mL for Swimming Areas, and >410 col/100mL for all others.
- 2. Total Coliform > 500 col/100mL
- 3. Fecal Coliform >31 col/100 mL for Class SA and >260 col/100mL for Class SB
- 4. Enterococci >104 col/100mL for Swimming Areas and >500 col/100mL for all others.



### Field Inspection

**Inspector Name:** Danielle Whitcomb/Rosie Sibilio

**Date:** 12/12/2023

**Weather:** 35-40 °F, Sunny

**Outfall ID:** OF-107/OF-108

**Catchment ID:** 4309-00-2-R5

**Impairment:** Phosphorous, Nitrogen, E Coli, Total Coliform, Other (Circle all that apply)

### Outfall Information:

Item/Condition to be checked	Observations
Outfall description	The outfalls consist of two (2) 24" reinforced concrete pipes that discharge directly into Cherry Brook. Both outfalls are in good condition and do not appear to be blocked or compromised. OF-107 collects stormwater from three (3) upgradient catch basins along the northern side of West Mountain Road. OF-108 on the left collects stormwater that flows from one (1) catch basin on the southern side of West Mountain Road.
Where is the outfall located?	Both are located on West Mountain Road beneath the bridge over Cherry Brook.
Where does the outfall discharge to?	Both outfalls flow directly into Cherry Brook.
How many catch basins are connected to the outfall? Where are they located?	Three (3) catch basins, located on West Mountain Road, are connected to Outfall-107. One (1) catch basin, located on West Mountain Road, is connected to Outfall-108.
What is the direction of flow within the catchment.	Water flows west to east in the catch basins to OF-107. Water flows south to north across West Mountain Road to OF-108.
What is the primary land use within the catchment?	The land surrounding the catch basins is primarily wooded with some residential housing. Most of the stormwater is directed to the catch basins via sheet flow across West Mountain Road.
What impervious cover is within the catchment?	Impervious cover includes rooftops, asphalt-paved driveways, and pavement along West Mountain Road.

Notes: The stormwater from both outfalls directly discharges into Cherry Brook.





### Existing Conditions:

Item/Condition to be checked	Yes	No	Notes
Were there any illicit discharges observed at the time of inspection?		X	None were observed during the inspection.
Are there any combined sewer systems within the catchment?		X	
Are there any nearby sanitary sewer lines?		X	
Are there any unidentified pipes coming into or going out of any catch basins?		X	
Do any catch basins within the connection exhibit signs of impairment?		X	
Any potential MS4 maintenance issues?		X	All the pipes entering and exiting the catch basins were clear of debris.
Are there any manholes located within the catchment?		X	
Any natural contributors?		X	
Are there any business or commercial activities within the catchment that could contribute to outfall impairment?		X	
Any nearby properties with land use / development that could impair the stormwater?		X	
Any additional observations?		X	

Notes:

**Connected Catch Basins:**

Catch Basin ID	Observations
CB-1178	Flows north towards OF-108
CB-1179	Flows east toward OF-107
CB-1181	Flows east toward CB-1179
CB-1182	Flows north toward CB-1181

**Contributing Parcels:**

Parcel ID	Observations
18/560/0007	Wooded land with a large field and residence on northern portion.
18/560/0004	Residence with detached garage.







Notes:

**Catchment Assessment:**

Further investigation needed? ☒ YES ☐ NO

**Rationale:** Atlas staff noted the parcels near the catch basins were mostly wooded. Samples collected from OF-107 and OF-108 indicated high levels of Total Coliforms and E. Coli over the past three years. Based on these observations, it is possible that runoff from West Mountain Road is contaminated. Atlas recommends sampling all four catch basins and assessing where the bacteria could be originating from during a heavy rain event. In addition to this an investigation, septic failure data was obtained. An aging septic tank was replaced on West Mountain Road, approximately 0.7 miles from OF-107 and OF-108. It is possible that this and other aging septic systems that have not yet been replaced in the area are contributing to the elevated bacterial levels from the outfalls.



Legend	
	Outfall
	Catch Basin
	Piping
	Surface Water
	Parcel
	Catchment Extent

# Town of Canton

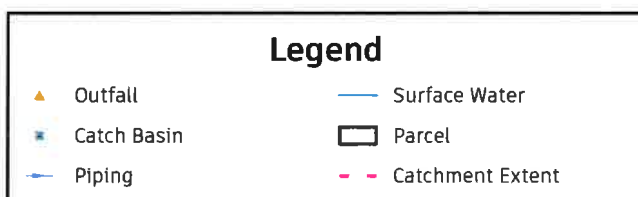
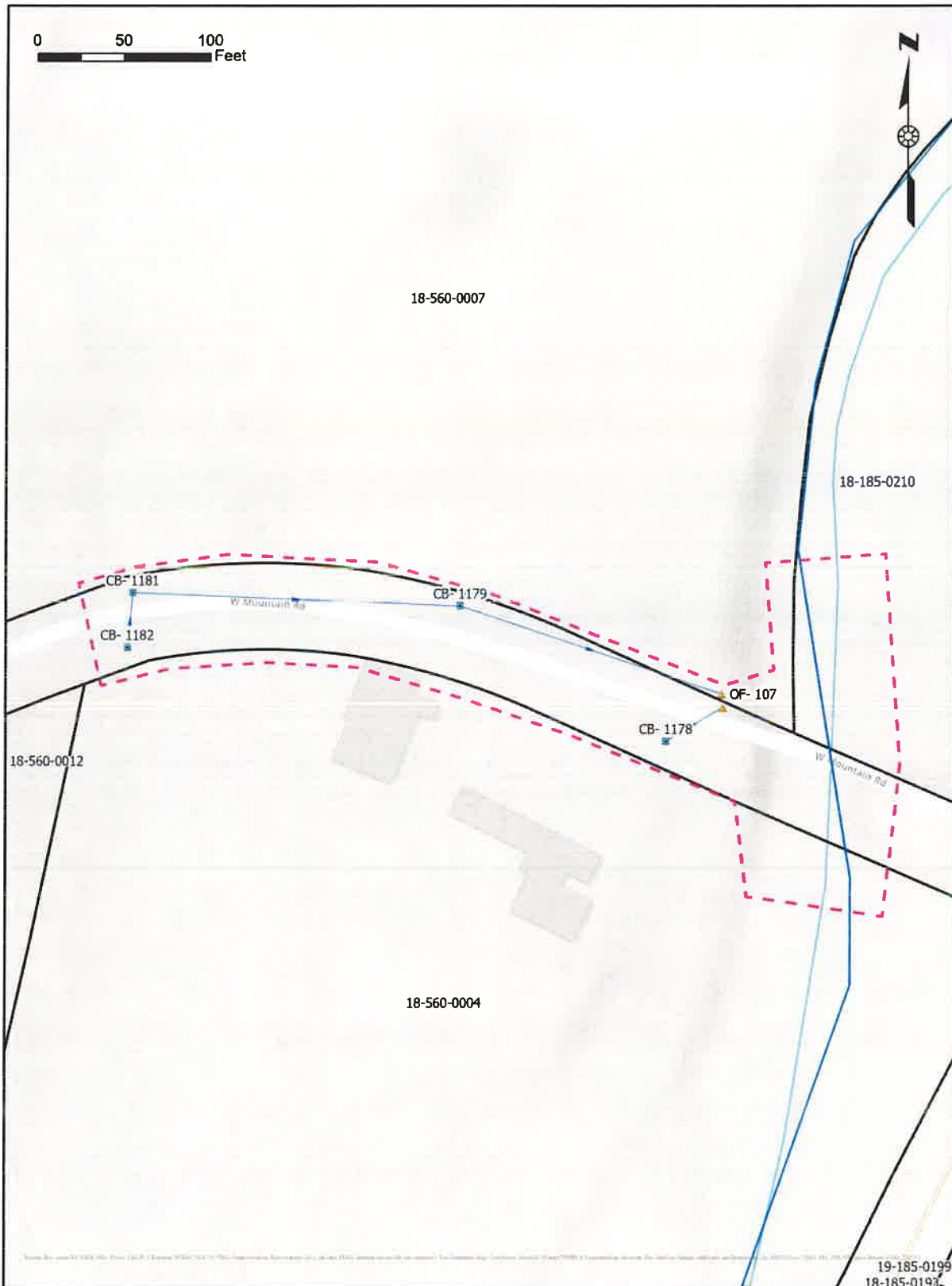
## 2023 Annual Report

### OF-107/108 Catchment

### Investigation







# Town of Canton

## 2023 Annual Report

### OF-107/108 Catchment Investigation



**TABLE 1**  
**Stormwater Sampling Data**  
Town of Canton MS4  
OF-107/108  
Catchment Investigation

Outfall ID	Inspection Date	Condition	Discharge Description	General Parameters							Bacterial	
				Temperature (°C) <sup>(3)</sup>	pH (SU) <sup>(4)</sup>	Dissolved Oxygen (mg/L)	SPC (uS/cm)	ORP (mV)	Turbidity (NTU)	Odor	Escherichia Coli	Total Coliforms
											MPN/100mL	
OF-107	6/14/2021	Fair	Dark yellow	17.1	5.96	7.17	86.9	-192.5	21.03	No	<b>2,060</b>	<b>&gt;24,200</b>
	9/1/2021	Good	Slight oil sheen and foam	18.6	6.37	5.82	63.4	164.8	6.72	No	<b>556</b>	<b>&gt;24,200</b>
	9/22/2022	Fair	Clear	18.9	7.31	5.61	62.4	162.5	13.2	No	<b>10,500</b>	<b>&gt;24,200</b>
	8/25/2023	Good	--	19.7	7.35	5.3	18.96	114.21	35.98	No	<b>1,350</b>	<b>&gt;24,200</b>
OF-108	6/14/2023	Fair	Dark yellow	17.3	5.96	6.58	90.3	-195.2	12.68	No	<b>1,970</b>	<b>&gt;24,200</b>
	9/1/2021	Excellent	Yellow tint, opaque	19.6	7.16	19.7	20	128.9	14.7	No	<b>908</b>	<b>&gt;24,200</b>
	9/22/2022	Fair	Clear	17.3	6.41	6.42	21.2	175.8	14.03	No	<b>7,270</b>	<b>&gt;24,200</b>
	8/25/2023	Good	--	19.7	7.41	5.55	25.3	108.7	18.37	No	199	<b>&gt;24,200</b>

**Notes:**

- \* All highlighted bacterial concentrations are required for follow-up investigations.
- \* Highlighting is based on the following criteria;
- \* NA = Not Analyzed
- 1. E. Coli >235/100mL for Swimming Areas, and >410 col/100mL for all others.
- 2. Total Coliform > 500 col/100mL
- 3. Fecal Coliform >31 col/100 mL for Class SA and >260 col/100mL for Class SB
- 4. Enterococci >104 col/100mL for Swimming Areas and >500 col/100mL for all others.

**Town of Canton**  
**2023 Catchment Assessment**  
**and Priority Ranking Matrix**

[illegible][illegible]



**APPENDIX VI**  
**LABORATORY ANALYTICAL REPORTS**



Tuesday, August 29, 2023

Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
SDG ID: GCO83157  
Sample ID#s: CO83157 - CO83158

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

August 29, 2023

SDG I.D.: GCO83157

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE

Client Id	Lab Id	Matrix
OF-105	CO83157	SURFACE WATER
OF-107	CO83158	SURFACE WATER



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

August 29, 2023

FOR: Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

### Sample Information

Matrix: SURFACE WATER  
Location Code: ATC-EHDAS  
Rush Request: 48 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

### Date

08/25/23  
08/25/23

### Time

9:50  
14:04

### Laboratory Data

SDG ID: GCO83157  
Phoenix ID: CO83157

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
Client ID: OF-105

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Escherichia Coli	185	10	MPN/100 mls	10	08/25/23 15:30	RM/KDB	SM9223B-16
Total Coliforms	>24200	10	MPN/100 mls	10	08/25/23 15:30	RM/KDB	SW9223B-16

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

August 29, 2023

Reviewed and Released by: Ethan Lee, Project Manager



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

August 29, 2023

FOR: Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

### Sample Information

Matrix: SURFACE WATER  
Location Code: ATC-EHDAS  
Rush Request: 48 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

Date Time

08/25/23 10:25  
08/25/23 14:04

### Laboratory Data

SDG ID: GC083157  
Phoenix ID: CO83158

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
Client ID: OF-107

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Escherichia Coli	1350	10	MPN/100 mls	10	08/25/23 15:30	RM/KDB	SM9223B-16
Total Coliforms	>24200	10	MPN/100 mls	10	08/25/23 15:30	RM/KDB	SW9223B-16

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

August 29, 2023

Reviewed and Released by: Ethan Lee, Project Manager

Tuesday, August 29, 2023

Criteria: CT: GBM, GWP, RC, SWP

State: CT

## Sample Criteria Exceedances Report

GCO83157 - ATC-EHDAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----------------	-------------------

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.





## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

**Laboratory Name:** Phoenix Environmental Labs, Inc.

**Client:** ATC Associates

**Project Location:** TOWN OF CANTON MS4 SW COMPLI **Project Number:**

**Laboratory Sample ID(s):** CO83157, CO83158

**Sampling Date(s):** 8/25/2023

**List RCP Methods Used (e.g., 8260, 8270, et cetera)** None

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1A	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1B	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Ethan Lee Position: Project Manager

Printed Name: Ethan Lee Date: Tuesday, August 29, 2023

Name of Laboratory Phoenix Environmental Labs, Inc.

**This certification form is to be used for RCP methods only.**



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## RCP Certification Report

August 29, 2023

SDG I.D.: GCO83157

---

### ***SDG Comments***

Temperature above 6C:

The samples were received in a cooler with ice packs. The samples were delivered to the Laboratory within a short period of time after sample collection. Therefore no significant bias is suspected.

No RCP analyses are included with this report. The RCP narrative is provided at the request of the client.

### ***Temperature Narration***

The samples were received at 18.0C with cooling initiated.

(Note acceptance criteria for relevant matrices is above freezing up to 6°C)



# CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: info@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-8726

Coolant: ☒ IPK ☐ ICE ☐ No ☐ No

Temp 18.0 C Pg of

## Data Delivery/Contact Options:

☐ Fax: \_\_\_\_\_  
☐ Phone: \_\_\_\_\_  
☒ Email: danielle.whitcomb@oneatlas.com

Customer: Atlas Technical Consultants, LLC  
Address: 290 Roberts Street  
East Hartford, CT 06108

Project: Town of Canton MS4 SW Compliance  
Report to: Danielle Whitcomb  
Invoice to: Atlas  
QUOTE #

Project P.O:

**This section MUST be  
completed with  
Bottle Quantities.**

Client Sample - Information - Identification  
Sampler's Signature: *[Signature]* Date: 8-25-23

Matrix Code:  
GW=Ground Water SW=Surface Water WW=Waste Water  
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe Oil=Oil  
B=Bulk L=Liquid

Analysis  
Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled
	OF-104	SW		
	OF-206	SW		
	OF-40	SW		
83157	OF-105	SW	8-25-23	9:50
83158	OF-107	SW	8-25-23	10:25
	OF-108	SW		

E.Coli	T.Coli	GI Amber 8 oz. w/H3PO4	Soil VOCs Vials [1] methanol [2] H2O	GI Soil container ( 8 ) oz	GI Soil container ( 8 ) oz	40 ml VOA Vial [1] As is [X] HCl	PL Amber 1000ml [X] As is [X] H2SO4	PL As is [1] 250ml [1] 500ml [1] 1000ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle white	Bacteria Bottle as is
X	X										2	
X	X										2	
X	X										2	
X	X										2	
X	X										2	
X	X										2	

AJ  
AJ  
AJ  
AJ

Relinquished by: *[Signature]* Accepted by: *H. Corman*  
*H. Coleman* *Quilly*

Date: 8-25-23 13:32  
8/25/23 1404

RI  
☐ Direct Exposure  
(Residential)  
☐ GW  
☐ Other

CT  
☒ RCP Cert  
☐ GW Protection  
☐ SW Protection  
☐ GA Mobility  
☐ GB Mobility  
☐ Residential DEC  
☐ I/C DEC  
☐ Other

MA  
☐ MCP Certification  
☐ GW-1  
☐ GW-2  
☐ GW-3  
☐ S-1  
☐ S-2  
☐ S-3  
☐ MWRA eSMART  
☐ Other

## Data Format

☐ Excel  
☒ PDF  
☐ GIS/Key  
☐ EQulS  
☐ Other

## Data Package

☐ Tier II Checklist  
☐ Full Data Package\*  
☒ Phoenix Std Report  
☐ Other

Comments, Special Requirements or Regulations:

CT DAS Rates

## Turnaround:

☐ 1 Day\*  
☐ 2 Days\*  
☐ 3 Days\*  
☐ Standard  
☐ Other

\* SURCHARGE APPLIES

State where samples were collected: CT

\* SURCHARGE APPLIES



Tuesday, September 19, 2023

Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
SDG ID: GCP02119  
Sample ID#s: CP02119 - CP02122

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

September 19, 2023

SDG I.D.: GCP02119

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE

---

Client Id	Lab Id	Matrix
OF-104	CP02119	SURFACE WATER
OF-206	CP02120	SURFACE WATER
OF-40	CP02121	SURFACE WATER
OF-108	CP02122	SURFACE WATER



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

September 19, 2023

FOR: Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

Sample Information

Matrix: SURFACE WATER  
Location Code: ATC-EHDAS  
Rush Request: 48 Hour  
P.O.#:

Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

Date

09/18/23  
09/18/23

Time

12:50  
15:26

Laboratory Data

SDG ID: GCP02119  
Phoenix ID: CP02119

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
Client ID: OF-104

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Escherichia Coli	8660	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SM9223B-16
Total Coliforms	>24200	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SW9223B-16

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

September 19, 2023

Reviewed and Released by: Ethan Lee, Project Manager





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

September 19, 2023

FOR: Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

### Sample Information

Matrix: SURFACE WATER  
Location Code: ATC-EHDAS  
Rush Request: 48 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

### Date

09/18/23  
09/18/23

### Time

13:00  
15:26

## Laboratory Data

SDG ID: GCP02119

Phoenix ID: CP02120

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
Client ID: OF-206

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Escherichia Coli	1160	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SM9223B-16
Total Coliforms	>24200	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SW9223B-16

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

September 19, 2023

Reviewed and Released by: Ethan Lee, Project Manager



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

September 19, 2023

FOR: Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

### Sample Information

Matrix: SURFACE WATER  
Location Code: ATC-EHDAS  
Rush Request: 48 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

### Date

09/18/23  
09/18/23

### Time

11:50  
15:26

## Laboratory Data

SDG ID: GCP02119  
Phoenix ID: CP02121

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
Client ID: OF-40

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Escherichia Coli	106	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SM9223B-16
Total Coliforms	>24200	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SW9223B-16

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**September 19, 2023**

**Reviewed and Released by: Ethan Lee, Project Manager**



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

September 19, 2023

FOR: Attn: Danielle Whitcomb  
ATC Associates  
290 Roberts St., Suite 301  
East Hartford, CT 06108

### Sample Information

Matrix: SURFACE WATER  
Location Code: ATC-EHDAS  
Rush Request: 48 Hour  
P.O.#:

### Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

Date Time

09/18/23 12:30  
09/18/23 15:26

### Laboratory Data

SDG ID: GCP02119  
Phoenix ID: CP02122

Project ID: TOWN OF CANTON MS4 SW COMPLIANCE  
Client ID: OF-108

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Escherichia Coli	199	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SM9223B-16
Total Coliforms	>24200	10	MPN/100 mls	10	09/18/23 16:00	KG/KG	SW9223B-16

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

September 19, 2023

Reviewed and Released by: Ethan Lee, Project Manager

Tuesday, September 19, 2023

Criteria: CT: GBM, GWP, RC, SWP

State: CT

## Sample Criteria Exceedances Report

GCP02119 - ATC-EHDAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
--------	-------	-----------------	----------	--------	----	----------	----------------	-------------------

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



## REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

**Laboratory Name:** Phoenix Environmental Labs, Inc.

**Client:** ATC Associates

**Project Location:** TOWN OF CANTON MS4 SW COMPLI **Project Number:**

**Laboratory Sample ID(s):** CP02119-CP02122

**Sampling Date(s):** 9/18/2023

**List RCP Methods Used (e.g., 8260, 8270, et cetera)** None

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1A	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1B	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence". This form may not be altered and all questions must be answered.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature: Ethan Lee Position: Project Manager

Printed Name: Ethan Lee Date: Tuesday, September 19, 2023

Name of Laboratory Phoenix Environmental Labs, Inc.

**This certification form is to be used for RCP methods only.**



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## RCP Certification Report

September 19, 2023

SDG I.D.: GCP02119

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### ***SDG Comments***

Temperature above 6C:

The samples were received in a cooler with ice packs. The samples were delivered to the Laboratory within a short period of time after sample collection. Therefore no significant bias is suspected.

No RCP analyses are included with this report. The RCP narrative is provided at the request of the client.

### ***Temperature Narration***

The samples were received at 15.1C with cooling initiated.

(Note acceptance criteria for relevant matrices is above freezing up to 6°C)





# CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: info@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-8726

151  
Coolant: IPK ☒ ICE ☐ No ☐

Temp °C Pg of

## Data Delivery/Contact Options:

☐ Fax: \_\_\_\_\_  
☐ Phone: \_\_\_\_\_  
☒ Email: danielle.whitcomb@oneatlas.com

Customer: Atlas Technical Consultants, LLC

Address: 290 Roberts Street

East Hartford, CT 06108

Project: Town of Canton MS4 SW Compliance

Report to: Danielle Whitcomb

Invoice to: Atlas

QUOTE #

Project P.O:

**This section MUST be  
completed with  
Bottle Quantities.**

## Client Sample - Information - Identification

Sampler's  
Signature

Date:

9/18/2023

Analysis  
Request

### Matrix Code:

DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil  
B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	E.Coli	T.Coli	GL Amber 8 oz. w/H3PO4	Soil VOA Vials (1) methanol (2) H2O	GL Soil container ( 8 ) oz	GL Soil container ( 1 ) oz	40 ml VOA Vial ( 1 ) As is ( X ) HCl	GL Amber 1000ml ( X ) As is ( X ) H2SO4	PL As is ( 1 ) 250ml ( X ) 500ml ( 1 ) 1000ml	PL H2SO4 ( 1 ) 250ml ( X ) 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/100	Bacteria Bottle as is
02119	OF-104	SW	9/18/2023	12:50	X	X												2
02120	OF-206	SW		13:00	X	X												2
02121	OF-40	SW		11:50	X	X												2
	<del>OF-105</del>	<del>SW</del>			<del>X</del>	<del>X</del>												<del>2</del>
	<del>OF-107</del>	<del>SW</del>			<del>X</del>	<del>X</del>												<del>2</del>
02122	OF-108	SW		12:30	X	X												2

Relinquished by:

Accepted by:

Date:

Time:

RI

☐ Direct Exposure  
(Residential)

☐ GW

☐ Other

CT

☒ RCP Cert

☒ GW Protection

☒ SW Protection

☐ GA Mobility

☐ GB Mobility

☒ Residential DEC

☐ I/C DEC

☐ Other

MA

☐ MCP Certification

☐ GW-1

☐ GW-2

☐ GW-3

☐ S-1

☐ S-2

☐ S-3

☐ MWRA eSMART

☐ Other

## Data Format

☐ Excel

☒ PDF

☐ GIS/Key

☐ EQUIS

☐ Other

## Data Package

☐ Tier II Checklist

☐ Full Data Package\*

☒ Phoenix Std Report

☐ Other

Comments, Special Requirements or Regulations:

## Turnaround:

☐ 1 Day\*

☒ 2 Days\*

☐ 3 Days\*

☐ Standard

☐ Other

\* SURCHARGE APPLIES

State where samples were collected: CT

\* SURCHARGE APPLIES