



Haverhill

Robert E. Ward, Deputy DPW Director
Water/Wastewater Division
Phone: 978-374-2382 Fax: 978-521-4083
rward@haverhillwater.com

March 31, 2026

Enforcement and Compliance Assurance Division
U.S. EPA New England – Region 1 (Mail Code: 04-4)
5 Post Office Square
Boston, MA 02109-3912
Attn: Ms. Solanch S. Pastrana-Del Valle

Subject: City of Haverhill, MA NPDES Permit #MA 0101621
Consent Decree Submittal (Civil Action No. 16-11698-IT)
2025 Annual Combined Sewer Overflow Report

Dear Ms. Pastrana-Del Valle:

In accordance with Part I.F. 1 through 5 of the City of Haverhill's NPDES Permit and the Consent Decree item VII.M.51, we are providing this annual report for the 2025 calendar year.

If you require additional information, please call me at (978) 374-2382.

Sincerely,

Robert E. Ward
DPW Director

Enclosure

cc:

Chief, Environmental Enforcement Section, U.S. DOJ
Susan Poswistilo, U.S. Attorney, MA District
I. Andrew Goldberg, MA Assistant Attorney General, andy.goldberg@state.ma.us
Mayor Melinda E. Barrett, City of Haverhill, mayor@haverhillma.gov
Lisa Mead, City Solicitor, lisa@mtclawyer.com
Michael Leon, Nutter, McClennen & Fish LLP, MLeon@nutter.com
Paul Jessel, Wastewater, pjessel@haverhillma.gov
Isaiah Lewis, WWTP Facility Manager, ilewis@haverhillma.gov



City of Haverhill

Wastewater Division

Annual Combined Sewer Overflow Report

Calendar Year 2025

NPDES Permit No. MA 0101621

Purpose

This report was prepared to meet the requirements of Part I, Section F (1 to 5) of the National Pollutant Discharge Elimination System (NPDES) Permit No. MA0101621 issued to the City of Haverhill by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP). The permit authorizes the City to discharge stormwater/wastewater during wet weather from 13 combined sewer overflow (CSO) outfalls located along the Merrimack and Little Rivers. The report also satisfies the requirements of Item VII.M.51 of the Consent Decree (Civil Action No. 16-11698-IT) between the United States Department of Justice, EPA, the Commonwealth of Massachusetts, and the City of Haverhill.

As required by the NPDES permit, this report includes:

- Locations of CSO outfalls
- A summary of activities and volumes
- Status and progress of CSO abatement work
- Contacts for additional information on CSO's and water quality
- Daily precipitation information, including total precipitation, peak intensity, and average intensity.
- Certification that monthly inspections were completed, results recorded, and records maintained.
- Information related to compliance with the Nine Minimum Controls (NMC)
- Information pertaining to each combined sewer overflow outfall including the monthly total volume discharged, the total duration of discharges for each month, and the monthly number of CSO discharge events.

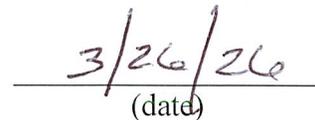
The Consent Decree requires information related to each combined sewer overflow event for each outfall including date and time the overflow started and stopped, the volume of the overflow for each event, the amount of precipitation associated with each overflow event, the total volume discharged from each outfall for the year, and the total volume discharged for the year.

Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Robert E. Ward
DPW Director
City of Haverhill

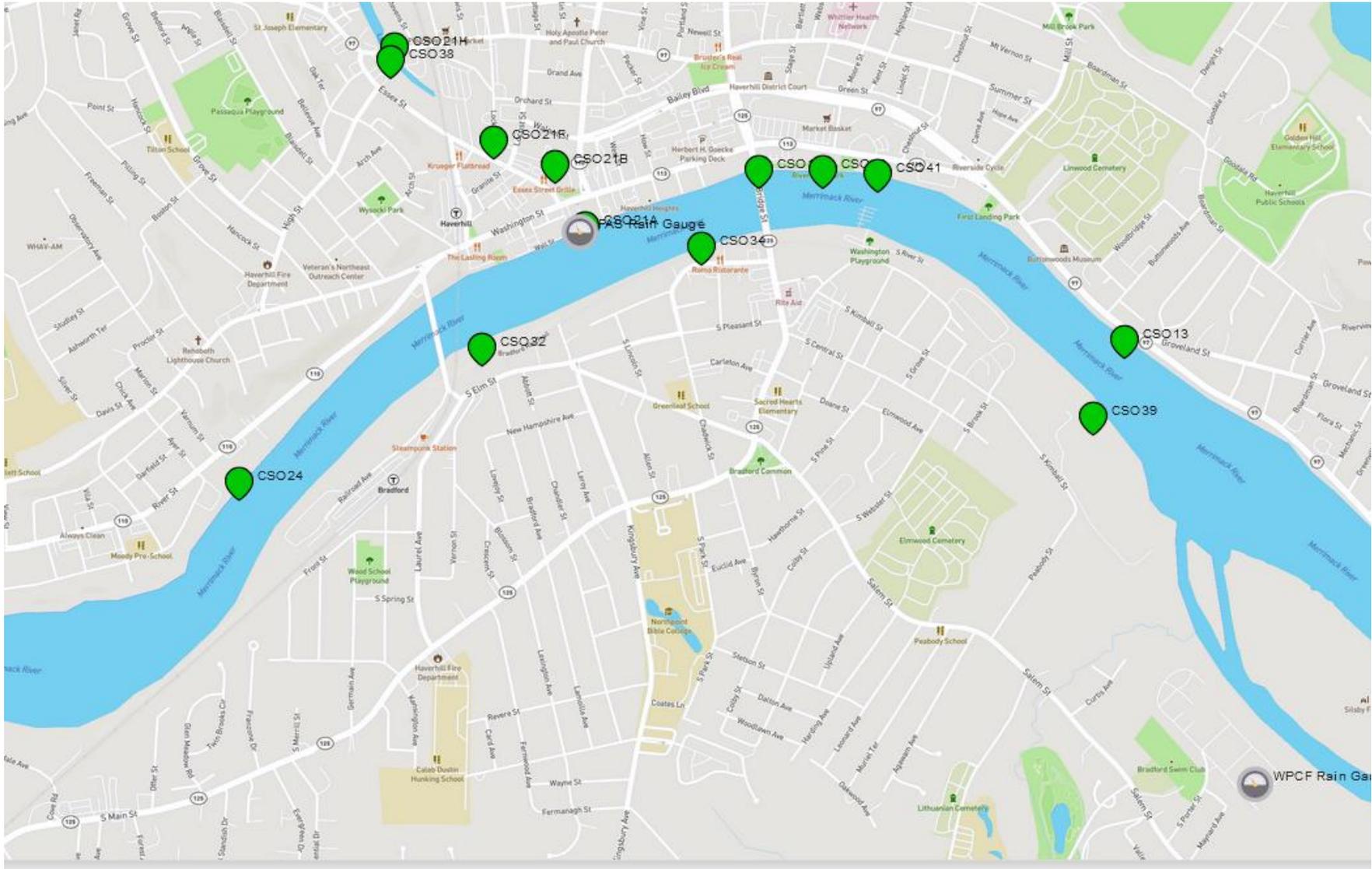


3/26/20
(date)

**Table 1
CSO Outfalls and Regulators**

NPDES Outfall ID	CSO Outfall Name	CSO Regulator Names	Receiving Waters	Status
Upper Siphon System				
025	Beach Street		Merrimack River	Closed
024	Upper Siphon - Varnum Street		Merrimack River	Open
023	266 River Street		Merrimack River	Closed
022	Railroad Bridge		Merrimack River	Closed
Middle Siphon System				
021H	Winter Street and Hale Street	Winter Street at Hale Street (021H) Winter Street (021G)	Little River	Open
038	High Street Diversion	Broadway (037) High Street (038)	Little River	Open
021B	Emerson Street		Little River	Open
021E	Little River South (Locke Street South)		Little River	Closed
021M	Marginal Pump Station		Little River	Closed
021D	Little River North (Locke Street North)		Little River	Closed
021F	Center Barrel - Locke Street		Little River	Open
021A	Middle Siphon - Essex Street		Little River	Open
Lower Siphon System				
019	Main Street North		Merrimack River	Open
016	Fire Station		Merrimack River	Closed
040	Bethany Avenue		Merrimack River	Open
041	Chestnut Street		Merrimack River	Open
013	Lower Siphon - Buttonwoods Avenue		Merrimack River	Open
010	Boardman Street		Merrimack River	Closed
001	Bates Bridge		Merrimack River	Closed
Bradford System				
031	Front Street		Merrimack River	Closed
032	Bradford Avenue		Merrimack River	Open
033	South Prospect Street		Merrimack River	Closed
034	Middlesex Street		Merrimack River	Open
035	South Main Street		Merrimack River	Closed
036	Ferry Street		Merrimack River	Closed
039	South Webster St.	(042) Colby St./ Salem St.	Merrimack River	Open

FIGURE 1 Open CSO Outfalls



**Table 2
CSO Outfalls and Regulators**

Outfall ID	CSO Outfall Name	CSO Regulator Names	CSO Monitoring and Volume Measurement Method
Upper Siphon System			
024	Upper Siphon – Varnum Street	Depth/Sluice Gate Opening - Orifice Equation	Depth/Sluice Gate Opening - Orifice Equation
Middle Siphon System			
021H	Winter Street and Hale Street (F)	Winter Street/Hale Street (021H) (F) Winter Street (021G) (F)	Depth at Weir Depth at Weir
038	High Street Diversion (F)	Broadway (037) (F) High Street (038) (F)	Depth at Weir Depth at Weir
021B	Emerson Street (F)		Depth at Weir
021F	Center Barrel - Locke Street		Depth at Weir
021A	Middle Siphon - Essex Street		Depth at Weir and Depth / Velocity in Outfall
Lower Siphon System			
019	Main Street North		Depth at Weir and Depth / Velocity in Outfall
040	Bethany Avenue		Depth at Weir and Depth / Velocity in Outfall
041	Chestnut Street		Depth at Weir and Depth / Velocity in Outfall
013	Lower Siphon – Buttonwoods Avenue		Depth/Sluice Gate Opening - Orifice Equation
Bradford System			
032	Bradford Avenue		Depth at Weir and Depth/Velocity in Outfall
034	Middlesex Street		Depth at Weir
039	South Webster Street	(042) Colby Street/ Salem Street	Depth at Weir and Depth/Velocity in Outfall

Note: (F) Indicates CSO regulators and outfalls used in the flood protection system.

CSO Discharge Monitoring

Since 2014, each of the City’s CSO outfalls has been monitored by a depth measuring device at the weir and/or a depth/velocity meter in the CSO outfall pipe, as indicated in Table 2. All CSO regulators are monitored by a depth gauge located at the CSO weir (some are ultrasonic meters, and some have both ultrasonic and transducer gauge). Six of the CSO regulators also have a depth/velocity gauge in the CSO outfall (measuring the depth and velocity of the CSO flow through the outfall pipe).

The flow metering equipment is maintained by a contractor, Flow Assessment Services (FAS). FAS sends alert emails to Haverhill Wastewater Staff when CSOs start and stop. FAS is responsible for the analysis of the meter information to make sure accurate flow data is collected. Flow Data from FAS is sent to the City's Historian Database. Another third-party contractor, Aquasight Inc, maintains the CSO Public website and initiates public notification emails.

CSO flow computations at the CSO weir are estimated using a depth of flow over a weir calculation. The depth/velocity gauges utilize an area-velocity equation to estimate flow in the outfall pipe. In some cases, depth/velocity meters could not be installed in the outfall pipe because flow measurements were hydraulically affected by river backwater conditions and/or downstream backwater gates (gravity flap gates).

As previously mentioned, 2 CSO outfalls have 2 regulators that share the outfall. To accurately record CSO volumes, flow is measured at each regulator structure. CSOs for the High Street Diversion (NPDES Outfall ID 038) outfall are measured and reported under Broadway 037 and the High Street 038 regulators. CSOs for the Winter Street and Hale Street (NPDES Outfall ID 021H) outfall are measured and reported under the Winter Street/Hale Street 21H and Winter Street 021G regulators.

CSO volumes at Upper and Lower Siphon outfalls are now calculated by the City using an orifice equation that reflects the typically surcharged (but variable) CSO gate opening. Each regulator has radar units that record the depths in the influent sewer, downstream of the CSO gates (river conditions), and downstream of the flow inlet gate to the siphons (to evaluate the backwater condition of the Bradford Interceptor).

Working with CDM Smith, the City developed appropriate computations to calculate flow through the variable orifice sluice gate openings. The City uses these equations to calculate CSO volumes discharged at the Upper and Lower Siphon outfalls. CDM Smith added these flow calculations into the City's SCADA system in 2019. The City can now view real-time flows from Upper and Lower Siphons during storm events. The CSO gate positions are connected to the City's SCADA system. The CSO flow calculations are stored in HachWIMS Historian database that is queried to produce this annual report.

In 2023 the City's contractor finalized the data sync to acquire all Flow Assessment meter and rain gage data automatically. Preliminary CSO data is used to notify downstream communities that a CSO is active and the estimated volume. FAS verifies all CSO Data monthly and the data is imported into HachWIMS for reporting. The City uses HachWIMS reporting software for all CSO reporting.

The City's CSO meters are a complex method to accurately record each CSO event. The City nor the City's vendor can guarantee 100% data communication between the meter and HachWims. The City can only report the available information. Errors or omissions will be documented to the best of our abilities.

2025 CSO Outfall Activations

Activation frequency and flow characteristics are measured by the FAS meters, as discussed above. FAS provides yearly flow data, including volume, from their meters. Except for the Upper and Lower Siphon Outfalls, FAS analyzes flow data for each CSO occurrence to assure that accurate flow data is being measured and reported. For the Upper and Lower Siphons, the City uses the data downloaded from the SCADA system.

Table 3 summarizes the total CSO volume discharged and the number of activations for each outfall/regulator for 2025.

Table 3 Summary by Regulators

Outfall ID	CSO Name	Number of Activations	Total Volume (gals.)
13	Lower Siphon	1	59,600
19	Main Street North	0	0
021A	Middle Siphon	3	133,903
021B	Emerson Street	0	0
021F	Center Barrel Locke Street	17	1,262,670
021H	Winter/ Hale Street	10	732,309
24	Upper Siphon	1	835,394
32	Bradford Avenue	1	23,010
34	Middlesex Street	3	31,628
38	High Street	1	990
39	South Webster Street	1	2,472
40	Bethany Avenue	2	32,122
41	Chestnut Street	2	6,507
		Total	3,120,605

Appendix A shows the date, rainfall, and CSO volumes for the days with CSO activations.

Appendix B provides information required by the City’s NPDES permit, including monthly total flow, duration of overflow, and the number of discharges for the month.

Appendix C provides 2025 CSO activation information required by the Consent Decree, including start and stop times, the amount of precipitation, and overflow volume.

Appendix D provides daily rainfall statistics from Lawrence Airport, Middle Siphon Rain Gage (Flow Assessment), and rain gage at the City’s Wastewater treatment plant.

2025 Precipitation

The City collects rain data from 3 rain gauges: a tipping bucket rain gauge at the Wastewater Treatment Facility (WWTF) ASPW building, a NOAA supplied rain gage at the Lawrence Municipal airport and a tipping bucket rain gauge at the Marginal Pumping Station CSO21A. The gauge at the Marginal Pumping Station is the closest gauge to 11 of the CSO outfalls and their tributary areas. The other 2 outfalls, 013 and 039, and their tributary areas are closer to the gauges at the WWTF.

The data from the tipping bucket rain gauge at the WWTF ASPW building is connected to SCADA and HachWIMS and is automatically pulled into a report created by the City. This report summarizes total daily rain in inches and 15-minute peak rain intensities.

The tipping bucket rain gauge at the Marginal Pumping Station is owned and maintained by FAS. Rain data from this gauge, such as daily totals and 15-minute peak intensities, is transmitted to the FAS website where wastewater staff can view it at any time.

We are also including rain data from the nearest National Weather Station, which is located at the Lawrence Municipal Airport. The current location is elevation 149 feet, Latitude 42.7172° W, Longitude -71.1239° W.

The rainfall totals for 2025 for each gauge are shown in Table 4 along with annual average rainfall from the City’s rainfall records. The 2025 total precipitation was below the average annual rainfall since the City began recording totals in 1895.

Rain Gage Location	2025 Total Annual Rain (in.)
Lawrence Municipal Airport National Weather Service	15.14
Tipping bucket rain gage at Marginal Pumping Station	29.66
Tipping bucket rain gage at the WWTF ASPW building	26.72
ASPW Manual Rain Gage	37.60

Appendix D shows total daily rainfall (in inches), peak intensity (highest 15-minute sample multiplied by four to convert to inches per hour), storm duration, and average intensity. It should be noted that some storm durations continue overnight and into another day.

Haverhill’s CSO Abatement Program

Since 2002, the city has been implementing its CSO Long Term Control Planning, design and construction have been completed for various projects aimed at reducing CSO Volumes and occurrences. To view the City’s progress since 2002 please see the 2023 CSO Annual Report, available at

<https://www.haverhillma.gov/living-here/waterwastewater-services/wastewater/wastewater-collection-system/>

In 2025, the City continued to move forward with the Locke Street Sewer Separation Project. The Phase 1 design is complete and includes sewer separation with infiltration rehabilitation and installing new storm drains and outfalls for the 10-year, 24-hour design storm. The City was waiting for an easement from MBTA railroad to begin Phase 1 construction. This easement was secured in September 2025. The City received a second extension to begin construction of Phase 1 by November 30, 2025. Currently CSO Phase 1 is projected to cost over \$12.8 million. Construction began in December 2025.

The City continues with CSO Phase 2 Design (total acres of 96.2 with 18,000 linear feet of new storm drains) and submitted 60% plans to MassDEP for their review. The Design cost is expected to be \$1,008,000. \$390,00 was spent in 2025. It is anticipated that Phase 2 CSO contract shall be awarded in June 2026.

Nine Minimum Controls (NMC)

The following is a summary of activities during the calendar year 2025 relating to compliance with the Nine Minimum Controls (NMC).

1. Proper operation and regular maintenance programs for the sewer system and CSO outfalls

The City continued to use its Computerized Maintenance Management System (CMMS) CityWorks to track and manage the maintenance of its combined sewer system, including inspection and cleaning of sewers, drains, pumping stations, CSO regulators, and CSO outfalls. Sewer segments with recurring problems are added to a preventative maintenance schedule in CityWorks.

The City continued to inspect its sewer pumping stations daily for stations with a flow greater than 100,000 gallons per day and weekly for all the other stations. The City completes preventive maintenance quarterly at each of the stations. Collection system personnel perform monthly inspections of the CSO regulators and outfalls. In addition, CSO regulators are monitored by flow meters that notify wastewater staff when activations occur.

2. Maximize the use of the collection system for storage

The City's CSO regulators are controlled by weirs and by automatically controlled sluice gates at the Upper and Lower Siphon CSO structures. Weirs at the regulators have been raised periodically to reduce CSO discharges based on recommendations in the LTCs. The City has closed 13 (13) CSO outfalls, which effectively increases the use of the collection system for wet weather storage.

The automated real-time control system (instrumentation, depth monitoring, and modulated flow control gates operated by automated programming) installed at the Upper and Lower Siphon CSO structures is designed to utilize the interceptor storage upstream of each regulator structure to allow more flow from the Middle CSO to be conveyed to the Bradford Interceptor, and ultimately to the WWTF, to maximize the use of interceptor storage for wet weather flows and to reduce CSO discharges. The City continued to fine-tune this real-time flow control system to optimize the use of the interceptor piping system for wet weather storage.

3. Review and modification of pretreatment program to assure CSO impacts are minimized

The Industrial Pretreatment Program (IPP) was established to help minimize the impacts of discharges in the combined sewer system from non-domestic sources during wet weather events. The IPP Coordinator monitors significant industrial users (SIU) that discharge to the City's sewer system.

The City's sewer use ordinance prohibits any discharge to the collection system that may be detrimental to the wastewater treatment process or the receiving water. These regulations establish limits for pollutant loads that can be discharged to the sewer system. All industrial discharges to the City's sewer system are required to adhere to the requirements of the City's IPP Program. Inspections of these dischargers are performed by City staff.

The WWTP influent fats, oil, and grease (FOG) has decreased significantly since the improvements to its IPP program. Since FOG loadings have been reduced, WWTP staff have been able to maintain low secondary blanket levels and exceptional sludge settling.

The IPP Coordinator continues to maintain the FOG program via annual inspections. These inspections include checking pump out receipts of all grease traps and interceptors, inspecting and measuring FOG using a modified sludge judge in all the grease traps and interceptors, ensuring owners have the proper maintenance schedules and ensuring proper waste grease disposal. The City hired a contractor to inspect all food service establishments using the procedures and protocols established by the IPP Coordinator. In 2025, all 255 registered FOG devices were successfully inspected, and a centralized Restaurant Master List was established to streamline asset management and oversight.

In 2018, the City hired Hoyle and Tanner to review and revise the City's Local Limits. A sampling plan was submitted to EPA and approved by EPA. The Local Limits study was completed by Hoyle and Tanner in June of 2021 and was submitted to the EPA. EPA has completed their review of the Local Limit Study, and the City anticipates presenting the study, along with some other updates to the sewer use ordinance, to Council for approval in the next reporting period.

As part of a July 2025 audit of Haverhill's Pretreatment Program, the EPA initiated a review of proposed language revisions to the City's Sewer Use Ordinance. As of the close of 2025, the City remains pending formal feedback from the EPA. Upon receiving approval, the City will proceed with the adoption of the updated ordinance.

The City implemented permitting software (ViewPoint) for all business occupancy permits, site plan applications, and wastewater discharge permits. Wastewater employees (currently the Collection System Supervisor and Pretreatment Coordinator) review applications and issue permits as applicable. This system allows the City to improve tracking of wastewater discharged to the City's collection system.

4. Maximization of flow to the publicly owned treatment works (POTW) for treatment.

The City continues to implement measures to maximize flow to the WWTP, including raising weirs and adding CSO control gates that will allow real-time control to reduce CSO discharges. WWTP staff prioritize the maintenance and repair of equipment at the plant and South Mill Street Pumping Station to maximize flow to the plant during wet weather. For example, staff monitor the influent pumps at South Mill Street Pumping Station, perform scheduled preventative maintenance, and perform any needed corrective maintenance on the pumps as a high priority.

WWTP staff operate and maintain the plant process to ensure the plant is capable of maximizing wet weather flow and treatment during wet weather.

The city has implemented artificial intelligence software that assists operations with important process decisions that help maximize flow to the WWTP.

In 2025, the City along with its consultant Wright-Pierce, began final design on the secondary treatment/South Mill Pumping Station upgrade project. Maximizing flow to the treatment plant is considered with all upgrade recommendations. Piping replacement and pump rehabilitation are planned for the station. Total estimated construction cost for the project is approximately \$58 million with more than \$6 million in South Mill Pumping station upgrades. The City surpassed 30% design drawings by the end of 2025. Final Design is expected to be completed in the next reporting period.

5. Prohibition of CSOs during dry weather overflows

Dry weather overflows (DWOs) from the CSO discharge outfalls are prohibited under the NPDES permit. Wastewater staff inspect all the CSO outfalls/regulators monthly. As discussed previously in this report, CSO regulators are continuously monitored. If there is a CSO

activation during dry weather, collection system operators are dispatched to investigate and resolve the issue as quickly as possible. In 2025 there were no known dry weather overflows.

6. *Control of solid material and floatable materials in CSOs*

Under the Wet Weather System Maximization/CSO Structure Modifications project, the City is maximizing its capture of wet weather flow for eventual treatment at the WWTP, which maximizes floatables control. The City has also raised weirs to capture more wet weather flow, and floatables in the first flush, during storm events.

As part of the Integrated LTCP, CDM Smith evaluated other potential solids and floatables controls options that could be implemented at the CSO regulators. It was determined that there are no cost-effective approaches to capturing solids and floatables at the City's CSO regulators for a variety of reasons including the constrained space within the regulators to install new screens, trash racks, or baffles, the lack of available land (most of the outfalls are situated directly on the river with no reasonable room for inline screens along the outfall pipe), and river/flow conditions that would preclude outfall technologies (like booms or netting systems).

The City relies on regular cleaning of catch basins and street sweeping near CSO regulators as a preventive measure for the reduction of grit and floatables to its combined system and receiving waters. The City is increasing the frequency of catch basin cleaning and street sweeping, which will improve its floatables capture.

In 2025, the City continued its catch basin cleaning program. An outside contractor cleaned approximately 3,213 catch basins. The City removed approximately 400 tons of debris, some of which are floatables, at an approximate cost of \$125,000. The City also uses its Vac-truck to clean debris from the sewer system and budgets \$60,000 annually for street sweeping.

7. *Pollution prevention programs to reduce contaminants in CSOs*

Haverhill has adopted City ordinances that prohibit litter and debris from being deposited on the street and within the watershed areas. The City also performs regular cleaning of catch basins and street sweeping as a preventive measure for the reduction of pollutants into the combined system. Additionally, the FOG program already discussed in this document helps minimize pollutants in the City's CSOs.

The City has created brochures, including stormwater pollution prevention for residents, FOG education for residents, FOG education for businesses, pet waste education, and education about flushable wipes for residents. These brochures are located on the City's website and available to the public in multiple City-owned buildings. Flyers are also distributed to problem areas.

The City also holds household hazardous waste collection days twice a year, waste oil drop-offs once a month, curbside leaf/grass pickups twice a year, and electronics recycling twice a year. The City also operates a recycling and yard waste facility at the Highway garage.

8. *Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.*

The City maintains a CSO webpage on the City's website to provide information about CSOs to the public. The web page also has links to prior years CSO reports.

Within two hours of the discovery of a CSO occurrence, an email notification is sent to downstream communities, local Boards of Health, Harbor Masters, local drinking water authorities and any members of the public who subscribe to the notifications. Appendix D shows the current list of those notified within two hours of the discovery of a CSO occurrence.

Each of Haverhill's CSO outfalls has signage that identifies the CSO outfall in English and Spanish.

In 2025, the city's revised CSO notification plan was reviewed by MaDEP and approved. The updated plan includes a CSO Impact Study performed by CDM. This study revealed the CSO impact from Haverhill reaches 9.1 miles downstream. The plan also features real time notifications and preliminary CSO volumes displayed on a map on the city's website. The CSO map can be viewed [here](#).



9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

In 2014, the City contracted with a flow metering company to install and maintain depth and depth/velocity meters at each of its CSO regulators. This program is discussed previously in this report. The flow monitoring program continued throughout 2025.

End of Report

APPENDIX A

SUMMARY OF CSO REGULATOR ACTIVATION

APPENDIX A SUMMARY OF CSO SUMMARY OF CSO REGULATOR ACTIVATIONS 2025

							Upper Siphon	MIDDLE SIPHON SYSTEM					LOWER SIPHON SYSTEM				BRADFORD SYSTEM					
Lawrence Airport Rain Gauge		Middle Siphon Rain Gauge		WWTF Rain Gauge			Upper Siphon	Middle Siphon	Emerson Street	Center Barrel Locke Street	Winter and Hale Street	High Street Broadway	Lower Siphon	Main Street North	Bethany Avenue	Chestnut Street	Bradford Avenue	Middlesex Street	South Webster	TOTAL		
Date	Total Rain (in)	Peak Rain (in/hr)	Total Rain (in)	Peak Rain (in/hr)	Total Rain (in)	Peak Rain (in/hr)	Max Flow WWTF (mgd)	24	021A	021B	021F	021H	38	13	19	40	41	32	34	39		
1/1/2025	0.63	0.32	0.54	0.48	0.66	0.08	60.67		0	0	35,837	3,750	0		0	0	0	0	0	0	0	39,587
3/6/2025	0.51	0.18	0.42	0.48	0.69	0.08	61.29		0	0	26,368	628	0		0	0	0	0	0	0	0	26,997
3/17/2025	0.99	0.25	0.95	0.48	1.04	0.12	62.10		0	0	51,462		0		0	0	0	0	0	0	0	51,462
4/3/2025	0.00	0.00	0.55	0.36	0.85	0.08	63.41		0	0	31,455		0		0	0	0	0	0	0	0	31,455
4/26/2025	0.82	0.17	0.72	0.60	0.54	0.08	65.00		0	0	37,962		0		0	0	0	0	0	0	0	37,962
5/3/2025	0.30	0.24	0.83	2.16	0.02	0.08	63.54		8,486	0	257,132	270,951	0		0	9,090	4,056	0	10,521	0	0	560,236
5/4/2025	0.21	0.05	0.42	0.48	0.00		41.00		0	0	9,795		0		0	0	0	0	0	0	0	9,795
5/8/2025	0.09	0.05	0.26	0.48	0.03	0.08	18.65		0	0	36,139		0		0	0	0	0	0	0	0	36,139
5/9/2025	0.91	0.31	0.61	0.24	0.01	0.04	47.74		0	0	10,556		0		0	0	0	0	0	0	0	10,556
5/10/2025	0.63	0.12	0.99	0.36	0.01	0.04	65.00		0	0	180,385	11,115	0		0	0	0	0	0	0	0	191,500
5/22/2025	1.43	0.27	1.65	0.36	0.00		65.00		12,944	0	189,028	17,733	0	59,600	0	0	0	0	0	7,778	0	287,083
5/31/2025	0.25	0.08	0.29	0.72	0.00		43.17		0	0	1,604		0		0	0	0	0	0	0	0	1,604
6/6/2025	0.21	0.16	0.40	1.32	0.04	0.04	62.87		0	0	7,024	11,313	0		0	3,441	451	0	0	0	0	22,229
6/28/2025	0.00	0.00	0.23	0.24	0.45	0.08	59.99		0	0	2,233	21,361	0		0	0	0	0	0	0	0	23,594
7/17/2025	0.00	0.00	0.00	0.00	0.23	0.12	60.67		0	0	34,667	1,771	0		0	0	0	0	0	0	0	36,437
7/31/2025	0.00	0.00	0.05	0.12	0.30	0.08	62.92		0	0	46,882	26,167	0		0	0	0	0	0	0	0	73,049
8/13/2025	0.00	0.00	0.05	0.12	0.27	0.12	65.00	835,394	90,667	0	57,104	58,087	990		0	0	0	23,010	9,688	2,472	1,077,411	
8/25/2025	0.00	0.00	0.11	0.60	0.05	0.08	43.35		0	0	52,333	110,434	0		0	0	0	0	0	0	0	162,767
9/6/2025	0.00	0.00	0.67	2.64	0.50	0.16	63.58		21,806	0	74,618	185,750	0		0	19,590	1,997	0	3,642	0	307,403	
9/25/2025	0.00	0.00	0.75	0.60	0.32	0.08	58.69		0	0	15,170		0		0	0	0	0	0	0	0	15,170
10/20/2025	0.00	0.00	0.63	0.72	0.01	0.04	57.83		0	0	38,021	12,559	0		0	0	0	0	0	0	0	50,580
10/22/2025	0.00	0.00	0.52	0.48	0.02	0.04	56.90		0	0	23,503	344	0		0	0	0	0	0	0	0	23,847
10/30/2025	0.00	0.00	0.97	0.48	0.02	0.04	60.48		0	0	23,108	205	0		0	0	0	0	0	0	0	23,313
11/3/2025	0.00	0.00	0.27	2.04	1.18	0.12	62.09		0	0	16,972	142	0		0	0	3	0	0	0	0	17,118
Volume TOTALS							835,394	133,903	0	1,262,670	732,309	990	59,600	0	32,122	6,507	23,010	31,628	2,472	3,120,605		
Number of Activations for the Year							1	4	0	25	16	1	1	0	3	4	1	4	1			

APPENDIX B
CSO MONTHLY ACTIVATION

APPENDIX B CSO MONTHLY ACTIVATION

Monthly Parameters	UPPER SIPHON SYSTEM		MIDDLE SIPHON SYSTEM							LOWER SIPHON SYSTEM				BRADFORD SYSTEM			
	Outfall#	024	Outfall 21H				Outfall 38			013	019	040	041	032	034	039	
			021A	021B	021F	021G	21 H	037	038								
CSO Outfall Name	Upper Siphon	Middle Siphon	Emerson St.	Locke St	Winter St.	Winter St. Hale St.	Broadway	High St.	Lower Siphon	Main St. North	Bethany Ave.	Chestnut St.	Bradford Ave.	Middlesex St.	South Webster		
	Receiving Water	Merrimack River	Little River	Little River	Little River	Little River	Little River	Little River	Little River	Merrimack River	Merrimack River	Merrimack River	Merrimack River	Merrimack River	Merrimack River	Merrimack River	
January, 2025	Total Flow		0	0	35,837	0	3,750	0	0		0	0	0		0	0	39,587
	Total Hrs				0.67		0.25										
	# Events	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
February, 2025	Total Flow		0	0	0	0	0	0	0		0	0	0		0	0	0
	Total Hrs																
	# Events	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
March, 2025	Total Flow		0	0	77,830	0	628	0	0		0	0	0		0	0	78,458
	Total Hrs				2.42		0.08										
	# Events	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	
April, 2025	Total Flow		0	0	69,417	0	0	0	0		0	0	0		0	0	69,417
	Total Hrs				6.58												
	# Events	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
May, 2025	Total Flow		21,431	0	684,639	1,108	298,691	0	0	59,600	0	9,090	4,056		18,299	0	1,096,913
	Total Hrs		0.33		33.92	0.33	4.50			0.33		1.08	1.08		0		
	# Events	0	2	0	7	1	5	0	0	1	0	1	1	0	2	0	
June, 2025	Total Flow		0	0	9,257	0	32,674	0	0		0	3,441	451		0	0	45,823
	Total Hrs				0.67		0.33					0.08	0.08				
	# Events	0	0	0	2	0	2	0	0	0	0	0	1	0	0	0	
July, 2025	Total Flow		0	0	81,549	0	27,937	0	0		0	0	0		0	0	109,486
	Total Hrs				1.08		0.33										
	# Events	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
August, 2025	Total Flow	835,394	90,667	0	109,438	854	167,663	0	990		0	0	0	23,010	9,688	2,472	1,240,175
	Total Hrs	1.83	0.25		0.92	0.16	0.58		0.08					0.08	0	0	
	# Events	1	1	0	2	2	2	0	1		0	0	0	1	1	1	
September, 2025	Total Flow		21,806	0	89,788	9,743	176,007	0	0		0	19,590	1,997		3,642	0	322,573
	Total Hrs		0.08		10.25	0.17	0.33					0.08	0.08		0		
	# Events	0	1	0	2	1	1		0	0	0	1	1	0	1	0	
October, 2025	Total Flow		0	0	84,632	0	13,108	0	0		0	0	0		0	0	97,740
	Total Hrs				4.33	0.17	0.50										
	# Events	0	0	0	3	1	3	0	0	0	0	0	0	0	0	0	
November, 2025	Total Flow		0	0	16,972	0	142	0	0		0	0	3		0	0	17,118
	Total Hrs				0.25		0.08						0.08				
	# Events	0.00	0.00	0.00	1.00	0.00		0.00	0.00	0.00	0.00	0.00	1.00	0.00		0	
December, 2025	Total Flow		0	0	3,313	0	0	0	0		0	0	0		0	0	3,313
	Total Hrs				0.33												
	# Events	0	0	0	1	0			0	0	0	0	0	0	0	0	3,120,602
Blank NO DISCHARGE																	

APPENDIX C

ACTIVATION PER STORM EVENT

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
1/1/2025	13	LOWER SIPHON					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	19	Main St North					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	24	UPPER SIPHON					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	32	Bradford Ave					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	34	Middlesex St					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	38	High St.					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	39	South Webster					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	40	Bethany Ave					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	41	Chestnut St					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	021A	Middle Siphon					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	021B	Emerson Street					0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	021F	Locke St	01/01/2025 03:20	01/01/2025 04:00	35,837	0.67	0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/1/2025	021H	Winter St. Hale st	01/01/2025 03:40	01/01/2025 03:55	3,750	0.25	0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
			STORM	TOTALS:	39,587	0.92												
3/6/2025	13	LOWER SIPHON					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	19	Main St North					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	24	UPPER SIPHON					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	32	Bradford Ave					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	34	Middlesex St					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	38	High St.					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	39	South Webster					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	40	Bethany Ave					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	41	Chestnut St					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	021A	Middle Siphon					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
3/6/2025	021B	Emerson Street					0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	021F	Locke St	03/06/2025 03:15	03/06/2025 04:55	26,368	1.67	0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/6/2025	021H	Winter St. Hale st	03/06/2025 03:20	03/06/2025 03:20	628	0.08	0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
			STORM	TOTALS:	26,997	1.75												
3/17/2025	13	LOWER SIPHON					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	19	Main St North					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	24	UPPER SIPHON					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	32	Bradford Ave					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	34	Middlesex St					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	38	High St.					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	39	South Webster					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	40	Bethany Ave					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	41	Chestnut St					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	021A	Middle Siphon					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	021B	Emerson Street					0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/17/2025	021F	Locke St	03/17/2025 03:25	03/17/2025 04:10	51,462	0.75	0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
			STORM	TOTALS:	51,462	0.75												
4/3/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	19	Main St North					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	32	Bradford Ave					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	34	Middlesex St					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	38	High St.					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
4/3/2025	39	South Webster					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	40	Bethany Ave					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	41	Chestnut St					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	021A	Middle Siphon					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	021B	Emerson Street					0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/3/2025	021F	Locke St	04/03/2025 03:20	04/03/2025 08:55	31,455	5.58	0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
			STORM	TOTALS:	31,455													
4/26/2025	13	LOWER SIPHON					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	19	Main St North					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	24	UPPER SIPHON					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	32	Bradford Ave					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	34	Middlesex St					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	38	High St.					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	39	South Webster					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	40	Bethany Ave					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	41	Chestnut St					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	021A	Middle Siphon					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	021B	Emerson Street					0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/26/2025	021F	Locke St	04/26/2025 08:25	04/26/2025 09:25	37,962	1.00	0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
			STORM	TOTALS:	37,962	1.00												
5/3/2025	13	LOWER SIPHON					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	19	Main St North					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	24	UPPER SIPHON					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	32	Bradford Ave					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
5/3/2025	34	Middlesex St	05/03/2025 17:30	05/03/2025 17:40	10,521	0.17	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	38	High St.					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	39	South Webster					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	40	Bethany Ave	05/03/2025 16:00	05/03/2025 17:05	9,090	1.08	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	41	Chestnut St	05/03/2025 16:00	05/03/2025 17:05	4,056	1.08	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	021A	Middle Siphon	05/03/2025 17:35	05/03/2025 17:40	8,486	0.08	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	021B	Emerson Street					0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	021F	Locke St	05/03/2025 16:00	05/03/2025 17:45	257,132	1.75	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/3/2025	021H	Winter St. Hale st	05/03/2025 16:00	05/03/2025 17:20	270,951	1.33	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
			STORM	TOTALS:	560,236	5.50												
5/4/2025	13	LOWER SIPHON					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	19	Main St North					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	24	UPPER SIPHON					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	32	Bradford Ave					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	34	Middlesex St					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	38	High St.					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	39	South Webster					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	40	Bethany Ave					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	41	Chestnut St					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	021A	Middle Siphon					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	021B	Emerson Street					0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	
5/4/2025	021F	Locke St	05/04/2025 15:50	05/04/2025 15:55	9,795	0.08	0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15			0.00	

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
			STORM	TOTALS:	9,795	0.08												
5/8/2025	13	LOWER SIPHON					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	19	Main St North					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	24	UPPER SIPHON					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	32	Bradford Ave					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	34	Middlesex St					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	38	High St.					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	39	South Webster					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	40	Bethany Ave					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	41	Chestnut St					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	021A	Middle Siphon					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	021B	Emerson Street					0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/8/2025	021F	Locke St	05/08/2025 23:30	05/08/2025 23:55	36,139	0.42	0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
			STORM	TOTALS:	36,139	0.42												
5/9/2025	13	LOWER SIPHON					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	19	Main St North					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	24	UPPER SIPHON					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	32	Bradford Ave					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	34	Middlesex St					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	38	High St.					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	39	South Webster					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	40	Bethany Ave					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	41	Chestnut St					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	021A	Middle Siphon					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
5/9/2025	021B	Emerson Street					0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/9/2025	021F	Locke St	05/09/2025 00:00	05/09/2025 22:35	10,556	22.58	0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
			STORM	TOTALS:	10,556	22.58												
5/10/2025	13	LOWER SIPHON					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	19	Main St North					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	24	UPPER SIPHON					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	32	Bradford Ave					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	34	Middlesex St					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	38	High St.					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	39	South Webster					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	40	Bethany Ave					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	41	Chestnut St					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	021A	Middle Siphon					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	021B	Emerson Street					0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	021F	Locke St	05/10/2025 06:25	05/10/2025 11:20	180,385	4.92	0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/10/2025	021H	Winter St. Hale st	05/10/2025 06:50	05/10/2025 08:55	11,115	2.08	0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
			STORM	TOTALS:	191,500	7.00												
5/22/2025	13	LOWER SIPHON	05/22/2025 23:05	05/22/2025 23:25	59,600	0.33	1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	19	Main St North					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	24	UPPER SIPHON					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	32	Bradford Ave					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	34	Middlesex St	05/22/2025 22:15	05/22/2025 22:30	7,778	0.25	1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	38	High St.					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
5/22/2025	39	South Webster					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	40	Bethany Ave					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	41	Chestnut St					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	021A	Middle Siphon	05/22/2025 22:15	05/22/2025 22:30	12,944	0.25	1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	021B	Emerson Street					1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	021F	Locke St	05/22/2025 18:50	05/22/2025 22:50	189,028	4.00	1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
5/22/2025	021H	Winter St. Hale st	05/22/2025 21:15	05/22/2025 22:20	17,733	1.08	1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17			0.00	
			STORM	TOTALS:	287,083	5.92												
5/31/2025	13	LOWER SIPHON					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	19	Main St North					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	24	UPPER SIPHON					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	32	Bradford Ave					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	34	Middlesex St					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	38	High St.					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	39	South Webster					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	40	Bethany Ave					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	41	Chestnut St					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	021A	Middle Siphon					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	021B	Emerson Street					0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
5/31/2025	021F	Locke St	05/31/2025 03:55	05/31/2025 04:05	1,604	0.17	0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17			0.00	
			STORM	TOTALS:	1,604	0.17												
6/6/2025	13	LOWER SIPHON					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	19	Main St North					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
6/6/2025	24	UPPER SIPHON					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	32	Bradford Ave					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	34	Middlesex St					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	38	High St.					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	39	South Webster					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	40	Bethany Ave	06/06/2025 06:55	06/06/2025 06:55	3,441	0.08	0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	41	Chestnut St	06/06/2025 06:55	06/06/2025 06:55	451	0.08	0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	021A	Middle Siphon					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	021B	Emerson Street					0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	021F	Locke St	06/06/2025 06:55	06/06/2025 07:15	7,024	0.33	0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/6/2025	021H	Winter St. Hale st	06/06/2025 07:00	06/06/2025 07:10	11,313	0.17	0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
			STORM	TOTALS:	22,229	0.66												
6/28/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	19	Main St North					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	32	Bradford Ave					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	34	Middlesex St					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	38	High St.					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	39	South Webster					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	40	Bethany Ave					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	41	Chestnut St					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	021A	Middle Siphon					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	021B	Emerson Street					0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
6/28/2025	021F	Locke St	06/28/2025 06:45	06/28/2025 07:05	2,233	0.33	0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/28/2025	021H	Winter St. Hale st	06/28/2025 06:45	06/28/2025 06:55	21,361	0.17	0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
			STORM	TOTALS:	23,594	0.50												
7/17/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	19	Main St North					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	32	Bradford Ave					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	34	Middlesex St					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	38	High St.					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	39	South Webster					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	40	Bethany Ave					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	41	Chestnut St					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	021A	Middle Siphon					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	021B	Emerson Street					0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	021F	Locke St	07/17/2025 20:45	07/17/2025 21:05	34,667	0.33	0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/17/2025	021H	Winter St. Hale st	07/17/2025 20:45	07/17/2025 20:50	1,771	0.08	0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
			STORM	TOTALS:	36,437	0.42												
7/31/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	19	Main St North					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	32	Bradford Ave					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	34	Middlesex St					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	38	High St.					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
7/31/2025	39	South Webster					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	40	Bethany Ave					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	41	Chestnut St					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	021A	Middle Siphon					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	021B	Emerson Street					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	021F	Locke St	07/31/2025 13:25	07/31/2025 14:10	46,882	0.75	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
7/31/2025	021H	Winter St. Hale st	07/31/2025 13:25	07/31/2025 13:40	26,167	0.25	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
			STORM	TOTALS:	73,049	1.00												
8/13/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	19	Main St North					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	24	UPPER SIPHON	08/13/2025 19:20	08/13/2025 21:10	835,394	1.83	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	32	Bradford Ave	08/13/2025 18:25	08/13/2025 18:30	23,010	0.08	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	34	Middlesex St	08/13/2025 18:25	08/13/2025 18:30	9,688	0.08	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	38	High St.	08/13/2025 18:20	08/13/2025 18:20	990	0.08	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	39	South Webster	08/13/2025 18:30	08/13/2025 18:30	2,472	0.08	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	40	Bethany Ave					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	41	Chestnut St					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	021A	Middle Siphon	08/13/2025 18:25	08/13/2025 18:40	90,667	0.25	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	021B	Emerson Street					0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	021F	Locke St	08/13/2025 18:20	08/13/2025 18:55	57,104	0.58	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/13/2025	021H	Winter St. Hale st	08/13/2025 18:20	08/13/2025 18:45	58,087	0.42	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
			STORM	TOTALS:	#####	3.41												

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
					#													
8/25/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	19	Main St North					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	32	Bradford Ave					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	34	Middlesex St					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	38	High St.					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	39	South Webster					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	40	Bethany Ave					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	41	Chestnut St					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	021A	Middle Siphon					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	021B	Emerson Street					0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	021F	Locke St	08/25/2025 16:30	08/25/2025 16:50	52,333	0.33	0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/25/2025	021H	Winter St. Hale st	08/25/2025 16:30	08/25/2025 16:45	110,434	0.25	0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
			STORM	TOTALS:	162,767	0.58												
9/6/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	19	Main St North					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	32	Bradford Ave					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	34	Middlesex St	09/06/2025 16:10	09/06/2025 16:10	3,642	0.08	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	38	High St.					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	39	South Webster					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	40	Bethany Ave	09/06/2025 16:10	09/06/2025 16:15	19,590	0.08	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
9/6/2025	41	Chestnut St	09/06/2025 16:10	09/06/2025 16:15	1,997	0.08	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	021A	Middle Siphon	09/06/2025 16:10	09/06/2025 16:15	21,806	0.08	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	021B	Emerson Street					0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	021F	Locke St	09/06/2025 16:10	09/06/2025 16:35	74,618	0.42	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
9/6/2025	021H	Winter St. Hale st	09/06/2025 16:05	09/06/2025 16:30	185,750	0.42	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13
			STORM	TOTALS:	307,403	1.16												
9/25/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	19	Main St North					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	32	Bradford Ave					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	34	Middlesex St					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	38	High St.					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	39	South Webster					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	40	Bethany Ave					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	41	Chestnut St					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	021A	Middle Siphon					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	021B	Emerson Street					0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/25/2025	021F	Locke St	09/25/2025 05:55	09/25/2025 15:45	15,170	9.83	0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
			STORM	TOTALS:	15,170	9.83												
10/20/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	19	Main St North					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
10/20/2025	32	Bradford Ave					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	34	Middlesex St					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	38	High St.					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	39	South Webster					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	40	Bethany Ave					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	41	Chestnut St					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	021A	Middle Siphon					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	021B	Emerson Street					0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	021F	Locke St	10/20/2025 10:45	10/20/2025 11:55	38,021	1.17	0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/20/2025	021H	Winter St. Hale st	10/20/2025 11:05	10/20/2025 11:25	12,559	0.33	0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
			STORM	TOTALS:	50,580	1.50												
10/22/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	19	Main St North					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	32	Bradford Ave					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	34	Middlesex St					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	38	High St.					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	39	South Webster					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	40	Bethany Ave					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
10/22/2025	41	Chestnut St					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	021A	Middle Siphon					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	021B	Emerson Street					0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	021F	Locke St	10/22/2025 06:10	10/22/2025 06:30	23,503	0.33	0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/22/2025	021H	Winter St. Hale st	10/22/2025 06:20	10/22/2025 06:20	344	0.08	0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
			STORM	TOTALS:	23,847	0.41												
10/30/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	19	Main St North					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	32	Bradford Ave					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	34	Middlesex St					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	38	High St.					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	39	South Webster					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	40	Bethany Ave					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	41	Chestnut St					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	021A	Middle Siphon					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	021B	Emerson Street					0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	021F	Locke St	10/30/2025 19:45	10/30/2025 22:35	23,108	2.83	0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/30/2025	021H	Winter St. Hale st	10/30/2025 22:20	10/30/2025 22:25	205	0.08	0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
			STORM	TOTALS:	23,313	2.92												
11/3/2025	13	LOWER SIPHON					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	19	Main St North					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	24	UPPER SIPHON					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	32	Bradford Ave					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	34	Middlesex St					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	38	High St.					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	39	South Webster					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	40	Bethany Ave					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	41	Chestnut St	11/03/2025 21:50	11/03/2025 21:50	3	0.08	0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	021A	Middle Siphon					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	021B	Emerson Street					0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	021F	Locke St	11/03/2025 21:50	11/03/2025 22:05	16,972	0.25	0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/3/2025	021H	Winter St. Hale st	11/03/2025 22:00	11/03/2025 22:00	142	0.08	0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
			STORM	TOTALS:	17,118	0.41												
12/29/2025	13	LOWER SIPHON					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	19	Main St North					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	24	UPPER SIPHON					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	32	Bradford Ave					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	34	Middlesex St					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	38	High St.					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	39	South Webster					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08

Appendix C ACTIVATION PER STOM EVENT

DATE	CSO Outfall No.	CSO Outfall Name	Overflow Start	Overflow End	CSO Volume (gals.)	CSO Duration (hr.)	Lawrence Airport NOAA Rain Gauge				Marginal Pumping Station Rain Gauge				ASPW Rain Gauge			
							Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Depth Intensity (in./hr.)	Storm Duration (hr.)	Daily Avg. Intensity (in./hr.)
5																		
12/29/2025	40	Bethany Ave					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	41	Chestnut St					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	021A	Middle Siphon					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	021B	Emerson Street					0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/29/2025	021F	Locke St	12/29/2025 04:55	12/29/2025 05:15	3,313	0.33	0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
			STORM	TOTALS:	3,313	0.33												

PENDIX D
YEARLY RAINFALL DATA

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
1/1/2025	0.63	0.32	7.00	0.09	0.54	0.48	2.58	0.21	0.66	0.08	9.00	0.07
1/2/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/3/2025	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.21	0.00		0.00	0.07
1/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/5/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/6/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/7/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/8/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/10/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/11/2025	0.11	0.03	7.00	0.02	0.00	0.00	0.00		0.00		0.00	
1/12/2025	0.00	0.00	0.00		0.13	0.12	1.08	0.12	0.20	0.08	2.50	0.08
1/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/15/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/18/2025	0.15	0.04	6.00	0.03	0.17	0.12	1.42	0.12	0.20	0.08	3.50	0.06
1/19/2025	0.24	0.06	7.00	0.03	0.03	0.12	0.25	0.12	0.03	0.04	0.50	0.06
1/20/2025	0.03	0.01	3.00	0.01	0.00	0.00	0.00		0.00		0.00	
1/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/22/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
1/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
1/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/26/2025	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.05	0.04	0.75	0.07
1/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/29/2025	0.13	0.04	5.00	0.03	0.15	0.36	0.75	0.20	0.15	0.08	2.50	0.06
1/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
1/31/2025	0.64	0.11	12.00	0.05	0.42	0.24	3.42	0.12	0.56	0.08	9.50	0.06
2/1/2025	0.04	0.01	4.00	0.01	0.00	0.00	0.00		0.00		0.00	
2/2/2025	0.04	0.04	1.00	0.04	0.00	0.00	0.00		0.00		0.00	
2/3/2025	0.05	0.03	2.00	0.00	0.48	0.24	3.08	0.00	0.46	0.08	4.00	0.00
2/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/5/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/6/2025	0.29	0.09	6.00	0.05	0.00	0.00	0.00		0.00		0.00	
2/7/2025	0.00	0.00	0.00		0.17	0.24	1.33	0.13	0.42	0.08	5.50	0.08
2/8/2025	0.12	0.12	1.00	0.12	0.01	0.12	0.08	0.12	0.02	0.04	0.50	0.04
2/9/2025	0.34	0.10	6.00	0.06	0.05	0.12	0.42	0.12	0.21	0.08	2.50	0.08
2/10/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.05	0.08	1.00	0.05
2/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
2/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
2/13/2025	0.48	0.11	14.00	0.03	0.11	0.12	0.92	0.12	0.25	0.08	2.75	0.09
2/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/15/2025	0.07	0.07	1.00	0.07	0.00	0.00	0.00		0.00		0.00	
2/16/2025	0.89	0.14	18.00	0.05	0.79	0.48	4.17	0.19	0.58	0.08	6.25	0.09
2/17/2025	0.00	0.00	0.00		0.04	0.12	0.33	0.12	0.00		0.00	
2/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

Date	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
	Rain Total (in.)	Peak hour intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
2/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
2/20/2025	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.00		0.00	
2/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.50	0.06
2/22/2025	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.00		0.00	
2/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
2/27/2025	0.17	0.04	7.00	0.02	0.17	0.12	1.42	0.12	0.26	0.08	3.50	0.07
2/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/1/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/2/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/3/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/5/2025	0.34	0.11	5.00	0.07	0.29	0.24	2.33	0.12	0.33	0.08	4.00	0.08
3/6/2025	0.51	0.18	7.00	0.07	0.42	0.48	2.67	0.16	0.69	0.08	8.50	0.08
3/7/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/8/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/10/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/15/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

Date	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
3/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/17/2025	0.99	0.25	11.00	0.09	0.95	0.48	5.58	0.17	1.04	0.12	9.00	0.12
3/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/20/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.02	0.04	0.50	0.04
3/21/2025	0.00	0.00	0.00		0.31	0.48	1.75	0.18	0.43	0.08	7.50	0.06
3/22/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/24/2025	0.00	0.00	0.00		0.60	0.24	4.42	0.14	0.80	0.08	9.75	0.08
3/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
3/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
3/29/2025	0.00	0.00	0.00		0.29	0.24	2.33	0.12	0.41	0.08	7.25	0.06
3/30/2025	0.00	0.00	0.00		0.12	0.12	1.00	0.12	0.21	0.08	3.50	0.06
3/31/2025	0.00	0.00	0.00		0.17	0.24	1.25	0.14	0.07	0.08	1.00	0.07
4/1/2025	0.33	0.13	4.00	0.08	0.20	0.36	1.42	0.14	0.42	0.08	7.00	0.06
4/2/2025	0.00	0.00	0.00		0.07	0.12	0.58	0.12	0.00		0.00	
4/3/2025	0.00	0.00	0.00		0.55	0.36	3.08	0.18	0.85	0.08	14.75	0.06
4/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.50	0.06
4/5/2025	0.29	0.07	8.00	0.04	0.30	0.24	2.42	0.12	0.17	0.08	3.50	0.05
4/6/2025	0.16	0.06	7.00	0.02	0.20	0.36	1.25	0.16	0.21	0.08	4.50	0.05
4/7/2025	0.11	0.02	8.00	0.01	0.12	0.12	1.00	0.12	0.08	0.04	1.50	0.05
4/8/2025	0.13	0.07	5.00	0.03	0.13	0.24	0.92	0.14	0.08	0.08	1.25	0.06
4/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.20	0.08	3.75	0.05

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
4/10/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.12	0.08	2.50	0.05
4/11/2025	0.07	0.03	4.00	0.02	0.08	0.12	0.67	0.12	0.12	0.08	2.25	0.05
4/12/2025	0.32	0.06	11.00	0.03	0.46	0.12	3.83	0.12	0.27	0.08	4.75	0.06
4/13/2025	0.07	0.03	5.00	0.01	0.08	0.12	0.67	0.12	0.19	0.08	3.00	0.06
4/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.10	0.08	2.00	0.05
4/15/2025	0.35	0.16	3.00	0.12	0.19	0.48	1.08	0.18	0.08	0.08	1.75	0.05
4/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.75	0.04
4/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
4/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.12	0.08	2.25	0.05
4/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
4/20/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
4/21/2025	0.00	0.00	0.00		0.07	0.84	0.08	0.84	0.00		0.00	
4/22/2025	0.29	0.18	4.00	0.07	0.15	0.48	0.83	0.18	0.21	0.08	2.00	0.11
4/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
4/24/2025	0.08	0.05	2.00	0.04	0.04	0.24	0.25	0.16	0.04	0.08	0.25	0.16
4/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.08	0.50	0.06
4/26/2025	0.82	0.17	13.00	0.06	0.72	0.60	4.42	0.16	0.54	0.08	8.00	0.07
4/27/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.04	0.04	1.00	0.04
4/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.75	0.04
4/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.06	0.08	0.75	0.08
4/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
5/1/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/2/2025	0.18	0.18	1.00	0.18	0.22	0.36	1.00	0.22	0.16	0.08	2.25	0.07
5/3/2025	0.30	0.24	2.00	0.15	0.83	2.16	1.67	0.50	0.02	0.08	0.25	0.08
5/4/2025	0.21	0.05	6.00	0.04	0.42	0.48	2.75	0.15	0.00		0.00	

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
5/5/2025	0.44	0.13	12.00	0.04	0.49	0.24	3.75	0.13	0.01	0.04	0.25	0.04
5/6/2025	0.35	0.11	11.00	0.03	0.32	0.24	2.33	0.14	0.02	0.04	0.50	0.04
5/7/2025	0.01	0.01	1.00	0.01	0.01	0.12	0.08	0.12	0.07	0.08	1.25	0.06
5/8/2025	0.09	0.05	3.00	0.03	0.26	0.48	1.33	0.20	0.03	0.08	0.50	0.06
5/9/2025	0.91	0.31	11.00	0.08	0.61	0.24	4.50	0.14	0.01	0.04	0.25	0.04
5/10/2025	0.63	0.12	12.00	0.05	0.99	0.36	6.17	0.16	0.01	0.04	0.25	0.04
5/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
5/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.08	0.25	0.08
5/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/15/2025	0.11	0.09	3.00	0.04	0.09	0.24	0.67	0.14	0.00		0.00	
5/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/17/2025	0.01	0.01	1.00	0.01	0.02	0.12	0.17	0.12	0.04	0.08	0.25	0.16
5/18/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.00		0.00	
5/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/20/2025	0.01	0.01	1.00	0.01	0.00	0.00	0.00		0.00		0.00	
5/21/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
5/22/2025	1.43	0.27	15.00	0.10	1.65	0.36	9.83	0.17	0.00		0.00	
5/23/2025	0.34	0.07	12.00	0.03	0.31	0.24	2.33	0.13	0.00		0.00	
5/24/2025	0.08	0.03	5.00	0.02	0.02	0.12	0.17	0.12	0.00		0.00	
5/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/26/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
5/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
5/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
5/30/2025	0.01	0.01	1.00	0.01	0.01	0.12	0.08	0.12	0.00		0.00	
5/31/2025	0.25	0.08	9.00	0.03	0.29	0.72	1.75	0.17	0.00		0.00	
6/1/2025	0.03	0.03	1.00	0.03	0.02	0.12	0.17	0.12	0.00		0.00	
6/2/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
6/3/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.08	0.25	0.16
6/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
6/5/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
6/6/2025	0.21	0.16	3.00	0.07	0.40	1.32	0.83	0.48	0.04	0.04	0.50	0.08
6/7/2025	0.26	0.12	4.00	0.07	0.19	0.24	1.50	0.13	0.00		0.00	
6/8/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
6/9/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.00		0.00	
6/10/2025	0.00	0.00	0.00		0.04	0.12	0.33	0.12	0.00		0.00	
6/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
6/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
6/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
6/14/2025	0.00	0.00	0.00		0.20	0.12	1.67	0.12	0.00		0.00	
6/15/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
6/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
6/17/2025	0.00	0.00	0.00		0.06	0.24	0.42	0.14	0.00		0.00	
6/18/2025	0.00	0.00	0.00		0.13	0.36	0.75	0.17	0.00		0.00	
6/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
6/20/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
6/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
6/22/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.02	0.04	0.25	0.08
6/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04

Date	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
6/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
6/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.00	
6/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.00	
6/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
6/28/2025	0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.45	0.08	5.25	0.09
6/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
6/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
7/1/2025	0.00	0.00	0.00		0.04	0.12	0.33	0.12	0.08	0.08	1.25	0.06
7/2/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.06	0.08	1.00	0.06
7/3/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.50	0.06
7/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.04	0.50	0.08
7/5/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
7/6/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
7/7/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.00	
7/8/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
7/9/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.06	0.08	1.00	0.06
7/10/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.13	0.08	2.25	0.06
7/11/2025	0.00	0.00	0.00		0.04	0.12	0.33	0.12	0.00		0.00	
7/12/2025	0.00	0.00	0.00		0.04	0.12	0.33	0.12	0.02	0.08	0.25	0.08
7/13/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.04	0.04	0.50	0.08
7/14/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.03	0.04	0.50	0.06
7/15/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.03	0.04	0.50	0.06
7/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.00	
7/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.23	0.12	2.00	0.12
7/18/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.11	0.08	1.75	0.06

Date	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
7/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
7/20/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.17	0.12	1.25	0.14
7/21/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
7/22/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
7/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
7/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
7/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
7/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
7/27/2025	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.19	0.08	3.00	0.06
7/28/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.02	0.04	0.25	0.08
7/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
7/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
7/31/2025	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.30	0.08	4.75	0.06
8/1/2025	0.00	0.00	0.00		0.14	0.12	1.17	0.12	0.07	0.08	1.00	0.07
8/2/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.01	0.04	0.25	0.04
8/3/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.00		0.00	
8/4/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.00		0.00	
8/5/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
8/6/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.00		0.00	
8/7/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
8/8/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/10/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.50	0.06
8/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
8/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
8/13/2025	0.00	0.00	0.00		0.05	0.12	0.42	0.12	0.27	0.12	2.75	0.10
8/14/2025	0.00	0.00	0.00		0.08	0.12	0.67	0.12	0.09	0.08	1.25	0.07
8/15/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.00		0.00	
8/16/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.02	0.04	0.50	0.04
8/17/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.02	0.04	0.25	0.08
8/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/19/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.00		0.00	
8/20/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.17	0.08	3.00	0.06
8/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
8/22/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/25/2025	0.00	0.00	0.00		0.11	0.60	0.42	0.26	0.05	0.08	0.50	0.10
8/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/27/2025	0.00	0.00	0.00		0.16	1.08	0.25	0.64	0.13	0.12	1.25	0.10
8/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
8/29/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.10	0.08	2.00	0.05
8/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
8/31/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/1/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/2/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/3/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/5/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.09	0.08	1.50	0.06
9/6/2025	0.00	0.00	0.00		0.67	2.64	1.83	0.37	0.50	0.16	4.00	0.13

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
9/7/2025	0.00	0.00	0.00		0.54	0.24	3.75	0.14	0.43	0.08	8.00	0.05
9/8/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.15	0.08	2.50	0.06
9/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.05	0.04	1.00	0.05
9/10/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.08	0.50	0.08
9/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/15/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/20/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/22/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/24/2025	0.00	0.00	0.00		0.16	0.12	1.33	0.12	0.27	0.08	4.00	0.07
9/25/2025	0.00	0.00	0.00		0.75	0.60	4.67	0.16	0.32	0.08	6.25	0.05
9/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.19	0.08	3.25	0.06
9/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
9/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.08	0.25	0.12
9/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
9/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/1/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

Date	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
10/2/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/3/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/5/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/6/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/7/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/8/2025	0.00	0.00	0.00		0.20	0.48	1.17	0.17	0.21	0.08	2.75	0.08
10/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/10/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/12/2025	0.00	0.00	0.00		0.32	0.24	2.58	0.12	0.22	0.08	3.75	0.06
10/13/2025	0.00	0.00	0.00		0.92	0.24	7.58	0.12	0.34	0.08	6.00	0.06
10/14/2025	0.00	0.00	0.00		0.20	0.12	1.67	0.12	0.17	0.08	2.25	0.08
10/15/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.12	0.08	2.00	0.06
10/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.04	0.75	0.05
10/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.06	0.08	0.75	0.08
10/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
10/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
10/20/2025	0.00	0.00	0.00		0.63	0.72	2.67	0.24	0.01	0.04	0.25	0.04
10/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.50	0.04
10/22/2025	0.00	0.00	0.00		0.52	0.48	2.92	0.18	0.02	0.04	0.50	0.04
10/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.05	0.04	0.75	0.07
10/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
10/25/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
10/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
10/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.09	0.08	1.25	0.07
10/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.01	0.04	0.25	0.04
10/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.08	0.25	0.12
10/30/2025	0.00	0.00	0.00		0.97	0.48	6.00	0.16	0.02	0.04	0.50	0.04
10/31/2025	0.00	0.00	0.00		0.18	0.24	1.33	0.14	0.04	0.04	1.00	0.04
11/1/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.06	0.04	1.50	0.04
11/2/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.03	0.04	0.50	0.06
11/3/2025	0.00	0.00	0.00		0.27	2.04	0.67	0.41	1.18	0.12	15.50	0.08
11/4/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.07	0.04	1.75	0.04
11/5/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.08	0.08	1.25	0.06
11/6/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.04	0.08	0.75	0.05
11/7/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.48	0.08	8.25	0.06
11/8/2025	0.00	0.00	0.00		0.01	0.12	0.08	0.12	0.03	0.04	0.50	0.06
11/9/2025	0.00	0.00	0.00		0.08	0.12	0.67	0.12	0.06	0.08	0.75	0.08
11/10/2025	0.00	0.00	0.00		0.37	0.48	2.25	0.16	0.20	0.08	4.25	0.05
11/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.16	0.08	3.00	0.05
11/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.17	0.08	2.75	0.06
11/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/15/2025	0.00	0.00	0.00		0.23	0.24	1.75	0.13	0.13	0.08	1.50	0.09
11/16/2025	0.00	0.00	0.00		0.28	0.24	2.25	0.12	0.69	0.08	8.25	0.08
11/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/19/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/20/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

Date	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
11/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/22/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.12	0.24	1.00	0.12
11/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/24/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/25/2025	0.00	0.00	0.00		0.27	0.24	2.17	0.12	0.24	0.08	3.25	0.07
11/26/2025	0.00	0.00	0.00		0.17	0.12	1.42	0.12	0.29	0.08	4.00	0.07
11/27/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/28/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/29/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
11/30/2025	0.00	0.00	0.00		0.14	0.12	1.17	0.12	0.20	0.08	3.50	0.06
12/1/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/2/2025	0.00	0.00	0.00		0.19	0.24	1.08	0.18	0.01	0.04	0.25	0.04
12/3/2025	0.00	0.00	0.00		0.37	0.24	2.33	0.16	0.38	0.08	4.25	0.09
12/4/2025	0.00	0.00	0.00		0.08	0.12	0.67	0.12	0.05	0.04	0.75	0.07
12/5/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/6/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.00		0.00	
12/7/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.00		0.00	
12/8/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/9/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/10/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.11	0.08	2.00	0.06
12/11/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/12/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/13/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/14/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.07	0.08	1.00	0.07
12/15/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	

	Lawrence Airport				Middle Siphon Rain Gage				WWTF Rain Gage			
Date	Rain Total (in.)	Peak hour intensity (in/hr.)	Storm Duration (hours)	Daily Avg. Intensity (in/hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)	Rain Total (in.)	Peak Hour Intensity (in./hr.)	Storm Duration (hours)	Daily Avg. Intensity (in./hr.)
12/16/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/17/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/18/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/19/2025	0.00	0.00	0.00		0.24	0.24	1.92	0.13	0.49	0.08	7.75	0.06
12/20/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.12	0.04	2.50	0.05
12/21/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/22/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/23/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/24/2025	0.00	0.00	0.00		0.14	0.12	1.17	0.12	0.17	0.08	2.75	0.06
12/25/2025	0.00	0.00	0.00		0.06	0.12	0.50	0.12	0.14	0.08	2.25	0.06
12/26/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.00		0.00	
12/27/2025	0.00	0.00	0.00		0.03	0.12	0.25	0.12	0.03	0.04	0.75	0.04
12/28/2025	0.00	0.00	0.00		0.02	0.12	0.17	0.12	0.07	0.08	1.25	0.06
12/29/2025	0.00	0.00	0.00		1.18	0.60	7.75	0.15	1.13	0.12	14.25	0.08
12/30/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.04	0.04	0.50	0.08
12/31/2025	0.00	0.00	0.00		0.00	0.00	0.00		0.02	0.04	0.25	0.08
	0.00		0.00				0.00		0.00			
Total	15.14				29.66				26.72			
Average	.04	.01	.87	.05	.08	.11	.52	.15	.07	.06	1.07	.06
Maximum	1.43	.32	18.00	.18	1.65	2.64	9.83	.84	1.18	.24	15.50	.16
Minimum		.00	.00	.00		.00	.00	.00		.04		

**APPENDIX E
CSO EMAIL NOTIFICATION**

Name	Email	Status
A. Sevigny	psevigny@wnewbury.org	Active
Aditya Pophale	apophale@brwncald.com	Active
Alba Gouldthrope	boardofhealth@townofnewbury.org	Active
Alexandra Chandler	alexandra.chandler@gmail.com	Active
Allana McOsker	ajmcosker@haverhillma.gov	Active
Andrea Brochu	abrochu@salisburyma.gov	Active
Barbara Mangini	boomarketing@yahoo.com	Active
Bonnie Dufresne	bdufresne@cityofhaverhill.com	Active
Becky Zawalski	becky@merrimack.org	Active
Belinda Stansbury	belinda.stansbury@state.ma.us	Active
Benjamin Stevens	bertram37@yahoo.com	Active
Berni Angelo	BOH@townofmerrimac.com	Active
Beth Haley	bethaley@bu.edu	Active
Betsy Merriam	pibetsea@comcast.net	Active
Brett Leavitt	bleavitt@GLSD.org	Active
Brian Gross	brian.n.gross@gmail.com	Active
btmwwtf	btmwwtf@comcast.net	Active
Charles Eiras	eirascharles@gmail.com	Active
Cheri R. Cousens	ccousens@glsd.org	Active
Cheryl Richardson	private@cherylrichardson.com	Active
Chris Pratt	cpratt@cityofnewburyport.com	Active
Christine Lindberg	clindberg@haverhillma.gov	Active
Christopher Hood	CHood@CityofNewburyport.com	Active
Colin Stokes	cstokes@grovelandma.com	Active
Corinn Flaherty	corinnbritt@gmail.com	Active
Daniel C	dcompiano@gmail.com	Active
Dave Schultz	dshultz@eagletribune.com	Active
David Bevilacqua	davebevil@aol.com	Active

Name	Email	Status
David Roach	dave.roach@state.ma.us	Active
Deb Ketchen	ketchend@amesburyma.gov	Active
Diane Regan	diane.regan@mass.gov	Active
Elizabeth A. Kudarauskas	Kudarauskas.beth@epa.gov	Active
Evan Walsh	ewalsh@lowellma.gov	Active
Executive Director	executivedirector@merrimack.org	Active
Florence Cenci	florence.cenci@mass.gov	Active
gingrich171@gmail.com	gingrich171@gmail.com	Active
Gloucester Shellfish	shellfish.gloucester@mass.gov	Active
Gordon Sims	gordonsims@gmail.com	Active
Gregg Coyle	gcoyle@lowellma.gov	Active
Heather McMann	heather@mcmann.net	Active
Heidi Zisch	heidi.zisch@state.ma.us	Active
I. Bensten	lbentsen@grovelandma.com	Active
Isaiah Lewis	ilewis@haverhillma.gov	Active
J. Hagggs	jhaggs100@gmail.com	Active
James Conte	jconte@haverhillma.gov	Active
Jamie Tuccolo	JTuccolo@CityofNewburyport.com	Active
Janice Reagan	rtcomp@comcast.net	Active
Jay Wallace	jwallace444@gmail.com	Active
Jeff Kennedy	jeff.kennedy@state.ma.us	Active
Jeff Yeastedt	jeffyeastedt@comcast.net	Active
Jennifer Reed	austenreeder@gmail.com	Active
Jennifer Keegan	JKeegan@nla-ma.org	Active
Joan Strauss	jlstrauss43@gmail.com	Active
John Cuneo	john.cuneo@outlook.com	Active
John D'Aoust	jdaoust@haverhillma.gov	Active
John Macone	jmacone@merrimack.org	Active
John Sokol	jsokol@flowassessment.com	Active
Jose Tapia	jose@merrimack.org	Active
Josselyn DeLeon-Estrada	jdeleon-estrada@haverhillma.gov	Active
Karl Brunelle	heykbrunelle@gmail.com	Active
Kevin Brander	Kevin.Brande@state.ma.us	Active
Kevin Dalton	kmdalton64@gmail.com	Active
Kevin Franey	kevinfraneyemail@gmail.com	Active
Kevin McCarthy	kevinmccarthy1@gmail.com	Active
Kevin Olson	kevin.olson@wright-pierce.com	Active
Laura Vlasuk	lvlasuk@cityofnewburyport.com	Active
Laurie Elliott	miklyn34@yahoo.com	Active
Leonard Mirra	Leonard.mirra@mahouse.gov	Active

Name	Email	Status
Leslie Alexander	lesliealexander11@gmail.com	Active
Leslie Whelan	lwhelan@salisburyma.gov	Active
Linda Parker	lindaparker17@comcast.net	Active
Lisa DeMeo	demeol@amesburyma.gov	Active
Lynn Ellen Williamson	lynn_ellen_smith@yahoo.com	Active
Macklen Wier	mweir@mvpc.org	Active
Marc Moccio	marc.moccio@wright-pierce.com	Active
Maria Pinaud	maria.pinaud@mass.gov	Active
Mass DPH	DPHToxicology@mass.gov	Active
Mass Fisheries and Wildlife	doug.cameron@mass.gov	Active
MassDEP	massdep.sewagenotification@mass.gov	Active
Matt Corbin	matthew.corbin@wright-pierce.com	Active
Matt Juros	mjuros@fishbrook.com	Active
Matt Moua	mmoua@geiconsultants.com	Active
Matthew Cranney	mcranney@merrimack.org	Active
Matthew Thorne	matthew@merrimack.org	Active
Mayor Donna Holaday	DHoladay@CityofNewburyport.com	Active
Mayor Melinda Barrett	mayor@haverhillma.gov	Active
Meg C	megbean@gmail.com	Active
Megan St. John	megan@sinjinworks.com	Active
Meghan O'Keefe	mokeefe@cityofnewburyport.com	Active
Merrimac BOH	Healthagent@townofmerrimac.com	Active
Merrimack Company	info@merrimackco.com	Active
Micah Donahue	micahdonahue@gmail.com	Active
Michael Armes	marmes@idexcorp.com	Active
Micheal Stein	michael.stein@wright-pierce.com	Active
Mike Labela	mlabela@northofboston.com	Active
Mike Paige	mpaige@paigelawoffice.com	Active
Mike Vetz	vetsm@comcast.net	Active
Nathaniel Wollinka	nathaniel@merrimack.org	Active
Newbury Harbor Master	harbormaster@newburypolice.com	Active
Newburyport BOH	health@cityofnewburyport.com	Active
parentim@gmail.com	parentim@gmail.com	Active
Paul Aganski	bluesblood7@outlook.com	Active
Paul Hogg	phogg@cityofnewburyport.com	Active
Paul Jessel	pjessel@haverhillma.gov	Active
peg.grisson	peg.grisson@charter.net	Active
Plum Hunter	donald.milotte@gmail.com	Active
R1 EPA	R1.EPANotifications@epa.gov	Active
Raeanna Hughes	raeanna.hughes@gmail.com	Active

Name	Email	Status
Ray Pike	harbormaster@salisburyma.gov	Active
Richard MacDonald	rmacdonald@cityofhaverhill.com	Active
Robert Sinibaldi	dpwdir@townofmerrimac.com	Active
Robert Ward	rward@haverhillma.gov	Active
Ryan Joyce	ryan.joyce@mass.gov	Active
Sailsbury WWTP	wwtp@salisburyma.gov	Active
Sainath Palani	sainathp@bu.edu	Active
Sam Marinez	smarinez@haverhillwater.com	Active
Scott Kinter	scott_kinter@avalonbay.com	Active
Sesha Manning	sesha@merrimack.org	Active
Shaw, David	dshaw@cityofnewburyport.com	Active
Solanch Pastrana-DeValle	pastrana-del-valle.solanch@epa.gov	Active
T Thomas	tthomas1359@comcast.net	Active
T. Rogers	rogerst@amesburyma.gov	Active
Ted Angelakis	TAngelakis@cityofnewburyport.com	Active
Thomas Connors	tmconnors@aol.com	Active
Thomas Horgan	thomas_horgan@uml.edu	Active
Tom Cusick	TCusick@CityofNewburyport.com	Active
Tom Mitchell	tmitchell@flowassessment.com	Active
Tracey Rauh	trauh@northofboston.com	Active
Wally Taylor	wally.taylor@gmail.com	Active