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DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION

2025 ANNUAL INSPECTION REPORT
COMBINED SEWER OVERFLOWS
ST. JOHNSBURY, VERMONT
February 18, 2026

General

The existing combined sewer collection system was originally designed to discharge sanitary waste and storm water in a number of locations throughout the Town. As Federal regulations implemented pollution control programs, this practice needed to be eliminated. In 1963 the Town of St. Johnsbury constructed three interceptor sewer mains to collect the combined sewage and convey it to a treatment facility.

To avoid installing considerably massive mains, the interceptor mains were designed to pass the combined sewer and small storm events, while discharging excess flow from large storm events to the waterways. Since construction of the interceptor mains, additional regulations have been developed that make having CSO structures as part of the collection system a direct violation of the Environmental Protection Agency (EPA) Clean Water Act of 1972, the Vermont Water Quality Standards, Section 3.04(B)(3) and Discharge Permit No. 3-1290. The EPA released the National CSO Control Strategy on September 8, 1989, and then issued the Combined Sewer Overflow (CSO) Control Policy Notice on April 19, 1994. The State of Vermont issued the Combined Sewer Overflow Rule to replace the CSO Control Policy with the latest version effective September 15, 2016.

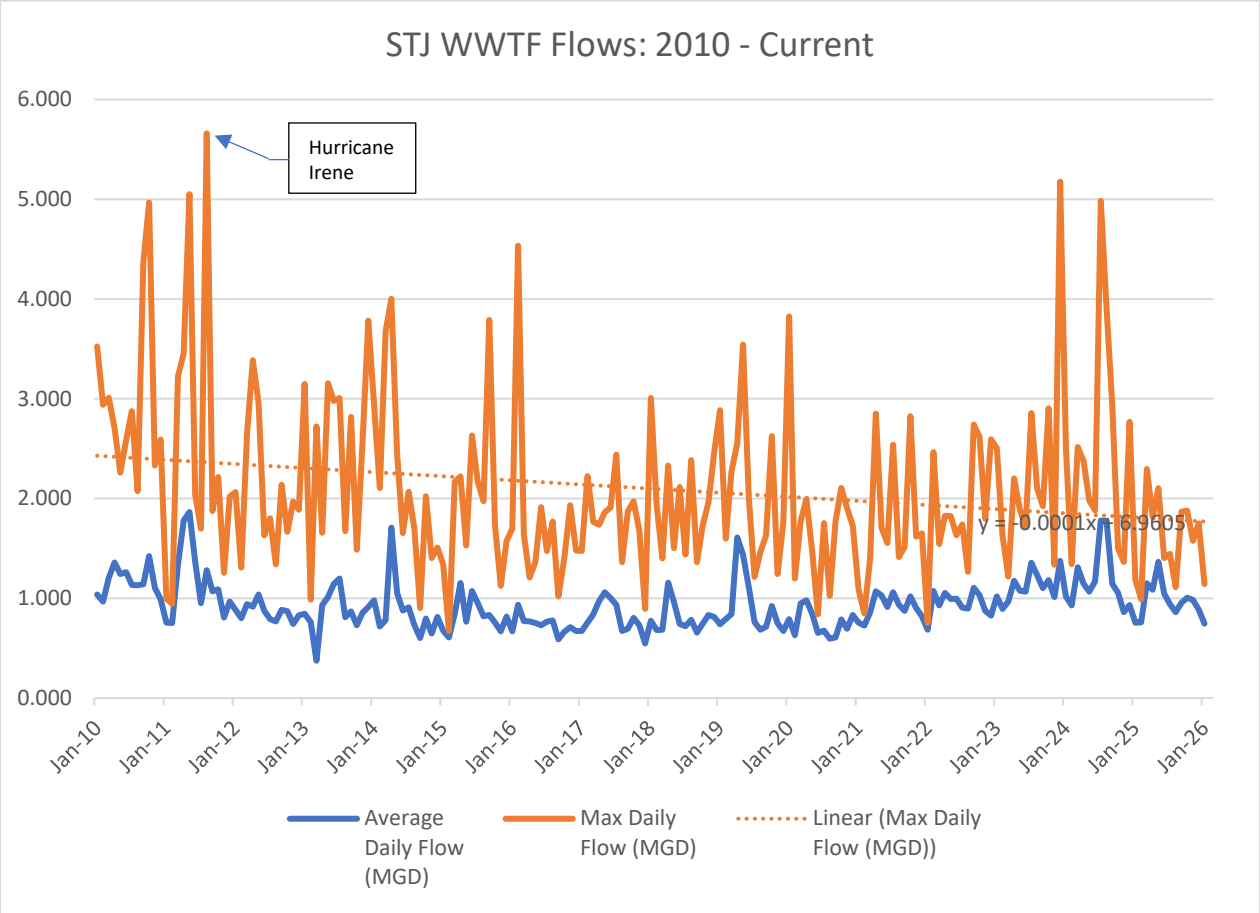
The Town of St. Johnsbury is currently functioning under a 1272 Order from the Vermont Agency of Natural Resources, which requires an annual report to:

- Summarize key CSO control/reduction accomplishments
- Identify compliance with nine minimum control measures
- Discuss condition and operation of the Combined Sewer System (CSS)
- Report frequency, duration, and magnitude of precipitation events that lead to CSO discharge over past year with comparison to previous years
- Report frequency, duration, and magnitude of CSO discharges over past year with comparison to previous year
- Summarize 1272 Order Activities Status
- Summarize status of the Long-Term Control Plan and activities being addressed

Key CSO Control/Reduction Accomplishments

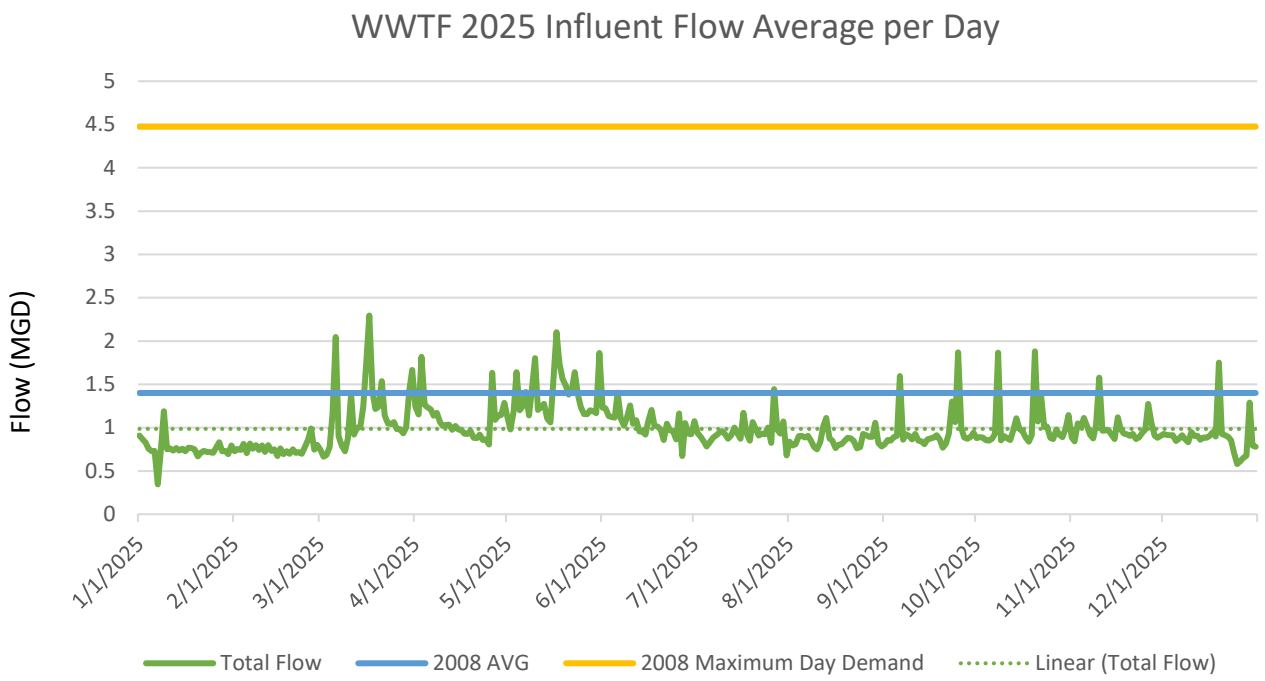
The Town of St. Johnsbury has made some significant improvements to the collection system over the past several decades. The dramatic improvements have reduced the flow in the collection system so much that not only are the impacts seen at the CSO structures, but the flow has been significantly reduced at the wastewater treatment facility (WWTF). Figure 1 illustrates the continuing reduction in flows seen at the WWTF with the most dramatic decrease being the maximum daily flow, which is continually trending down. In a combined collection system elevated maximum daily flow is the result of inflow and infiltration due to storm events and the decrease demonstrates the reduction in stormwater flow entering the collection system.

Figure 1



Reduction in flow collected by the system has been so dramatic that the maximum day flow for 2025 at the WWTF was 2.21-million gallons lower than the maximum day flow in 2008, as shown in Figure 2. This high amount of flow reduction can only be explained by the separation and removal of stormwater collected by the system.

Figure 2



In addition to the reduction in flow to the WWTF, the Town has eliminated 14 of the 26 permitted CSO structures. There are 12 CSO structures and the wastewater treatment facility that have the physical connection to discharge to waterways, as shown in Figure 3 and outlined in Table 1. The goal of the Town is to reduce activity in all CSO structures to a point where elimination can occur without fear of impact to buildings or the public.

St. Johnsbury has also been working toward substantially increasing their ability to monitor and trend the discharges with the installation of flow monitors and rain gauges that utilize a cloud-based recording system. This has already proven useful for identifying maintenance issues that were impacting CSO discharges. Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities. During 2025, current staff diligently monitored, maintained, calibrated and trouble shot any issues to ensure that data is being collected and is accurate.

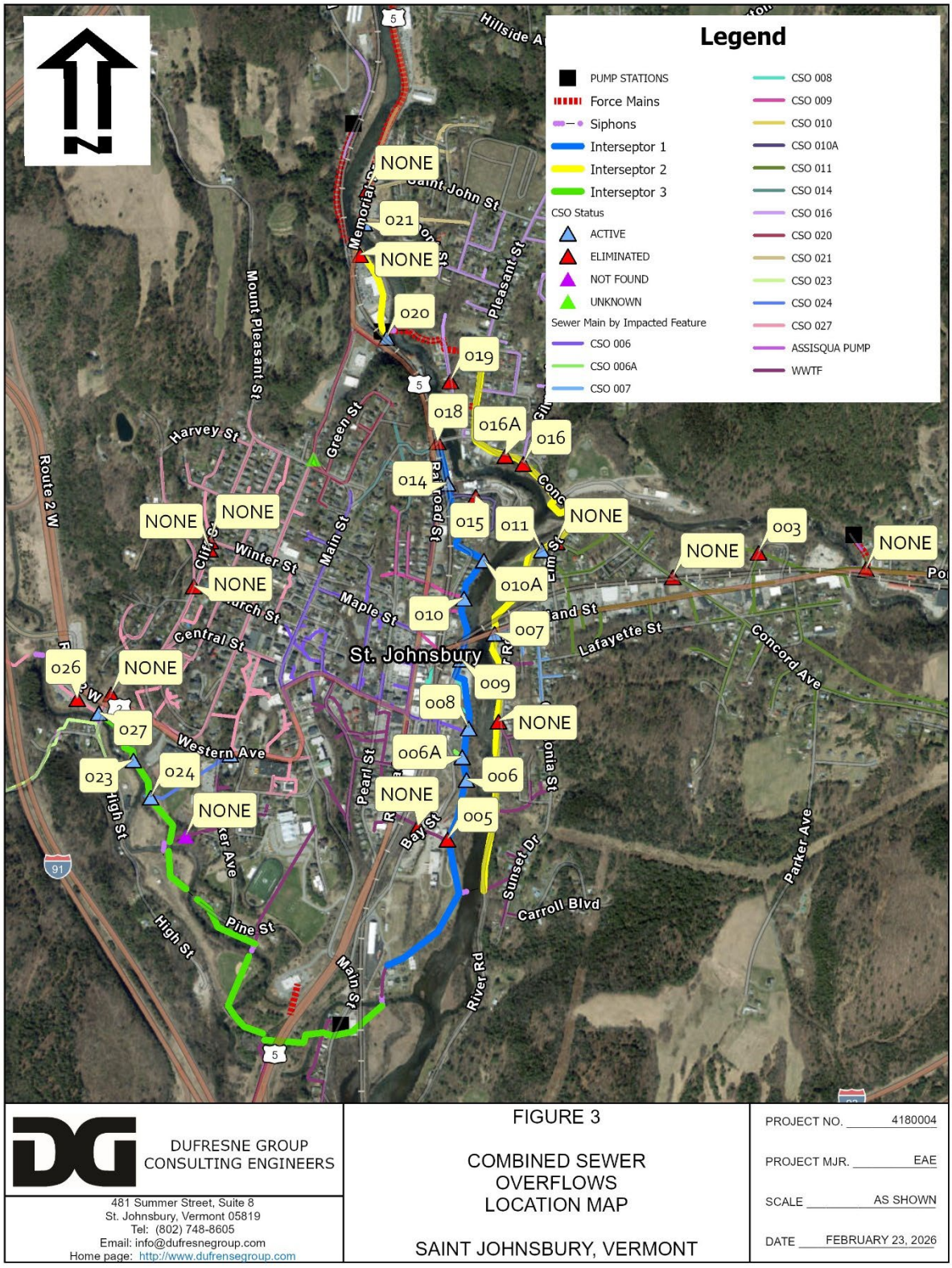
TABLE 1
COMBINED SEWER OVERFLOWS

CSO #	Location	Receiving Water	Status
001	**WWTF**	**Passumpsic River**	**WWTF Regulated Outfall**
002	WWTF	Passumpsic River	Eliminated prior to 1990
003	Intersection Ely & State Street	Moose River	Eliminated June 2002
005	Bay Street	Passumpsic River	Eliminated Aug 2006
005A	Bay Street	Passumpsic River	Eliminated Aug 2006
006	**Bay Street**	**Passumpsic River**	**In use**
006A	Bay Street	Passumpsic River	Eliminated Aug 2025
007	**Intersection River & Bay**	**Passumpsic River**	**In use**
008	**Bay Street**	**Passumpsic River**	**In use**
009	**Bay Street**	**Passumpsic River**	**In use**
010	**St. Mary's Street**	**Passumpsic River**	**In use**
010A	**St. Mary's Street**	**Passumpsic River**	**In use**
011	**Elm Street**	**Passumpsic River**	**In use**
014	**Mill Street**	**Passumpsic River**	**In use**
014A	Concord Avenue	Passumpsic River	Eliminated June 2009
015	Perkins Street	Passumpsic River	Eliminated June 2009
016	Concord Avenue	Passumpsic River	Eliminated June 2022
016A	Concord Avenue	Passumpsic River	Eliminated August 2009
019	Oak Street Pump Station	Passumpsic River	Eliminated 1993
020	Hood Pump Station	Passumpsic River	Eliminated Aug 2025
021	**Intersection of Tremont and Passumpsic Street**	**Passumpsic River**	**In use**
023	**Southeast of 401 Western Avenue**	**Sleeper River**	**In use**
024	**South of St. Johnsbury School**	**Sleeper River**	**In use** ***See Note 1**
025	Western Avenue	Sleeper River	Eliminated date unknown
026	Intersection of Western and Central Street	Sleeper River	Eliminated Sept. 1992
027	**Intersection Western and Mount Vernon**	**Sleeper River**	**In use** ***See Note 1**

Note:

1. In August and September of 2025, CSO 024 and CSO 027 overflow pipe was raised using PVC pipe inside the structure in accordance with Figure 4-12 of the Long Term Control Plan, but the existing structure remained as is.

Figure 3
Combined Sewer Overflows Location Map



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FIGURE 3

COMBINED SEWER
OVERFLOWS
LOCATION MAP

SAINT JOHNSBURY, VERMONT

PROJECT NO. 4180004
PROJECT MJR. EAE
SCALE AS SHOWN
DATE FEBRUARY 23, 2026

Compliance with Nine Minimum Controls (NMC)

In accordance with the system 1272 Order and EPA requirements, the Town is addressing the nine minimum control tasks for the entire system as follows:

1. Proper operation and regular maintenance of programs for collection systems and CSO outfalls:
   The Town owns and operates a vac-con truck that is used to remove sediment and debris from the trunkline and contributing catch basins. Due to age and performance of their current vac-con truck, the Town worked with Manosh and Wind River Environmental to ensure critical areas of the trunklines were clean. The Town intends to clean as much as possible with their vac-con truck and utilize a private contractor for areas that have been found to be critical to reducing CSO discharge until a new truck can be purchased.

   The Town is also working with property owners to eliminate stormwater and roof drains connections to the sewer system. In 2025 during a sewer service repair for Gold Crown Lanes on Hastings Hill, it was noted that a catch basin that collected a significant amount of the parking area and the roof drainage was connected to the wastewater system. Given that Hastings Hill had been separated, the owner was able to redirect that stormwater collection into the designated storm system.

   Several areas that have separated stormwater collection systems have provided properties with connections to the property lines to encourage disconnection from the sewer system. As the Town is aware of improvements on properties that are in those areas, the Town is pushing to make those separations.

2. Maximum use of the collection system for storage without endangering public health or property, or causing solids deposition problems:
   Individual CSOs have been modified to increase storage in the structure prior to discharge, see Appendix for information on each structure. Two structures were modified in 2025 to allow more surcharging in the system prior to discharge without negatively impacting users. The Town will continue to work towards eliminating stormwater and groundwater infiltration and inflow by reviewing areas not addressed in previous projects.

3. Review and modification of pretreatment requirements to assure that CSO impacts are minimized:
   There are no current pretreatment devices in place, but the Town does clean contributing catch basins in the fall and spring to reduce grit, vegetation, litter and road debris from entering the collection system. Given the physical limitations that the locations of the CSO structures have, pretreatment has been eliminated as a viable alternative to address the CSO discharges and the Town will continue to work toward stormwater separation.

4. Maximization of flow to the treatment plant for treatment consistent with an evaluation of alternative treatment options:
   Individual CSOs have been modified to increase storage in the structure prior to discharge through the use of weirs or pipe stacks and a majority of the outfalls have flapper valves to prevent river water from entering the system, see Appendix for information on each structure.

5. Prohibition of CSOs during dry weather:
   The Town had two known dry weather discharges. All active CSOs currently have remote monitoring and are in densely populated areas where a dry weather overflow would create an offensive odor to neighboring properties. CSO 007 outlet had become plugged in May and caused a discharge. When the alarm was triggered for CSO 007, staff visually inspected the structure and rectified the issue. CSO 024 outlet had become plugged in September and caused a discharge. When the alarm was triggered for CSO 024, staff visually inspected the structure and rectified the issue.

6. Control of solid and floatable materials in CSOs:
   The Town has a street sweeping program for spring and fall to remove grit and debris from the roads before it has a chance to enter the collection system. Catch basins are cleaned to remove grit and debris that didn't get collected by street sweeping. Several structures have weirs constructed in the structure or outfall pipe, see appendix for information for each structure.

7. Establishment of a pollution prevention programs to minimize contaminants in CSOs:
   All connections are required to comply with State standards for oil/grease separation and pretreatment. Town officials continue to work with property owners when areas of the collection system are impacted by improper maintenance of these practices.

8. Public notification:
   Warning signs have been installed at all discharge locations and discharge events are notified through the Vermont Watershed Management Combined Sewer Overflows and Untreated Discharges website.

9. Monitoring:
   CSOs are monitored using remote flow meters and visual inspection, see Appendix for information on each structure. Precipitation is monitored manually using a rain gauge at the WWTF, while staff work with the vendor to get the three Texas Electronic Inc TR-5251 rain gauges online and calibrated.

Combined Sewer Collection System Condition and Operation

The combined sewer collection system overall condition is functional. There have been a few customer complaints regarding building surcharges during storm events and the Town is currently working on addressing those issues. Several large separation projects have replaced vitrified clay tile (VC) piping that had few manhole access points with polyvinyl chloride (PVC) piping with manholes spaced in accordance with current regulations.

Replacement projects have also addressed high levels of inflow entering the collection system. Several areas that had been CCTV inspected prior to replacement were found to have significant sags, which reduced the available storage in those areas.

The three interceptor trunklines were constructed in the 1960s with asbestos cement (AC) piping with manhole access that meets current regulations. 2020 CCTV inspection of the AC trunklines showed that they were in fair condition and showed little signs of infiltration despite being in close proximity to a river.

The maintenance, operation and monitoring oversite responsibilities for the Town was shifted in 2024 from staff at the Department of Public Works to staff at the Wastewater Treatment Facility. 2025 was the first full year of the current staff managing CSO activities. Significant improvement to the level of monitoring include; regular data management, continual coordination to ensure monitoring equipment is functioning, and oversight with documentation of maintenance of trucklines, as shown in the log of the activities recorded is outlined in Table 2.

TABLE 2
CSO Maintenance, Operation and Monitoring Log

Date	Location	Maintenance
1/07/2025	All CSOs	Monthly Sign Inspection
2/16/2025	All CSOs	Monthly Sign Inspection
3/14/2025	CSO 9,11,14	Data Dump, Changed Batteries, Monthly Sign Inspection
3/18/2025	WS 1,2,3	Re-Calibration
3/20/2025	CSO 11	Reset
4/21/2025	All CSO's	Monthly Sign Inspection
5/27/2025	CSO 10A,10,9,23,27,24,21	Re-Calibration
5/27/2025	CSO 7	Dry Weather Overflow
5/27/2025	CSO 21	Changed Batteries
5/28/2025	CSO 14,11,6,7	Re-Calibration
5/28/2025	All CSOs	Monthly Sign Inspection
6/6/2025	CSO 11	Modem/Sim Trouble Shooting
6/9/2025	CSO 9, WS 1	Modem/Sim Trouble Shooting
6/11/2025	Misc.	Conference Call w/ Blue Siren for Modem/Sim Issues
6/16/2025	Misc.	Packed 3 Roadway Monitors to Send to Blue Siren
6/16/2025	CSO 27	Changed Upload Frequency
6/23/2025	CSO 27	Changed Upload Frequency
6/23/2025	Misc.	Sent 3 Roadway Monitors to Blue Siren
6/30/2025	CSO 6,10A	Reset, Worked on in Shop
6/30/2025	All CSOs	Monthly Sign Inspection
7/28/2025	All CSOs	Monthly Sign Inspection
8/07/2025 - 8/15/2025	Misc.	Manosh Vacon cleaned collection system, Monthly sign inspection
9/15/2025 - 9/19/2025	Misc.	Wind River Vacon cleaned collection system
9/22/2025	All CSOs	Monthly Sign Inspection
9/22/2025	CSO 8,24,27 WS 1,3	Changed Batteries, Misc Work
10/17/2025	All CSOs	Monthly Sign Inspection
11/4/2025	CSO 6,11	Changed Batteries
11/4/2025	All CSOs	Monthly Sign Inspection
12/16/2025	All CSOs	Monthly Sign Inspection

Reported CSO Events

The events with the rainfall experienced to trigger overflows are listed in the Table 3. The current staff are also working with the manufacturer and their representative to ensure that all monitoring units are functioning, calculating and recording properly.

TABLE 3
2025 CSO Discharge Events

Event #	Date	Total Rainfall (Inches	Max Intensity (in/h	Total Flow (Gallons) CSO #06	CSO #07	CSO #08	CSO #09	CSO #10	CSO #10A	CSO #11	CSO #14	CSO #21	CSO #23	CSO #24	CSO #27	ALL CSOs
1	3/16/25	0.36	0.96								14,838			2,127	19,838	36,803
2	4/26/2025	0.79	0.48								2,589			1,988		4,577
3	5/7/2025	0.31	0.95								1,315			1,727	3,175	6,217
4	5/16/2025	0.77	3.2			21,443			15,658		30,910			9,133	53,543	130,687
5	5/17/2025	0.84	1.8			7,528					2,432	770		13,994	58,593	83,317
6	5/27/2025	0	0		1,000											1,000
7	5/31/2025	0.92	0.47	54,910						37,299	11,672			1,574	7,400	112,855
8	6/17/2025	0.25	0.48								601			1,162		1,763
9	6/22/2025	0.12	0.48											551		551
10	6/28/2025	0.24	1.85			1,079					5,085			985	1,263	8,412
11	7/17/2025	0.37	1.38								6,241			3,175	5,034	14,450
12	7/20/2025	0.24	0.39											2,428		2,428
13	7/27/2025	0.99	1.95								22,245			26,832	7,726	56,803
14	8/14/2025	0.21	0.48	2,457										3,440		5,897
15	8/29/2025	0.36	0.97	2,687							2,523			5,077		10,287
16	9/5/2025	0.18	1.27	3,472					653		3,789			1,908		9,822
17	9/6/2025	0.7	0.71	38,340							5,147			19,790		63,277
18	9/18/2025	0	0											3,726		3,726
19	9/25/2025	0.94	0.96	35,107							1,378					36,485
20	10/8/2025	0.98	7.7	124,689					8,091		23,856					156,636
21	10/20/2025	1.2	5.4	61,741							2,201					63,942
22	11/26/2025	0.37	0.75	29,460												29,460
23	12/19/2025	0.41	1.55	15,426					1,334							16,760
	Totals	11.55		368,289	1,000	30,050	-	-	25,736	37,299	136,822	770	-	99,617	156,572	856,155
	Max:	1.2	7.7	124,689	1,000	21,443	-	-	15,658	37,299	30,910	770	-	26,832	58,593	156,636
	Min:	0	0	2,457	1,000	1,079	-	-	653	37,299	601	770	-	551	1,263	551
	Avg:	0.50	1.49	36,829	1,000	10,017	-	-	6,434	37,299	8,551	770	-	5,860	19,572	37,224

Not Rain Events

Note: There were no discharge activities in January and February of 2025.

In previous years the CSOs were prioritized by the number of discharges alone, but with the metering equipment the volume has shed additional light to which structures are having the largest impact on the waterways. For example, CSO 014 discharged the most times with 16 events, but CSO 006 discharged over twice the volume in 11 events.

1272 Order Activities Summary:

The following provides a status of activities listed in the 1272 Order to be completed by 2025:

1. Locate, access and maintain Manholes I2-7 to I2-11: As shown in Figure 4, this section of trunkline is between River Road and the Passumpsic River. This area is heavily wooded with exceptionally steep grades to the river below. Additional CCTV inspection was completed from I2-6 north to located these manholes. It appeared that the structures may have been plated over and buried. Attempts to locate structures from above were unsuccessful but the CCTV inspection verified removal of a significant root ball in I2-7 using hydronic jetting was successful.

2. Access and maintain Manholes I2-14 to I2-16: As shown in Figure 5, this section of trunkline is across a ball field that belongs to the American Legion. Manhole I2-14 has been located, however grade, ledge and railroad right-of-way hinders access. This area was cleaned in 2025 by hydronic jetting using manholes I2-13 and I2-17 approximately 500-600 feet from each manhole.

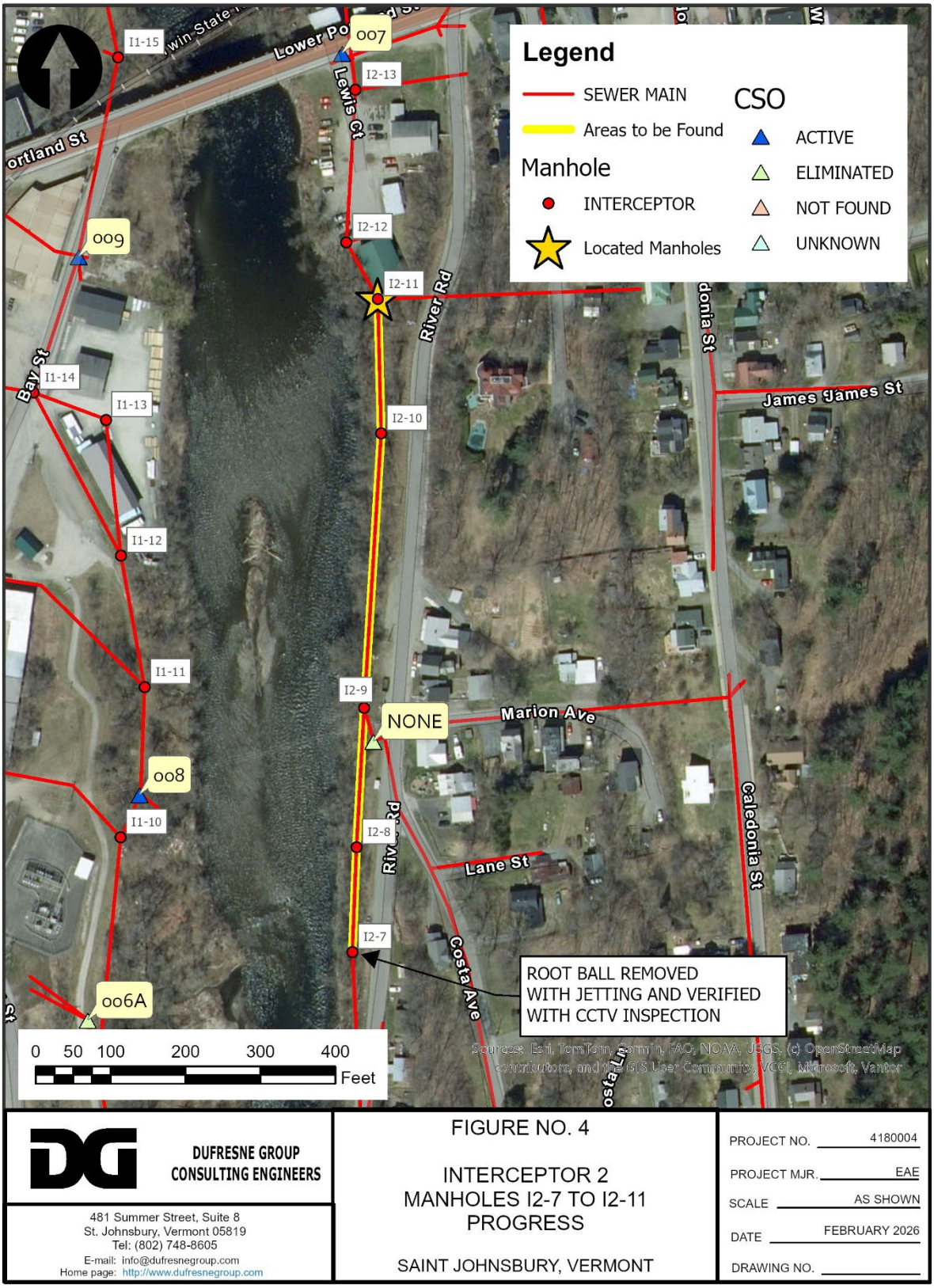
3. Access and maintain Manholes on Interceptor 3: As shown in Figure 6, additional manholes were located and inspected in 2025 to the 19 found since the Long-Term Control Plan 19 manholes. This area was cleaned this year by hydronic jetting accessing manholes I3-2, I3-5, I3-6, I3-15, I3,14, I3-16, I3-20, I3-21, I3-24, I3-26, and I3-28. Each area was cleaned from each of these manholes upstream and downstream approximately 500-600 feet. The Town will continue to locate and identify more manholes along this interceptor that can be accessed with a vac-con and work with a private contractor to have that area cleaned.

4. Cap Overflows CSO 20 and 006a: These CSOs have been capped.

5. Add flow monitoring equipment to CSOs 007, 009, 010, 010a, 014, 020, 021, 023, 024, and 027. Calibrate the equipment so that overflow volumes can be reported as a measured value rather than an estimated range: All listed CSOs except for CSO 020 and including CSO 006 has been equipped with Bluesiren ecoSiren Monitoring equipment installed by Champlin Associates. All equipment is functioning and installed in a manner that promotes effective use. Staff have made necessary updates to ensure that the batteries are continually charged and data is being collected daily.

6. St. Mary's Street Bypass: This project is not currently in the planning phase.

7. Barker Avenue: This project has been designed but construction has been put on hold.



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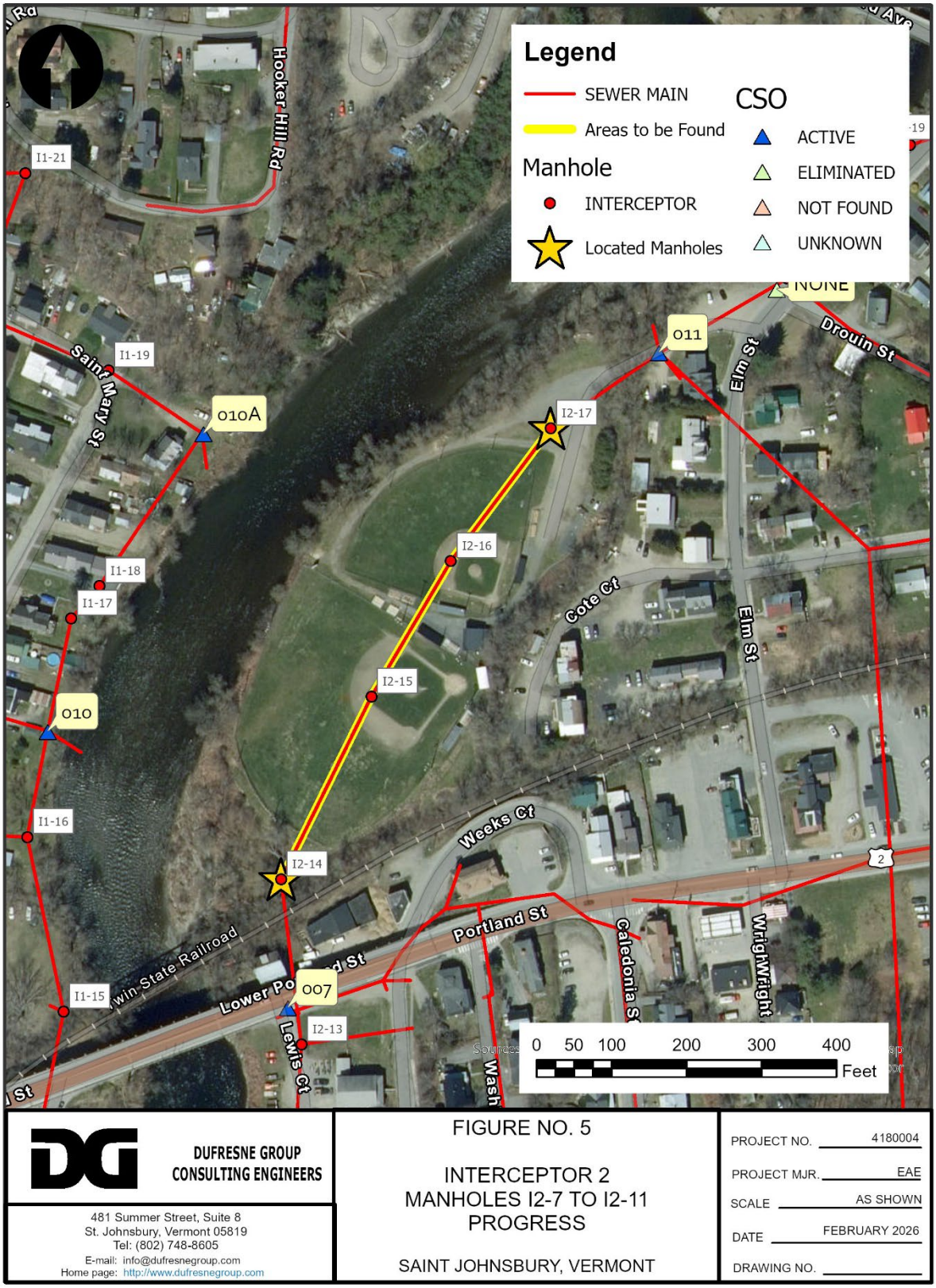
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FIGURE NO. 4

INTERCEPTOR 2
MANHOLES I2-7 TO I2-11
PROGRESS

SAINT JOHNSBURY, VERMONT

PROJECT NO. 4180004
PROJECT MJR. EAE
SCALE AS SHOWN
DATE FEBRUARY 2026
DRAWING NO.



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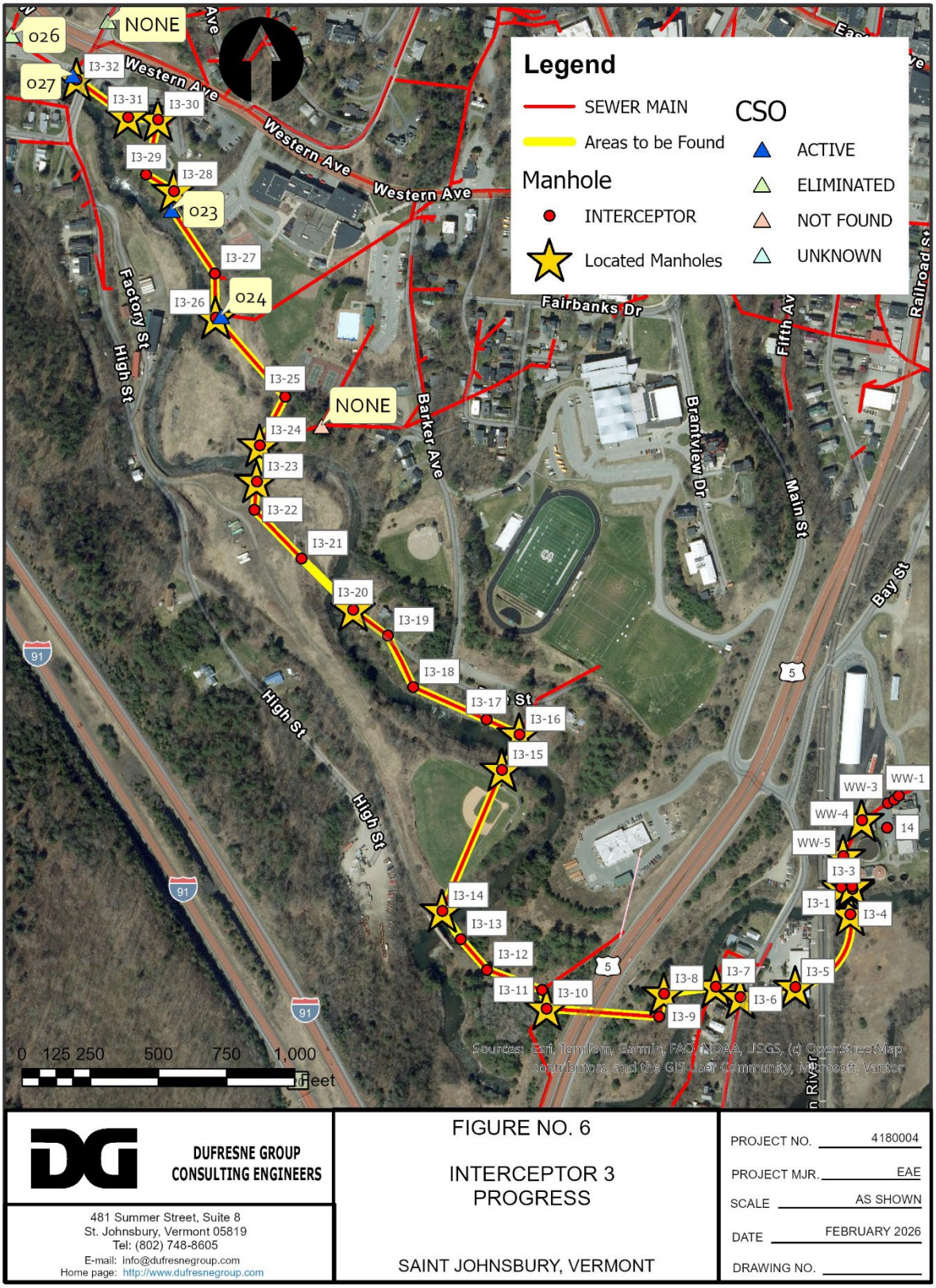
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FIGURE NO. 5

INTERCEPTOR 2
MANHOLES I2-7 TO I2-11
PROGRESS

SAINT JOHNSBURY, VERMONT

PROJECT NO. 4180004
PROJECT MJR. EAE
SCALE AS SHOWN
DATE FEBRUARY 2026
DRAWING NO.



DUFRESNE GROUP CONSULTING ENGINEERS 481 Summer Street, Suite 8 St. Johnsbury, Vermont 05819 Tel: (802) 748-8605 E-mail: info@dufresnegroup.com Home page: http://www.dufresnegroup.com	FIGURE NO. 6 INTERCEPTOR 3 PROGRESS SAINT JOHNSBURY, VERMONT	PROJECT NO. 4180004 PROJECT MJR. EAE SCALE AS SHOWN DATE FEBRUARY 2026 DRAWING NO.

8. Railroad Street – Main and Mill: This project is currently in the design phase with anticipated construction in 2027. This project has been expanded to include improvements from Maple Street to Bagley Street outlined in pages 74-77 of the LTCP.

9. Interceptor 3: This project is not currently in the planning phase. Improvements made to CSO 024 and CSO 027 have kept these structures from discharging, which has reduced the priority to complete this area.

Long-Term Control Plan Status:

The Town with the assistance of Dufresne Group developed a working Long-Term Control Plan that has been reviewed and excepted by the State in March of 2021. The Town will work to update that plan after completion of work 2026. Although this does exceed the EPA recommended 5-year interval, significant improvements to the system will be made in 2026 that will directly affect activities at CSO 006, CSO 008, and CSO 009, and potentially CSO 010, CSO 010a, and CSO 014 with reduction in flow downstream. Using the Town's LTCP last revised March 1, 2021, the following projects are in the planning/design phase to be completed:

1. Bay Street Sanitary Sewer Bypass: This project, as shown in Figure 4-10 on page 89 of the LTCP, is currently in the design phase with an anticipated construction start of early 2026 to meet project funding requirements.

2. Portland Street Separation Project: This project is in the design phase and intended to be incorporated as part of a larger full street reconstruction and will include new sewer and separated storm. This will address projects illustrated in Figure 4-4 on page 73 and 4-7 on page 82 of the LTCP. Depending on funding availability, anticipated construction would be completed by 2030.

APPENDIX

Information by CSO Structure

CSO 006

CSO 006 is located off Bay Street approximately 250 feet south of the Green Mountain Power substation on Interceptor 1. The precast concrete structure has a 14" AC inlet and outlet with a 30" CMP overflow pipe that has a 15" concrete weir. The top of the weir is 40" above the invert out of the manhole, as shown in Image A.1.



Image A.1 - CSO 006

CSO 006 has been impacted and combined sewer flows reduced by the following projects:

- 1984 Central Business District Improvements – Installed 28 catch basins and 17 roof drain connections on designated storm discharge and removed all storm connections from the combined sewer system in the project area
- 1991 Cherry Street Storm Improvements – Installed 15 catch basins on designated storm that previously discharged to combined sewer system
- 2003 Maple Street Storm Improvements – Installed catch basins on designated storm and connection to north end of Cherry Street storm that discharges to Railroad Street designated storm with designated storm discharge
- 2013/2014 Eastern, Western and Main Utility Improvements – Installed 32 catch basins on designated storm and connection to south end of Cherry Street storm that discharges to Railroad Street designated storm with designated storm discharge

There are an estimated 12 storm collection structures remaining on the combined collection system contributing to CSO 006The Bay Street Sanitary Sewer Bypass and the Railroad Street separation project from Maple Street to Main Street are currently in design and will reduce the flow contributing to the Interceptor line upstream of this structure. Table A.1 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.1
CSO 006 NMC MEASURES

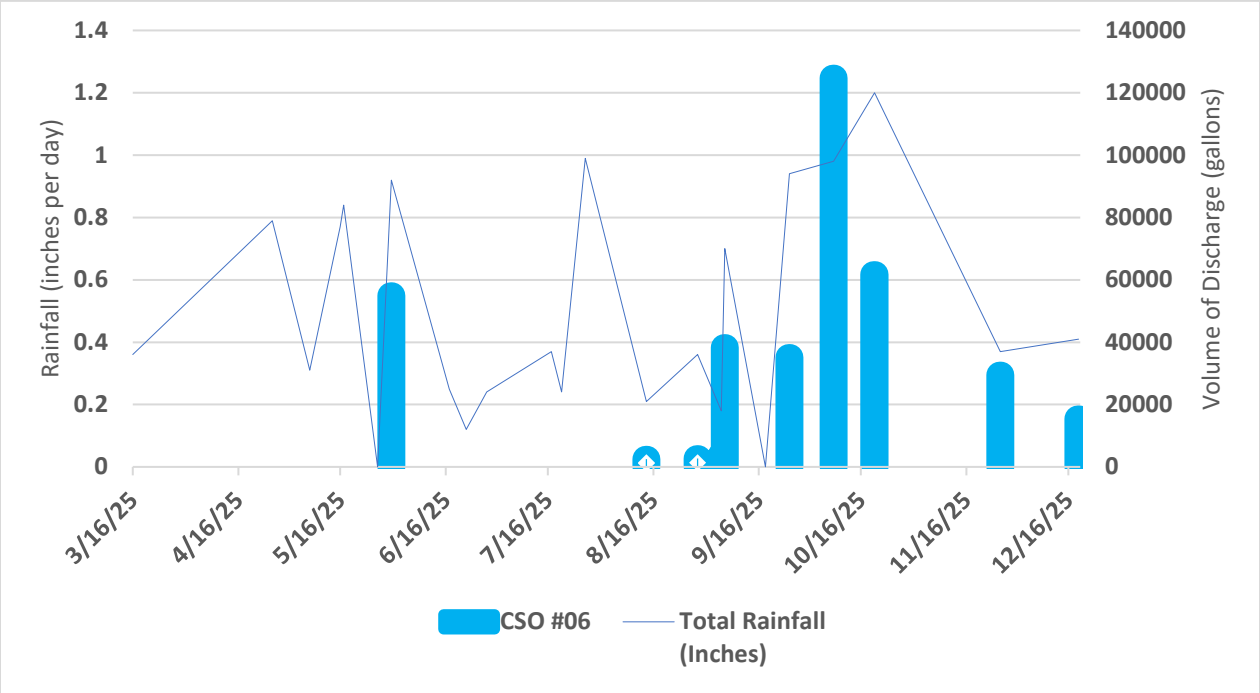
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a concrete weir in place to reduce frequency of discharge and the outlet has a tide gate installed to prevent surface water into the system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials installed approximately 250 LF of new 15-inch trunkline down stream of CSO 006 which increased the size and eliminated some existing sags that had developed in the main
5. Elimination of dry weather discharge	CSO 006 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 006 has had a depth monitor since 2019, but upgraded this monitor on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.1.

TABLE A.2
CSO 006 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	3	2	3
2020	1	5	5	--
2021	--	--	6	1
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	0	0
2025	0	1	5	4

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.1
CSO #6 2025 RECORDED EVENTS



CSO 006A – Eliminated 2025

CSO 006A is a 6'x6' poured-in-place concrete structure with two inlet pipes and an outlet pipe that discharged to a manhole on the Interceptor 1. The overflow pipe discharged to a headwall with a flap gate installed approximately 18-feet from the structure.

This structure had been inspected on a number of occasions with no flow observed and was identified to be eliminated in the Long Term Control Plan. During inspections, both inlets and the outlet were typically filled with sediment with no signs of flow, as shown in Images A.2 and A.3. There appeared to be some dampness in the structure, this is most likely condensation. This structure was eliminated by disconnecting it from the truckline and plugging all inverts with concrete. There have been no reports of service disruption from this structure being taken offline, which is further proof that upstream collection had been detached during previous projects.



Image A.2 - CSO 006A Inlet



Image A.3 - CSO 006A Outlet

CSO 007

CSO 007 is located on the lower level of Portland Street on the east side of the bridge and discharges from the bottom of the structure to Interceptor 2, with an overflow to a storm manhole that discharges to the Passumpsic River. The precast concrete structure has an 18" VCP inlet and overflow pipe close in elevation, as shown in Image A.4.



Image A.4 - CSO 007

CSO 007 has been impacted and overflows reduced by the following projects:

- 1996 Lafayette Street Storm Improvements – Installed 9 catch basins on a designated storm that discharges to a separated storm system on Caledonia Street
- 1996 Caledonia Street Storm Improvements – Installed 9 catch basins on a designated storm that discharges to the combined sewer system on Caledonia Street

There are an estimated 27 storm collection structures remaining on the combined collection system contributing to CSO 007. The Town is currently funded for final design for the improvements of Portland Street, which will provide a designated storm discharge for the previously separated lines on Lafayette Street and Caledonia Street, while separating the remaining contributing structures. The Town is currently on the priority list for construction, but the subsidy provided may not be enough for the project to be constructed. Table A.5 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.5
CSO 007 NMC MEASURES

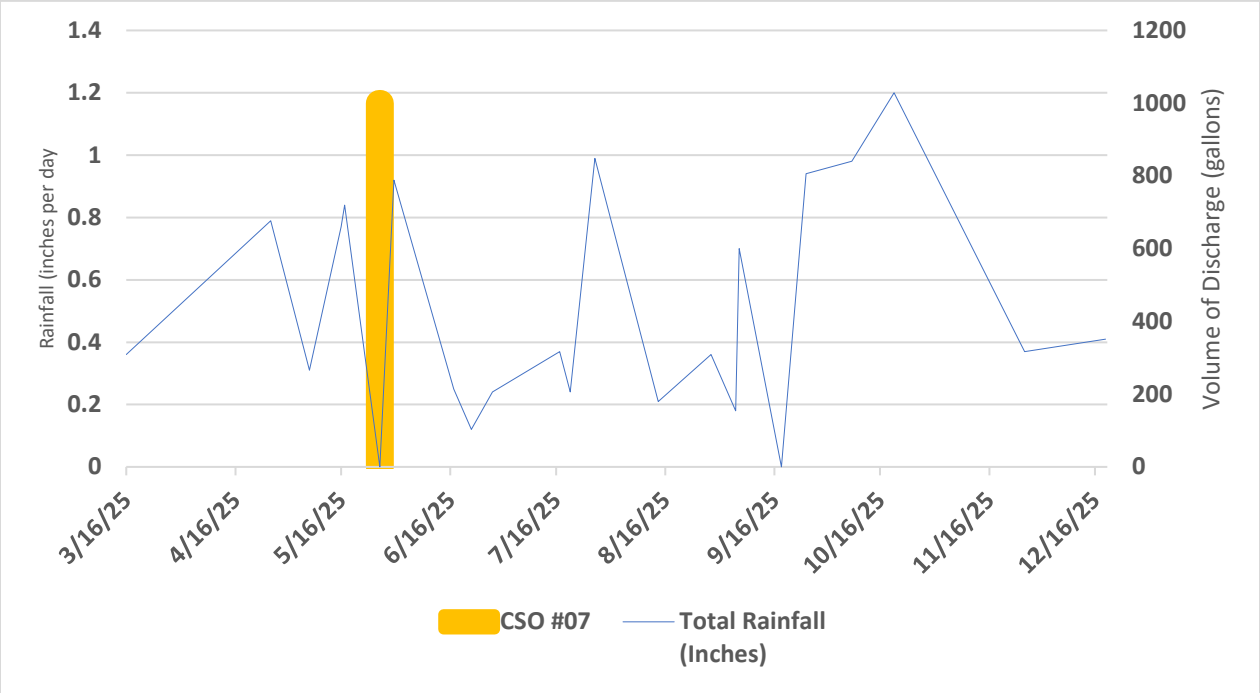
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The discharge pipe does not have a tide gate, but is above the high water level of the river
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	There are currently no restrictions on overflow
5. Elimination of dry weather discharge	CSO 007 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 007 had a monitor installed on September 18, 2021 to provide depth, flow and velocity of discharge, as shown in image A.4.

TABLE A.6
CSO 007 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	1	3
2020	1	4	6	--
2021	--	--	6	1
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	0	0
2025	0	1	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.2
CSO #7 2025 RECORDED EVENTS



CSO 008



Image A.5 - CSO 008

CSO 008 is located east of R.K. Miles on Interceptor 1 and discharges to the Passumpsic River. The precast concrete structure has a 10" AC inlet and outlet with a 12" PVC overflow pipe approximately 3.8-feet above the outlet, as shown in Image 7.

CSO 008 has been impacted and overflows reduced by the following projects:

- 1990 Bay Street Stormwater – Installed 2 catch basins on designated storm discharge

There are an estimated 4 storm collection structures remaining on the combined collection system contributing to CSO 008. The Town is in final design for construction of the Bay Street Sanitary Sewer Bypass and to separate Railroad Street from Maple Street to Bagley Street. The Bay Street project with reduce the flow in the trunkline below CSO 008 and reduce surcharging in the trunkline. The Railroad Street project will remove both sewer and storm flow that is contributing to this trunkline above this CSO and redirect it to the separated mains on Railroad Street. Table A.7 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.7
CSO 008 NMC MEASURES

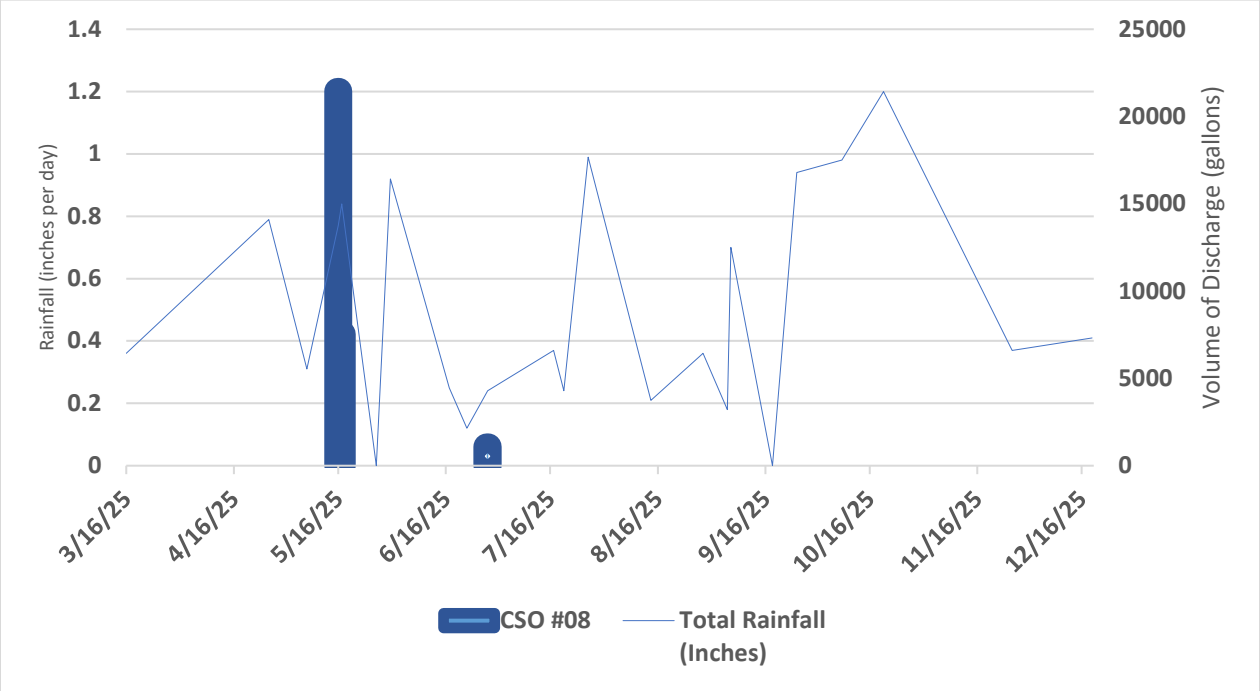
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a concrete weir in place to reduce frequency of discharge and the outlet has a tide gate installed to prevent surface water into the system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials installed approximately 250 LF of new 15-inch trunkline down stream of CSO 006 which increased the size and eliminated some existing sags that had developed in the main. This section is also down stream of CSO 008
5. Elimination of dry weather discharge	CSO 008 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 008 has a monitor that provides depth, flow and velocity of discharge. Installed in early March 2022.

TABLE A.8
CSO 008 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	--	3
2020	--	6	5	--
2021	--	--	4	--
2022	0	0	--	--
2023	--	--	--	--
2024	--	--	10	0
2025	0	3	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.3
CSO #8 2025 RECORDED EVENTS



CSO 009

CSO 009 is located on the north end of Bay Street on Interceptor 1 and discharges to a catch basin that discharges to the Passumpsic River. The precast concrete structure has a 10” AC inlet, 18” VC inlet and 10” AC outlet with an 8” PVC overflow pipe approximately 2.5-feet above the outlet. The original overflow pipe was a 12” VC pipe that has been plugged, as shown in Image A.6.



Image A.6 - CSO 009

CSO 009 has not been impacted and reduced by any projects to date, however the Town experienced some damage to the 18” VC inlet for this structure and is planning on completing a connection on Railroad Street to divert the flow to continue down Railroad Street. The Town is also working with 502 Railroad Street to direct the roof drains to the separated storm system. Also, the Town is under final design contract and applying for construction funding to separate Railroad Street from Maple Street to Bagley Street. This project will remove both sewer and storm flow that is directly contributing to this CSO and redirect it to the separated mains on Railroad Street.

There are an estimated 7 storm collection structures remaining on the combined collection system contributing to CSO 009. Table A.9 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.9
CSO 009 NMC MEASURES

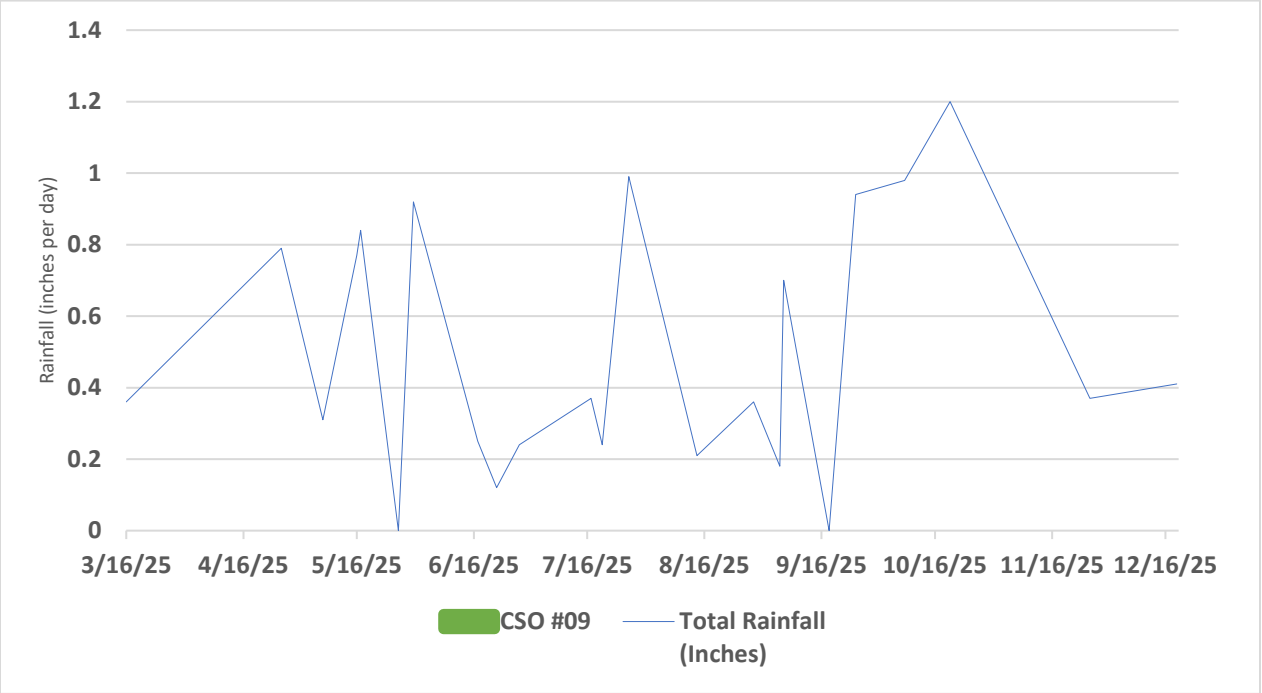
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	There are no restrictions in place on this overflow. The overflow discharges to a nearby catch basin that discharges to the Passumpsic River. With the distance and elevation it is highly unlikely that river water can enter the collection system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials installed approximately 250 LF of new 12-inch trunkline down stream of CSO 009, while leaving the existing 10-inch in service. This not only increased the size, it provided a second main for flow to use as storage.
5. Elimination of dry weather discharge	CSO 009 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 009 had a monitor installed on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.6.

TABLE A.10
CSO 009 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	--	--
2020	--	--	--	--
2021	--	--	--	--
2022	--	5	7	3
2023	--	--	--	--
2024	--	--	5	0
2025	0	0	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.4
CSO #9 2025 RECORDED EVENTS



CSO 010



Image A.7 - CSO 010

CSO 010 is located east of 120 St. Mary's Street on Interceptor 1 and discharges to a headwall adjacent to the Passumpsic River. The precast concrete structure has a 10" AC inlet, an 8" VC inlet and a 10" AC outlet with an 8" PVC overflow pipe approximately 2-inches above the outlet. A 12-inch high brick berm has been constructed to reduce the frequency of discharges, as shown in Image A.7.

CSO 010 has not been impacted and reduced by any projects to date, however the Town is under final design contract and applying for construction funding to separate Railroad Street from Maple Street to Bagley Street. This project will remove both sewer and storm flow that is directly contributing to this CSO and redirect it to the separated mains on Railroad Street. The Town is on the priority list for this project, but subsidy is low and it most likely will not get to construction in the near future.

There are an estimated 10 storm collection structures remaining on the combined collection system contributing to CSO 010. Table A.11 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.11
CSO 010 NMC MEASURES

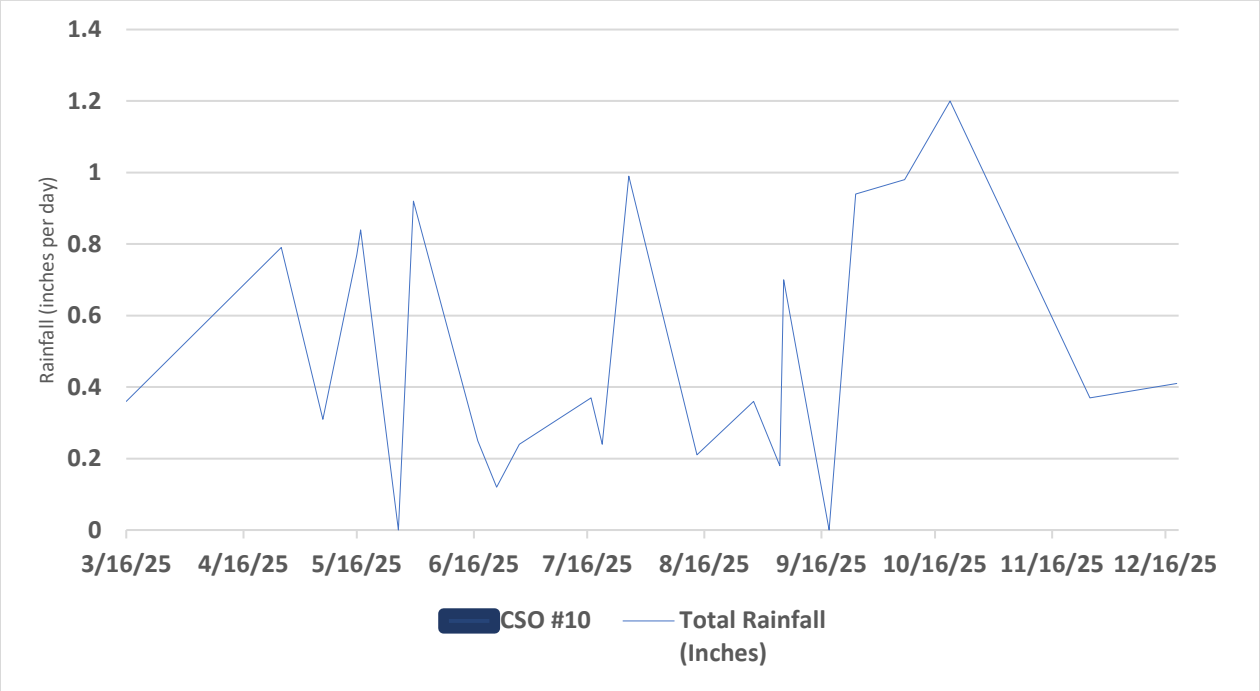
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a concrete weir in place to reduce frequency of discharge and the outlet has a tide gate installed to prevent surface water into the system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials have made several improvements to the trunkline down stream of CSO 010
5. Elimination of dry weather discharge	CSO 010 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 010 had a monitor installed September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.7.

TABLE A.12
CSO 010 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	--	--
2020	--	--	--	--
2021	--	--	--	--
2022	9	13	17	8
2023	--	--	--	--
2024	--	--	20	2
2025	0	0	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.5
CSO #10 2025 RECORDED EVENTS



CSO 010A



Image A.8 - CSO 010A

CSO 010a is located east of 206 St. Mary's Street on Interceptor 1 and discharges to a headwall adjacent to the Passumpsic River. The precast concrete structure has a 10" AC inlet and outlet with an 8" PVC overflow pipe approximately 7-inches above the outlet. A 12-inch high brick berm has been constructed to reduce the frequency of discharges, as shown in Image A.8.

CSO 010a has not been impacted and reduced by any projects to date, however the Town is under final design contract and applying for construction funding to separate Railroad Street from Bagley Street to Main Street. This project will remove storm flow that is directly contributing to this CSO from Railroad Street and redirect it to a new stormwater discharge point on Mill Street.

There are an estimated 5 storm collection structures remaining on the combined collection system contributing to CSO 010a. Table A.13 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.13
CSO 010A NMC MEASURES

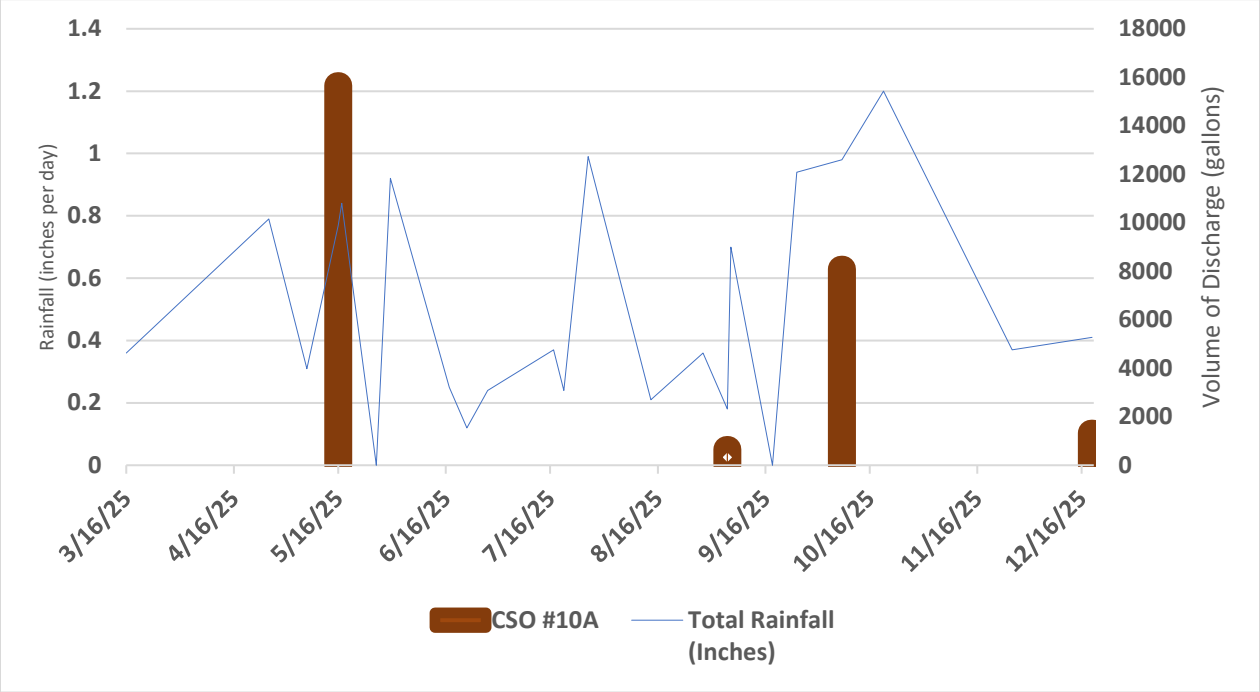
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a concrete weir in place to reduce frequency of discharge and the outlet has a tide gate installed to prevent surface water into the system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials have made several improvements to the trunkline down stream of CSO 010a
5. Elimination of dry weather discharge	CSO 010a has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 010a has had a monitor installed on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.8.

TABLE A.14
CSO 010A NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	--	--
2020	--	--	--	--
2021	--	--	--	--
2022	5	--	--	--
2023	--	--	--	--
2024	--	--	1	0
2025	0	1	1	2

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.6
CSO #10A 2025 RECORDED EVENTS



CSO 011



Image A.9 - CSO 011

CSO 011 is located on Elm Street in the American Legion baseball field access drive on Interceptor 2 and discharges to a headwall adjacent to the Passumpsic River. The precast concrete structure has a 20" AC inlet and outlet with a 20" VC overflow pipe approximately 20-inches above the outlet. An 8-inch weir has been constructed in the overflow pipe to reduce the frequency of discharges, as shown in Image A.9.

CSO 011 has been impacted and overflows reduced by the following projects:

- 1987 Lateral Sewers, Storm Drains, Pump Stations and Force Mains - Installed separated storm system with designated storm discharge along Concord Avenue from railroad crossing to Parker Avenue. Also eliminated a CSO on Concord Avenue
- 1991 Concord Avenue Improvements M700 (11)S – Installed separated storm system with designated storm discharge along Concord Avenue from Elm Street to railroad crossing
- 1998 Parker Avenue DPW Improvements – Installed new sewer and storm by Town staff. Storm discharges to designated storm on Concord Avenue.
- 2021 – 2023 Pleasant Street and Gilman Avenue Water, Sewer and Stormwater Improvements – This project eliminated 21 catch basin structures contributing to the sewer system.

There are an estimated 51 storm collection structures remaining on the combined collection system contributing to CSO 011. The Town is currently under final design contract for Portland Street that will remove 20 structures from the combined system, but Table 16 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.15
CSO 011 NMC MEASURES

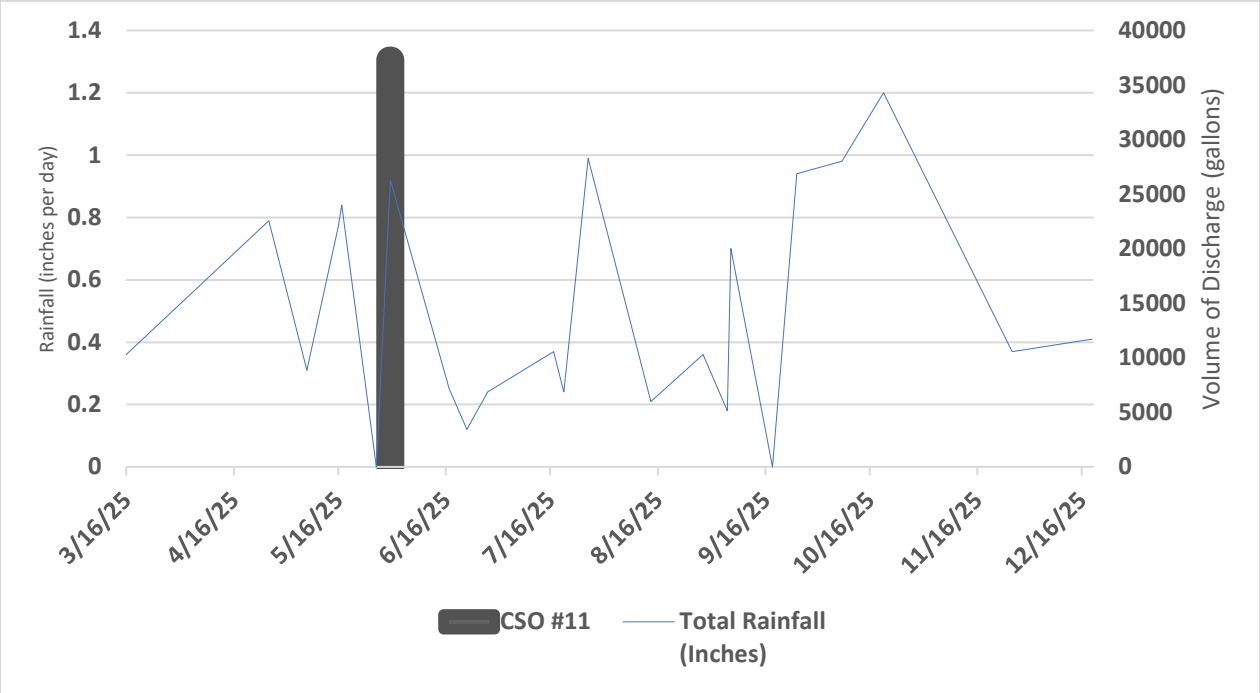
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a concrete weir in place to reduce frequency of discharge and the outlet has a tide gate installed to prevent surface water into the system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	The trunkline downstream of CSO 011 was professionally cleaned by Wind River in October 2025.
5. Elimination of dry weather discharge	CSO 011 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 011 has had a depth monitor since 2019, but upgraded this monitor on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.9.

TABLE A.16
CSO 011 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	10	10	9
2020	1	2	3	7
2021	--	6	13	5
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	8	1
2025	0	1	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.7
CSO #11 2025 RECORDED EVENTS



CSO 014

CSO 014 is located adjacent to 98 Mill Street on Interceptor 1 and discharges to a headwall adjacent to the Passumpsic River. The precast concrete structure has an 8" AC inlet and outlet with a 12" VC overflow pipe approximately 4-inches above the outlet. An 8-inch high brick berm has been constructed to reduce the frequency of discharges, as shown in Image A.10.



Image A.10 - CSO 014

CSO 014 has not been impacted and reduced by any projects to date, however the Town is under final design contract and applying for construction funding to separate Railroad Street from Bagley Street to Concord Avenue. This project will remove storm flow that is directly contributing to this CSO.

There are an estimated 10 storm collection structures remaining on the combined collection system contributing to CSO 014. Table A.17 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.17
CSO 014 NMC MEASURES

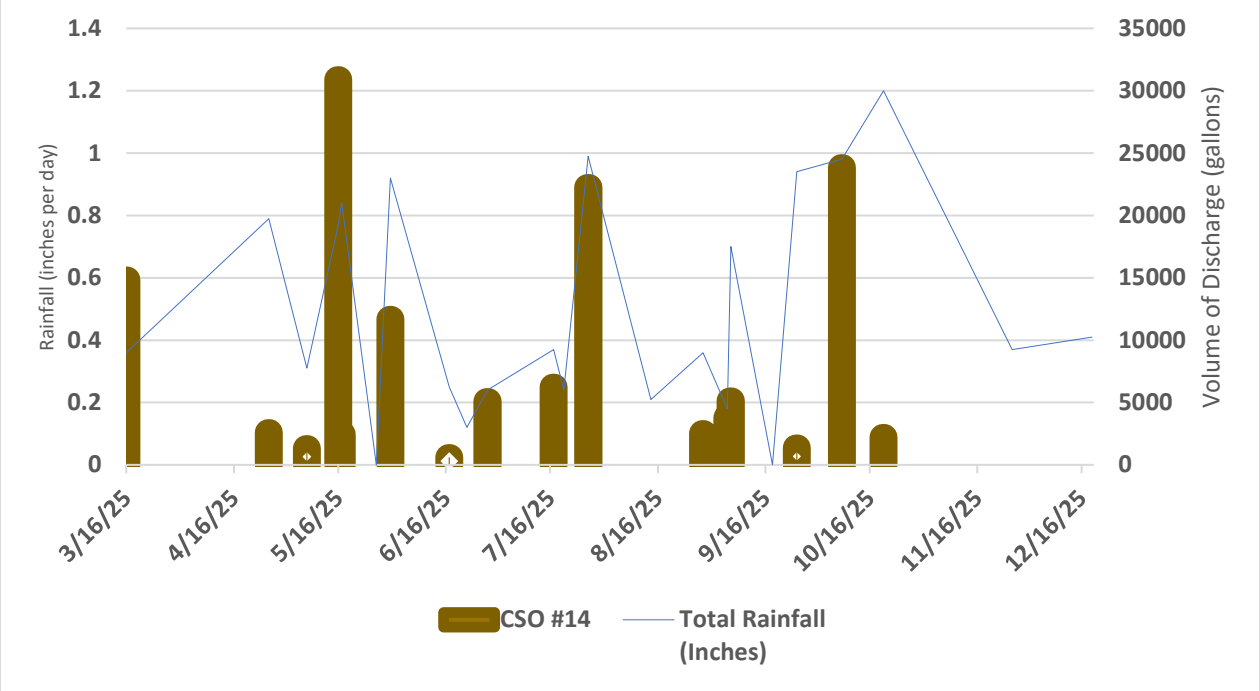
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a concrete weir in place to reduce frequency of discharge and the outlet has a tide gate installed to prevent surface water into the system
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials have made several improvements to the trunkline down stream of CSO 014
5. Elimination of dry weather discharge	CSO 014 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 014 has a monitor installed on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.10.

TABLE A.18
CSO 014 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	--	2
2020	--	6	6	--
2021	--	--	6	1
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	3	0
2025	1	7	6	2

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.8
CSO #14 2025 RECORDED EVENTS



CSO 020 - Eliminated



Image A.13 - CSO 020

CSO 020 is located east of the Hood Pump Station on Interceptor 2 and discharged to a headwall adjacent to the Passumpsic River. The precast concrete structure was reconstructed in August of 2015 and has a 12" PVC drop inlet, 18" VC inlet and outlet with a 12" PVC overflow pipe approximately 3.6-feet above the outlet, as shown in Image A.13.

CSO 020 has been impacted and overflows eliminated by the following projects:

- 2007 Cliff Street and Hastings Hill Drainage and Sewer Improvements – Installed a designated storm system on the northern end of Hastings Hill that discharged to a designated storm discharge located behind 4 Memorial Drive
- 2010 Westside Infrastructure Improvements Project Hastings Hill – Installed designated storm and sewer systems on Hastings Hill. New storm discharged to designated storm installed previously.
- 2013/2014 Westside Infrastructure Improvements Northern Portion – Installed a designated storm system on Mount Pleasant and Boynton Avenue that discharges to the designated storm previously installed on Hastings Hill. This project also reconstructed the CSO, which installed a 15-inch PVC riser in the existing 18-inch clay tile overflow and removed the existing concrete weir. The riser has an elevation of 580.0 where the weir had an elevation of 576.83. The new PVC riser is more restrictive and ensures that flow does not get to a point where discharging to the overflow is the only way for it to exit the structure.

There is an estimated 1 storm collection structure remaining on the combined collection system contributing to CSO 020. The drainage area for this structure is too small to trigger an overflow at this structure, so the overflow pipe has been capped.

CSO 021

CSO 021 is located at the intersection of Memorial Drive and Tremont Street on Interceptor 2 and discharges to the Passumpsic River. The precast concrete structure has a 10" AC inlet, 8" AC inlet and a dual 6" cast iron siphon outlet with an 8" PVC overflow pipe approximately 17-inches above the outlet. The structure is 13.2-feet deep, as shown in Image A.14.



Image A.14 - CSO 021

CSO 021 has been impacted and overflows reduced by the following projects:

- 1970 Sewerage and Water Systems Hospital Area – Installed designated sewer on St. John Street and Tremont Street
- 1997 Lateral Sewers, Storm Drains and In-line Grit Removal Facilities – Installed separated storm and sewer mains on Brunelle Street, Howard Terrace, Centerview Terrace and Elliot Street
- 2018 Oak Street Area Water, Sewer and Storm Improvements – Installed designated storm and sewer on Emerson Street, Union Street, Russell Avenue, and Southard Street. All storm was directed to a designated storm discharge at the bottom of Tremont Street.

There are an estimated 2 storm collection structures remaining on the combined collection system contributing to CSO 021. There are no projects planned in the next 5-years to reduce the flow to this structure, but Table A.19 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.19
CSO 021 NMC MEASURES

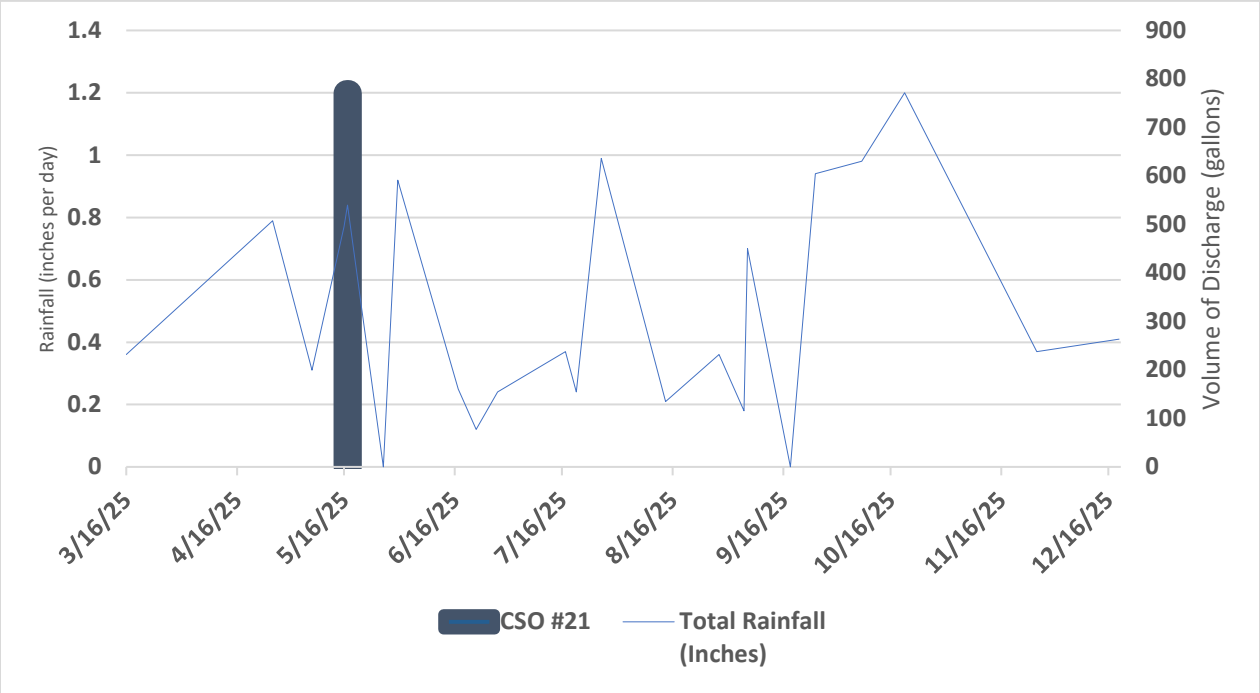
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins. The Town is also monitoring the siphons exiting the structure to ensure both are functioning.
2. Maximize system storage	The overflow has no restrictions or tide gate installed. It has been recommended in the past to determine if one is necessary
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	There is nothing currently in place to limit the overflow
5. Elimination of dry weather discharge	CSO 021 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system. Auto mechanic garages in collection area have oil/water separators and area is monitored for oil.
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 021 had a monitor installed on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.14.

TABLE A.22
CSO 021 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	2	--	1
2020	--	2	--	--
2021	--	--	--	--
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	6	0
2025	0	1	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.9
CSO #21 2025 RECORDED EVENTS



CSO 023

CSO 023 is located on the southern point of 401 Western Avenue on Interceptor 3 and discharges to the Sleepers River. The precast concrete structure has a 12" AC inlet and outlet and was not constructed to be an overflow structure. Based on our November 13, 2013 inspection, it was identified that the structure rim had been modified to allow sewage surcharging in the structure to discharge to the Sleepers River and a defined flow channel from the structure to the river did exist, as shown in Image A.15.



Image A.15 - CSO 023

CSO 023 has been impacted and overflows reduced by the following projects:

- 2007 Cliff Street and Hastings Hill Drainage and Sewer Improvements – Installed 46 catch basins on a designated storm system that discharged to a designated storm discharge location on Western Avenue
- 2011/2012 Westside Infrastructure Improvements Southern Portion – Installed 68 catch basins on a designated storm system that discharge to the designated storm previously installed on Cliff Street
- 2013/2014 Westside Infrastructure Improvements Northern Portion – Installed 87 catch basins on a designated storm system that discharge to the designated storm previously installed on Cliff Street
- 2013/2014 Eastern, Western and Main Utility Improvements – Installed 25 catch basins on designated storm and discharge to the designated storm discharge location on Western Avenue

There are no known storm collection structures remaining on the combined collection system contributing to CSO 023, however it is directly downstream of CSO 027. There are no projects planned in the next 5-years to reduce the flow to this structure, but Table A.23 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.23
CSO 023 NMC MEASURES

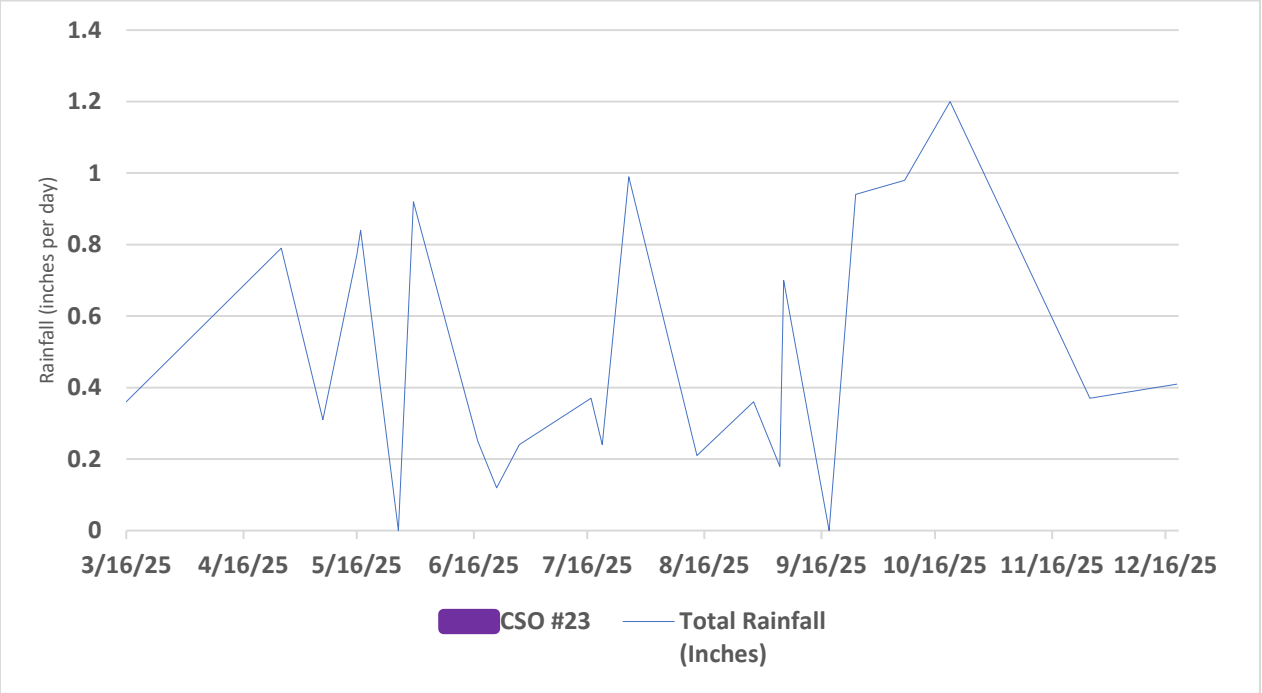
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	This overflow does not have any items in place, as it is the result from the manhole backing up
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	There are no restrictions in place
5. Elimination of dry weather discharge	CSO 023 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	This CSO had a monitor installed on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.15.

TABLE A.24
CSO 023 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	2	--	--
2020	--	--	1	--
2021	--	--	1	--
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	0	0
2025	0	0	0	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.10
CSO #23 2025 RECORDED EVENTS



CSO 024 - Modified

CSO 024 is located on the west side of the St. Johnsbury School property and discharges into Interceptor 3 and overflows to the Sleepers River. The precast concrete structure has a 24" AC drop inlet and 8" AC outlet with a 24" AC overflow pipe approximately 3-inches above the outlet when constructed, as shown in Image A.16. In 2025 the overflow pipe was modified with an 8-inch PVC riser to increase the storage capacity in the structure.



Image A.16 - CSO 024

CSO 024 has been impacted and reduced by the following projects:

- 2013/2014 Eastern, Western and Main Utility Improvements – Removed all flow from Western Avenue to this structure

It is estimated that there is 1 remaining storm collection structure on the combined collection system contributing to CSO 024. There are no projects planned in the next 5-years to reduce the flow to this structure, but Table A.25 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.25
CSO 024 NMC MEASURES

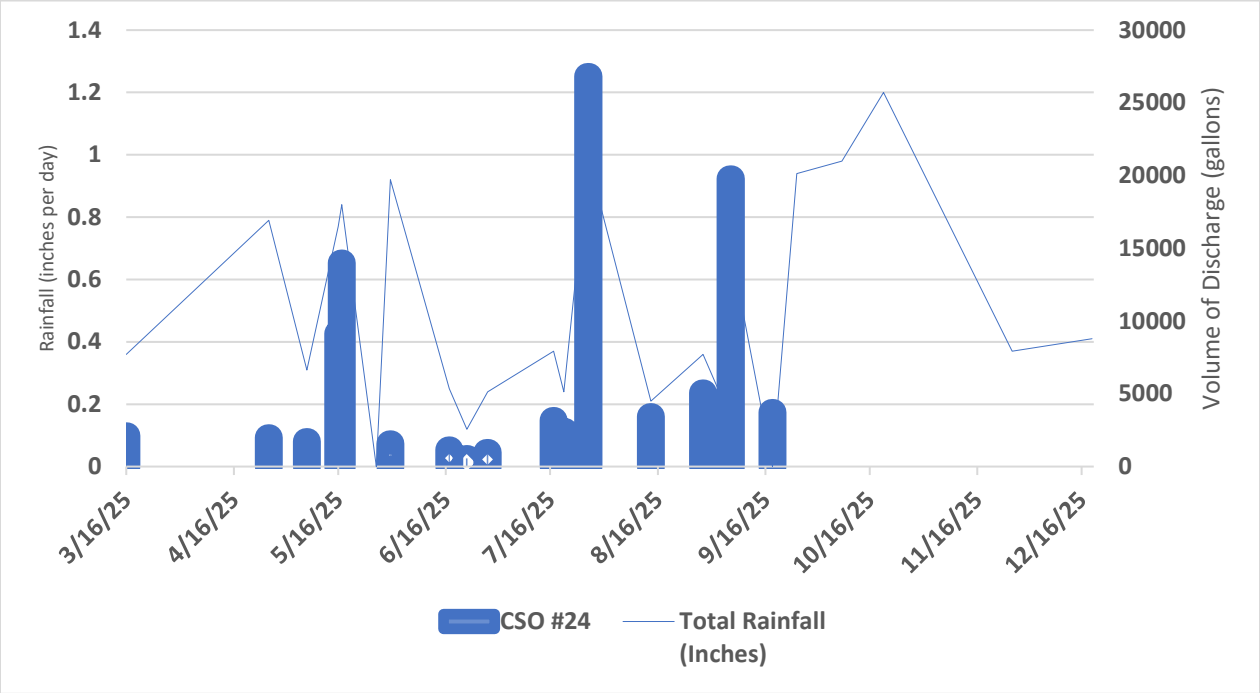
Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has some brick in place that may have been intended to be a weir reduce frequency of discharge
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	This structure has a weir constructed.
5. Elimination of dry weather discharge	CSO 024 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 024 has been visually monitored in the past, but a monitor was installed on September 21, 2021 to provide depth, flow and velocity of discharge, as shown in Image A.16.

TABLE A.26
CSO 024 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	1	1
2020	--	4	1	--
2021	--	--	--	--
2022	--	--	--	--
2023	--	--	--	--
2024	--	--	3	5
2025	1	8	8	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.11
CSO #24 2025 RECORDED EVENTS



CSO 027 - Modified

CSO 027 is located on the southwest side of 85 US Route 2W and discharges into Interceptor 3 and overflows to the Sleepers River. The precast concrete structure has a 24" VC inlet and 12" AC outlet with a 24" VC overflow pipe with a 14" weir, as shown on Image A.17. In 2025 the overflow pipe was modified with an 8-inch PVC riser to increase the storage capacity in the structure.



Image A.17 - CSO 027

CSO 027 has been impacted and overflows reduced by the following projects:

- 2007 Cliff Street and Hastings Hill Drainage and Sewer Improvements – Installed 46 catch basins on a designated storm system that discharged to a designated storm discharge location on Western Avenue
- 2011/2012 Westside Infrastructure Improvements Southern Portion – Installed 68 catch basins on a designated storm system that discharge to the designated storm previously installed on Cliff Street
- 2013/2014 Westside Infrastructure Improvements Northern Portion – Installed 87 catch basins on a designated storm system that discharge to the designated storm previously installed on Cliff Street
- 2013/2014 Eastern, Western and Main Utility Improvements – Installed 25 catch basins on designated storm and discharge to the designated storm discharge location on Western Avenue

There are an estimated 7 storm collection structures remaining on the combined collection system and several roof drains contributing to CSO 027. The Town plans to reconstruct this CSO in 2025 to reduce the flow to this structure, but Table A.27 identifies the measures being taken to meet the nine minimum control (NMC) measures identified in the EPA guidance.

TABLE A.27
CSO 027 NMC MEASURES

Control Measure	Measures Taken
1. Operation and maintenance program	Utility owns and operates a vac-con truck that is used to remove sediment and debris from trunkline and contributing catch basins
2. Maximize system storage	The overflow has a weir in place to reduce frequency of discharge. The outlet does not have a tide gate installed but is above the 100-year flood level of the river
3. Review/modify pretreatment	There is no pretreatment currently in place
4. Maximize flow to WWTF	Town officials removed roots and debris down stream of CSO 027 that reduced the flow level through the structure
5. Elimination of dry weather discharge	CSO 027 has not discharged during dry weather.
6. Control of solid/floatable materials	Town officials remove debris from contributing catch basins seasonally
7. Pollution prevention program	Town officials sweep streets twice annually to reduce debris from entering the combined collection system
8. Public notification	Discharges are reported to the state and warning signs have been installed at the location of the discharge
9. Monitoring to effectively characterize impacts.	CSO 027 has had a depth monitor since 2019, but upgraded this monitor on July 1, 2021 to provide depth, flow and velocity of discharge.

TABLE A.28
CSO 027 NUMBER OF REPORTED OVERFLOW EVENTS

Year	Winter (Dec 21-Mar 20)	Spring (Mar 20-June 21)	Summer (June 21-Sept 22)	Fall (Sept 22-Dec 21)
2019	--	--	--	--
2020	--	--	--	--
2021	--	--	--	--
2022	6	--	--	--
2023	--	--	--	--
2024	--	--	11	1
2025	1	5	2	0

** Some data from previous years was unavailable due to one or more of the following: Machine malfunction, transmitting/receiving issues, battery issues, transitioning of new employees and responsibilities.

FIGURE A.12
CSO #27 2025 RECORDED EVENTS

