

2023 NPDES Wastewater Report

Lowell Regional Wastewater Utility



NPDES Permit Number: MA0100633

Report Date: March 31, 2024



**CMOM, I/I, CSO, SSO, AND NMC
ANNUAL REPORT**

CERTIFICATION STATEMENT

I certify under penalty of perjury that this document and all attachments were prepared under my direction or 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 have no personal knowledge that the information submitted is other than 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.



Aaron Fox
Executive Director
Lowell Regional Wastewater Utility

3/30/2024
Date

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1. Introduction

The Lowell Regional Wastewater Utility (the Utility) is a public utility located in Lowell, Massachusetts that owns, maintains and operates a wastewater collection system comprised of a large combined sewer system dating to the 1800s, newer separated conveyance systems; an extensive stormwater drainage system; and a flood protection system. As well as the Duck Island Wastewater Treatment Facility (Duck Island) that delivers efficient secondary-level treatment of dry-weather flows and wet-weather flows up to 112 million gallons per day (MGD).

The Utility's mission is to effectively manage wastewater and stormwater transport and treatment systems in a professional manner and strives to provide reliable, cost-effective, high-quality services that protect public health, promote environmental stewardship, and deliver outstanding service to our customers.

This 2023 NPDES Wastewater Report documents and summarizes the performance of the Utility in compliance with its National Pollutant Discharge Elimination System (NPDES) permit (MA0100633) and the additional requirements discussed in the 2023 Consent Decree (CD) (subject to final filing and approval by Federal Court in 2024) during the current reporting year. The report documents programs implemented to maintain, repair and replace the sewer collection system (including sewer pipes, manholes, pump stations, and related appurtenances and facilities) and combined sewer overflow (CSO) stations/outfalls as well as operation and maintenance of Duck Island, which operates in accordance with its NPDES permit and all applicable State and Federal regulations, for calendar year 2023 and planned activities for calendar year 2024. Additionally, the Utility implements an ISO 14001-compliant Environmental Management System to minimize its environmental impact.

The Utility's sewer system consists of approximately 226 miles of gravity sewers and 14 sewage pumping stations. Nine miles of large-diameter (36-inch to 120-inch) interceptors are located along the banks of the Merrimack and Concord Rivers and collect wastewater from the sewer system and convey it to Duck Island. Duck Island was designed to provide biological (activated sludge) treatment for an average dry-weather design flow of 32 million gallons per day (MGD). There are nine (9) Combined Sewer Overflow (CSO) Stations that divert excess wet weather flow into the Merrimack and Concord Rivers, as well as Beaver Brook, through dedicated outfalls. A plan view of Duck Island, interceptor system, and CSO Stations is provided in [Figure 1](#).

During wet-weather conditions, a maximum flow of approximately 112 MGD is processed at Duck Island. Flow exceeding the capacity of the biological and secondary clarifier systems (secondary systems) causes activation of the High-Flow Treatment mode (as discussed in the Utility's High Flow Management Plan, [Appendix A](#)). Under the High-Flow Treatment mode, wet weather flow in excess of secondary treatment capacity receives screening and primary clarification and then the flow is bypassed around the secondary treatment system and is pre-chlorinated before being mixed with secondary treatment effluent. This mixture is then disinfected and discharged into the Merrimack River in compliance with the Utility's NPDES effluent permit requirements.

Flow in excess of the Duck Island High-Flow Treatment capacity is stored in the interceptor system through an automated network of gates controlled by computational algorithms designed for this purpose and implemented in a Supervisory Control and Data Acquisition (SCADA) system. Flows to the collection system that exceed this interceptor storage capacity are diverted as CSOs to the Merrimack River, the Concord River and Beaver Brook, as necessary to prevent sewer system surcharges that may cause sewage back-ups into homes and streets.

As part of the NPDES permit and CD, the Utility is required to submit an annual report that summarizes the activities performed for the calendar year to comply with:

- Collection System Operations and Management (Paragraph Part 1.C.5(b) in the NPDES Permit and the Capacity, Management, Operation, and Maintenance (CMOM) Annual Report in the CD (Paragraph 17). [Section 2](#) (and other portions of this report) summarizes these compliance actions.
- Infiltration and Inflow control (I/I), Paragraph Part 1.C.5(b) in the NPDES Permit and Paragraph 18 in the CD. [Section 2.6](#) discusses the Utility's I/I mitigation programs and activities for 2023 and the upcoming year.
- CSO Discharge Reporting and Annual Maintenance and Certification, which is found under the Nine Minimum Control (NMC) Minimum Implementation Levels (Paragraph Part 1.F.3 in the NPDES Permit). This includes CSO activity and wet-weather data ([Section 3.3](#)), certification of adequate recording of CSOs ([Section 3.1](#)), inspections of CSO facilities ([Section 3.2](#)), and reports on the Utility's Nine Minimum Controls (NMC) program ([Section 4](#)). This report references publicly available documents, with links to these documents found in [Appendix A](#).
- Unauthorized SSO discharge reporting (Paragraph Part 1.C.5(b) in the NPDES Permit. [Section 2.5](#) summarizes the SSO discharges that have occurred in the reported period, the causes of the discharge, the ultimate location of the discharges, and any activities to resolve the discharge.
- Nine Minimum Control Minimum Implementation measures and activities over the reporting period (Paragraph Part 1.F.3 in the Consent Decree). [Section 4](#) documents the NMC program implemented by the Utility for 2023, the modifications to the NMC, activities for compliance, and potential modifications to the program (if applicable).

The Utility has continued to commit substantial resources toward reduction of CSOs, identification of I/I, and maintenance and operation of its wastewater collection and treatment systems.

An important factor to consider regarding information contained within this document: the City of Lowell experienced a cyber-attack in April 2023. This event affected most systems within the City and some data may have been lost, corrupted, or made otherwise inaccessible. This document represents the Utility's best representation of collection system activities performed throughout 2023 from available data.

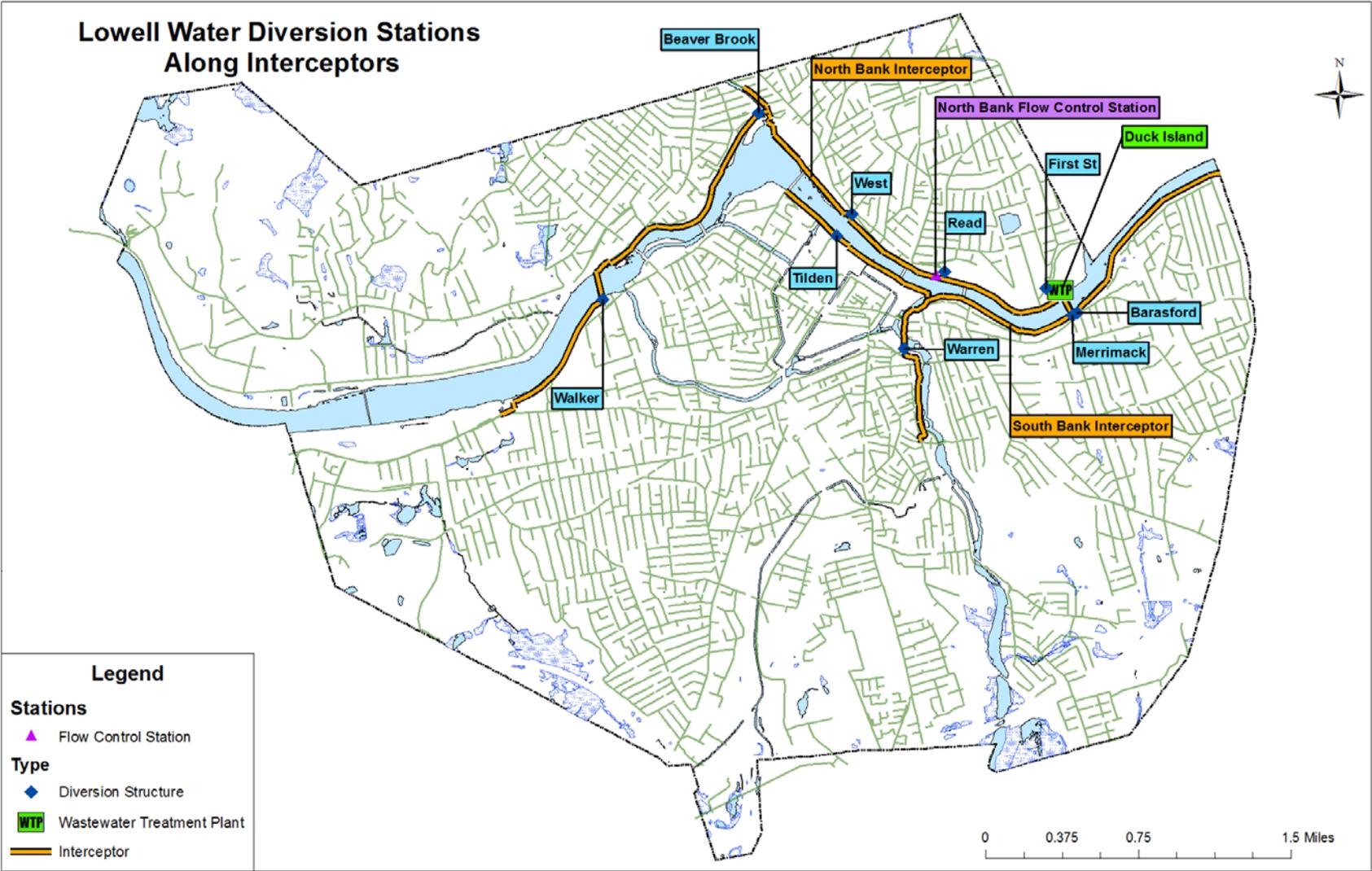


Figure 1. Lowell Wastewater Collection and Treatment Systems Overview

2. CMOM Program Plan and Annual Report

The Utility funded its CMOM program at a rate of \$9.2M in FY2023; this accounts for 32.5% of the Utility's overall budget for the year. This funding supported a variety of ongoing maintenance programs, including cleaning, inspection and repair work:

- Replacement of 804 feet of sewer and drain line
- Repair and replacement of 64 catch basins
- Repair and replacement of 28 manholes
- New installation of 8 structures
- Associated paving, test pits, and sidewalk repairs
- Cleaning of 39,339 feet of sewer and drain lines
- Video inspection of 26.5 miles (139,970 feet) of sewer and drain lines
- Handling of 443 catch basin, residential sewer-backup and street-flooding reports
- Bi-annual street sweeping yielding removal of 1052 tons of sediment and debris prior to entering the collection system
- Cleaning of 1,656 catch basins
- Uncovered 14 buried manholes

The following subsections include a more detailed presentation of sewer rehabilitation work performed in 2023.

2.1 Collection System Management

The purpose of Lowell's collection system is to protect public health and the environment by conveying sewage wastes to Duck Island for treatment, and to prevent unnecessary property damage from flooding or sewer surcharging.

Lowell's collection system is managed by the Maintenance Manager and Collection System Supervisor, who works in coordination with Utility staff to plan, perform and document the physical and operational states of the assets that make up the collection system: catch basins and manholes; sewer laterals, mains, trunk lines and interceptors; pump stations; communications networks, sensors and associated automated equipment.

The Collection System Supervisor also responds to customer requests regarding sewage back-ups and surcharges, as well as participating in bi-weekly Collection-System Meetings to identify, discuss and address performance issues related to the CMOM program.

2.1.1 Organizational Structure

An organizational chart depicting divisions and positions of all staff at the Utility is provided in [Table 1](#) and [Figure 2](#). Positions that have responsibilities related to collection systems operations are shown in green, with a gradient shading reflective of the percentage of time dedicated to the collection system. Staff not regularly assigned to the collection system still support efforts on as needed basis. The percentage indicated next to the position indicates the time dedicated to the collection system.

Table 1: Collection System Employee Allocation

Position	Number of Employees	Time Dedicated to the Collection System (%)
Maintenance Manager	1	50
Collection System Supervisor	1	100
Mechanic I	4	100
Mechanic I	2	50
TV Inspector	2	100
Pretreatment Coordinator	1	100
Engineering Manager	1	60
Engineering Supervisor	1	90
Staff Engineer	3	100

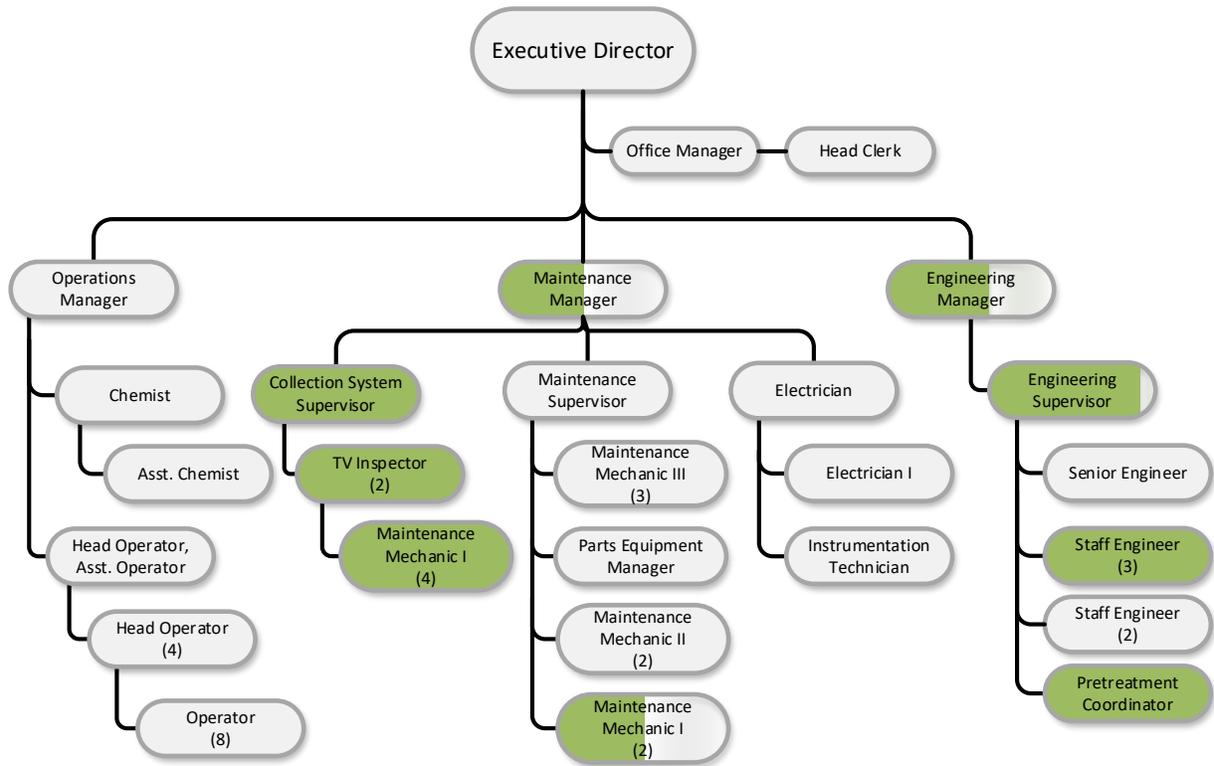


Figure 2. Lowell Wastewater Organizational Chart

Job descriptions are maintained by the Office Manager and include the nature of the work performed, minimum requirements for the position, special qualifications and certifications or licenses that are required. Advancement through the ranks is encouraged through multiple practices, including: educational reimbursement for advanced degrees; annual stipends for certifications achieved and maintained; and preferential consideration for open positions. Such practices allow Lowell to retain

talented workers with critical system knowledge and experience, and to place high-performing individuals in charge of critical programs. Copies of these job descriptions can be found in [Appendix B](#).

In addition to these positions, the Utility hires outside contractors for various collection system maintenance activities; this work includes small-to-medium sized replacement and repair work (Deflice Construction), catch basin cleaning (BMC), heavy sewer line cleaning (Rapid Flow), CIPP lining (National Water Main), and street sweeping (City of Lowell – DPW). Furthermore, the Utility also utilizes year-round part- and full-time interns to help meet the demands of our CMOM program.

2.1.2 Collection System Mapping

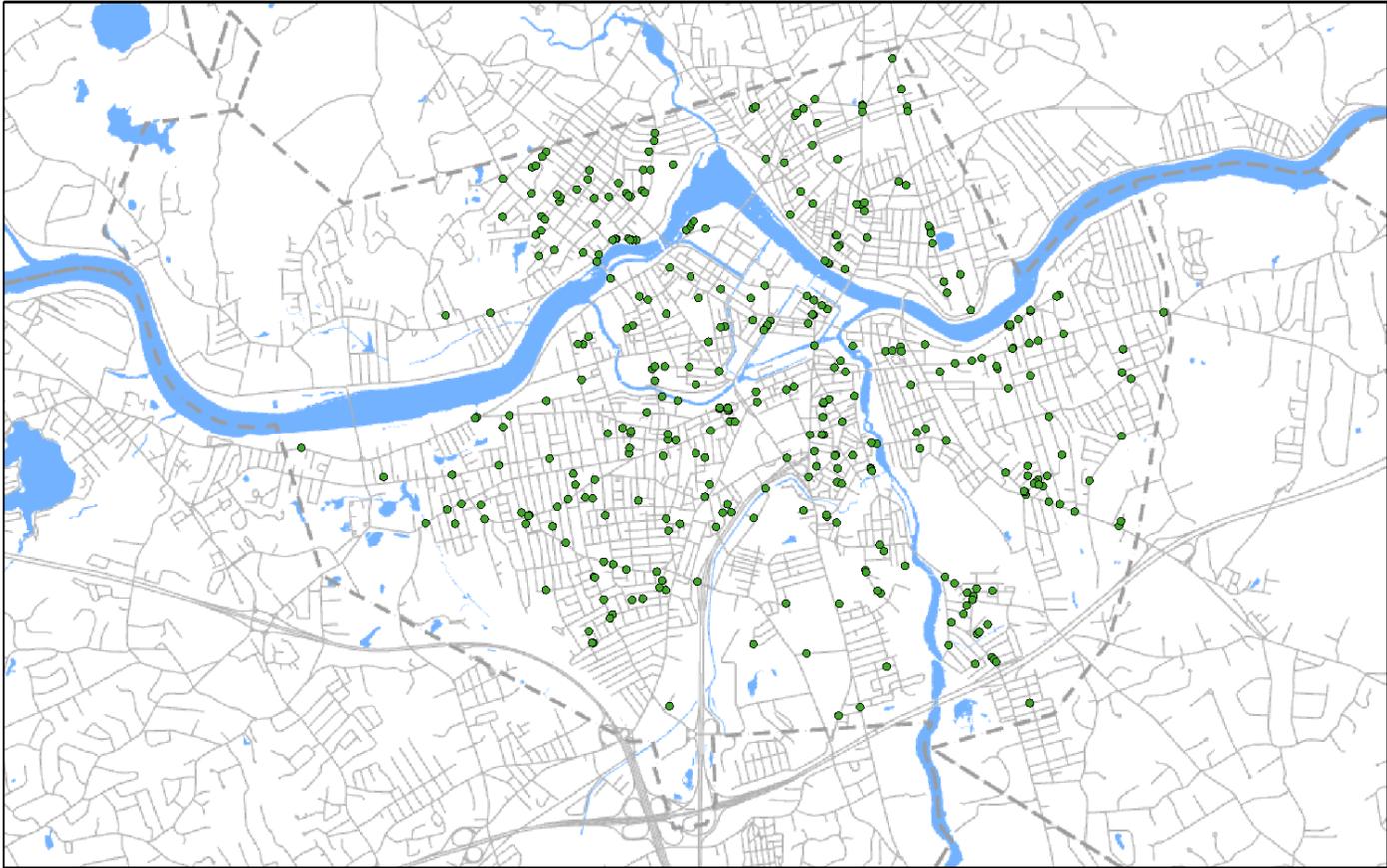
The Utility engaged CDM Smith in 2007 to develop a GIS database of the wastewater collection system based on historic paper records that were digitized to include the information in electronic database. It is estimated that about 86% of Lowell’s GIS database was originally developed on these paper plans. Since then, the City has continued to inspect (via CCTV through various maintenance and capital improvement programs) and update the GIS platform. Updates to Lowell’s GIS system are continuously being made by engineering staff and CMOM field personnel. It is estimated that comprehensive GIS records exist for 90% of Lowell’s collection system. Lowell’s GIS & Data Management team determined that it was in the Utility’s best interest upgrade to ESRI’s ArcGIS Enterprise. The Utility engaged with Hazen and Sawyer to facilitate these upgrades, with an expected completion date tentatively scheduled for late Spring 2024.

The Utility field crews are equipped with iPads and have access to GIS maps of the collection system via ESRI’s ArcGIS Online Collector application. Additionally, Lowell employees are able to access an online GIS utility viewer that is maintained by the City’s Management Information Systems (MIS) department. This viewer provides an overview of the city by parcel and contains hyperlinks to scanned sewer tie cards. Video inspections performed by in-house staff are recorded to Lowell’s GIS database through integration with GraniteNET technology onboard the video truck.

The Utility is currently working with Wright-Pierce to identify the location of sewer pipes that are outside of city streets to determine if the City has easements for these sewer pipes and facilities for access and maintenance. An initial inventory utilizing existing sewer sheets and deed research is expected to be completed in 2024. After completion of the inventory, Wright-Pierce is tasked with developing an approach to complete further easement discovery and to develop a process to acquire any required easements for access and maintenance.

The Utility currently has 348 manholes attributed as buried, 14 less than last calendar year, within its GIS database as depicted in [Figure 3](#). During CCTV inspection and paving activities buried manholes are identified and raised.

Buried Manholes



3/28/2024

• Buried Manholes

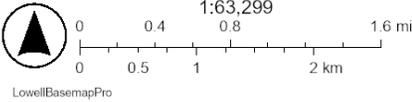


Figure 3. 2023 Buried Manhole Inventory

2.2 Summary of Collection System Maintenance - 2023

The Utility utilizes ESRI's ArcGIS Online applications, namely Collector and Survey123 to document CMOM related repair and cleaning activities in real time. [Figure 4](#) and [Figure 5](#) present maps of collection system sewer repairs, replacements, and cleaning activities undertaken in 2023. These projects include: 804 feet of new sewer pipe installed; repair and replacement of 64 catch basins; repair and replacement of 28 manholes. Also included in this total are 1,656 sewer and drainage system catch-basins cleaned; and associated miscellaneous items like test pits, paving and sidewalk repairs. The Utility also performed inspection and cleaning of 1 of its 6 siphons.

As discussed in greater detail in [Section 2.6](#), the Utility contracted with Kleinfelder to develop an Infiltration/Inflow (I/I) Abatement Plan. In 2023 the Utility conducted an extensive City-wide flow metering program to identify prioritized areas of the wastewater collection system with excessive I/I. This information was compiled into a comprehensive I/I Analysis Report to be submitted in early 2024, providing recommendations, a schedule, and projected costs for subsequent phases of Sewer System Evaluation Surveys (SSES). [Figure 8](#) provides an overview of the collection system divided into metering areas with the 63-meter locations discussed in greater detail in [Section 2.4](#). Additional maps detailing the scope and sub-areas that were investigated as part of this effort can be found in [Appendix A](#), Inflow and Infiltration Analysis Report.

The Utility has contracted with CDM Smith to assist in the planning, development, and execution of future sewer separation projects throughout Lowell's collection system. In December of 2023 the Utility submitted the Centralville Sewer Separation Preliminary Design Report (PDR), summarizing an approach to separate the combined sewer system in this neighborhood. The report includes assessment based on field investigation, extensive modeling to determine pipe conveyance, and 30% design drawings of the proposed separation plan.

Collection System Cleaning Summary

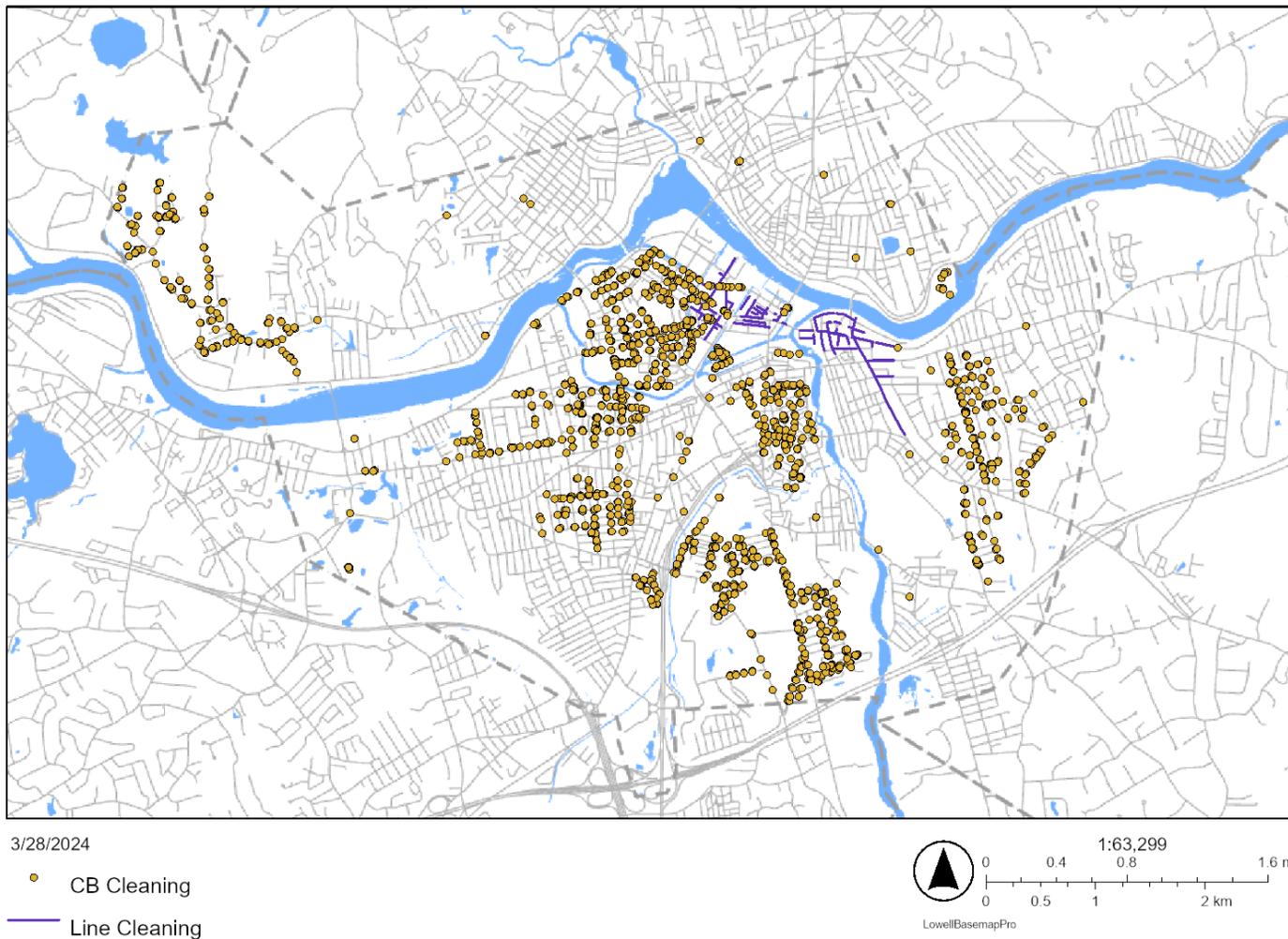


Figure 4. 2023 Collection System Cleaning Summary

Annual Maintenance and Inspection Summary

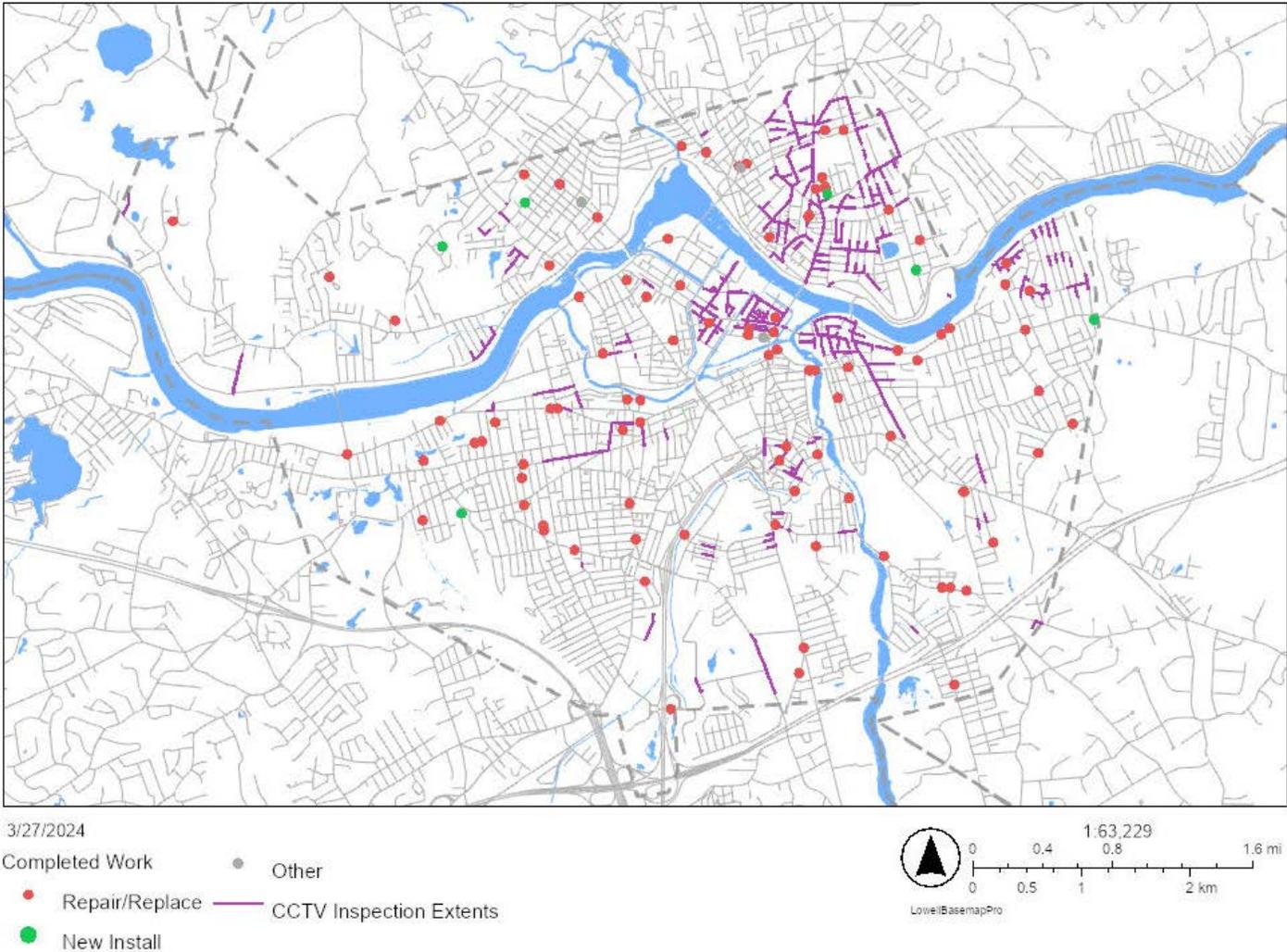


Figure 5. 2023 Maintenance and Inspection Summary

2.3 Collection System Expenditures

The Utility's FY2023 operating budget totaled \$28.3 million. This included funds for operation and maintenance and debt services related to capital improvements of the sewerage-drainage collection systems at \$9.2 million: 32.5% of the total operating budget. The \$9.2 million includes direct costs such as salaries, wages, professional services and utilities, and indirect costs for services provided by other City of Lowell departments and employee overhead costs. This budget also includes debt services on prior work performed under capital improvement projects and Long-Term Control Plan (LTCP) projects directed toward high-flow management and CSO control.

Table 2 below summarizes the expenditures for collection system maintenance activities in 2023. Budgeting for supported collection system maintenance services is pulled from this total operating cost.

Table 2: 2023 Collection System Expenditures

FY 2023 Line-Item	Cost
Street Sweeping	\$ 67,047
Catch Basin Cleaning	\$ 369,549
Heavy Cleaning	\$ 16,746
CIPP Lining	\$ 350,000
On-call Repairs: Defelice	\$ 714,314
Direct Costs (salary, engineering consultants, station upkeep, etc.)	\$ 2,876,835
Debt Services	\$ 4,503,805
Indirect Costs	\$ 306,245
FY23 Overall CMOM Budget	\$ 9,204,551

2.4 Planned Collection System Investigation/Actions in 2024

The Utility plans future system investigation and maintenance activities following the City's paving schedule to identify and complete sewer repairs ahead of new paving projects. Sewer lines that fall within the extents of any proposed paving areas are video inspected, assessed for repair and CIPP lined ahead of the scheduled paving. This work is to be completed before any actual paving takes place, as a five-year road work moratorium exists on all paved roads in the City.

Figure 6 shows a map showing areas identified for planned investigations, collection system maintenance, repairs and lining projects to be completed in 2024.

Planned investigations and actions throughout 2024 outlined in the *Appendix A* I/I Analysis Report include: targeted pipe and manhole inspections and pipe cleaning of high I/I meter areas (residual pipes in Meter Areas 37, 38, 51); sonar/laser inspections of all interceptor pipes, depicted in *Figure 7* (9 miles, 36 - 120"); and repair of a substantial inflow defect in Kearney Square utilizing Utility's on-call contractor. Additionally, the re-metering of 10-meter areas that were problematic in the flow meter program to revise the priority ranking of the SSES phases.

In 2024, Lowell and CDM Smith will continue the sewer separation planning and design efforts in the Centralville Neighborhood and will complete 100% design drawings for Phase 1 of the two-phase separation plan for this Neighborhood Area. Preliminary documentation related to this project can be found in [Appendix A](#) Centralville Sewer Separation Preliminary Design. The Utility will also develop and submit a Preliminary Design Report for other potential sewer separation projects, Phase 3, in key target areas throughout the City. The planned work for 2024 will include: CCTV inspections, borings, site survey, public input, building inspections, and SWMM model updates.

Additionally, Tighe & Bond is under contract with the utility to finalize design for the Douglas Road Storage Wet Weather Flow Tank, which is being targeted to help reduce sanitary sewer overflows in neighborhood areas that have experienced chronic system surcharging. The design will be completed and a contractor for the project will be obtained by the end of 2024.

2024 Planned Investigation and Action Areas

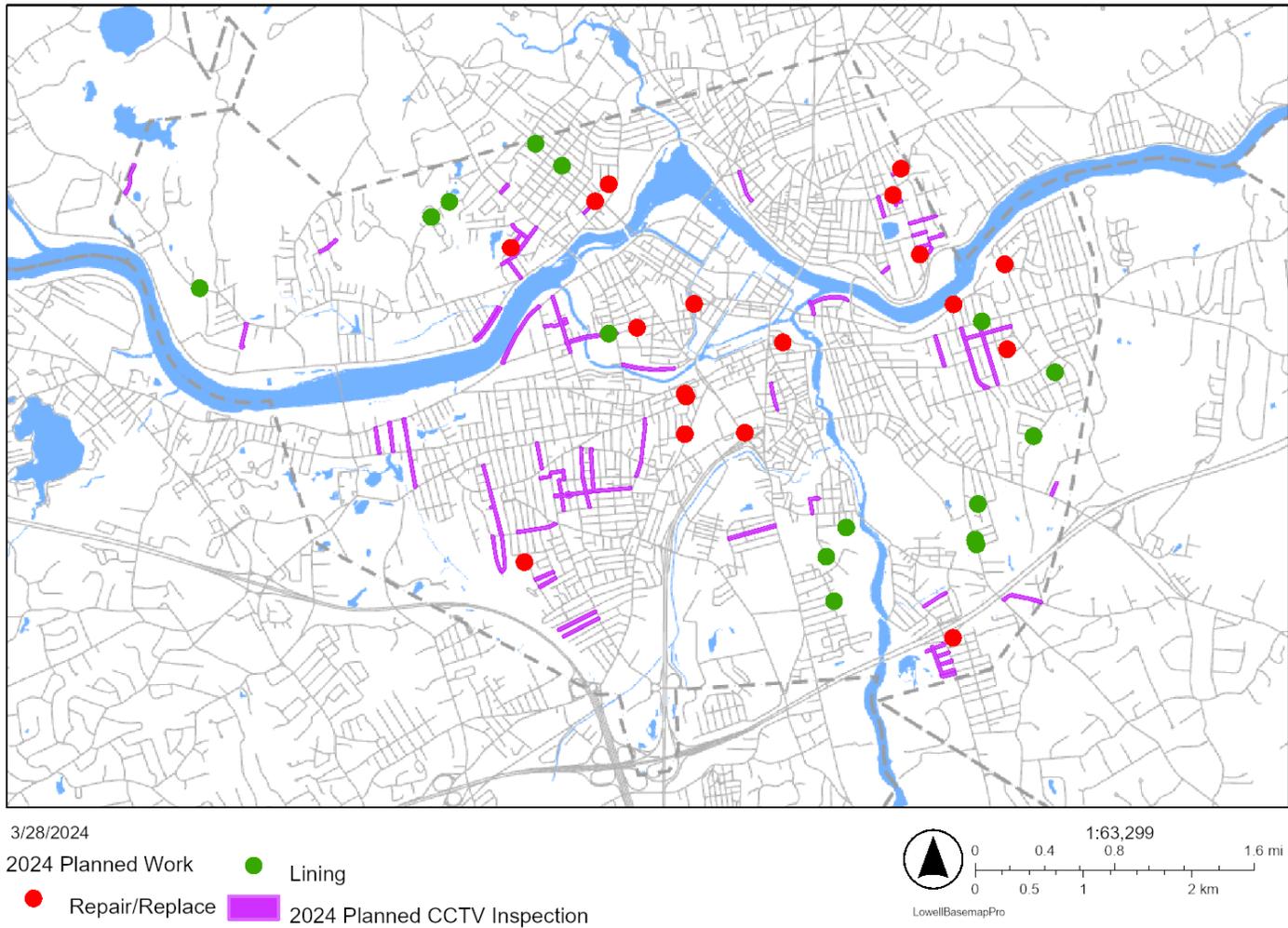


Figure 6. 2024 Planned Investigation and Action Areas

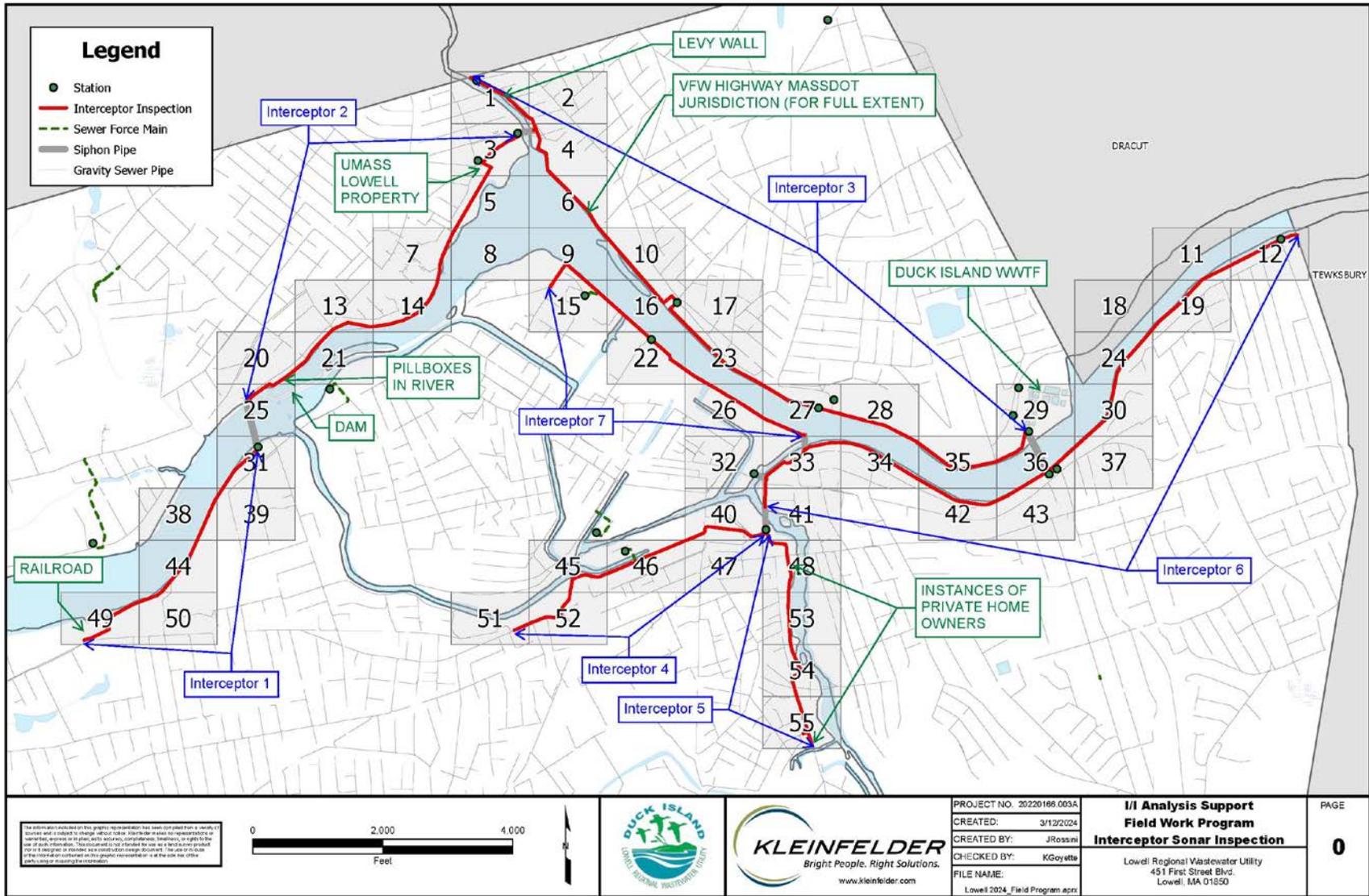


Figure 7. 2024 Planned Interceptor Inspections

2.5 Unauthorized Discharges Summary 2023

The following section details and summarizes the unauthorized discharges (i.e. sewer surcharges and overflows) that have occurred in Lowell’s collection system in 2023. The following section is specific to unauthorized discharges: SSOs/overflows; information pertaining to regulated discharges, (i.e. CSOs and treated bypass), can be found in [Section 3](#).

Additionally, the Utility launched a Sewer Check Valve Reimbursement Program at the end of 2023. This program provides reimbursement to residents of Lowell who install check valves within their service lines in areas of the combined sewer system. This allows them to have short-term protection from residential sewer backups while the Utility assesses and implements long-term, system wide solutions.

2.5.1 Sewer Surcharge Notification Program

The Utility follows the reporting procedures outlined in 314 CMR 16.00 Notification Requirements to Promote Public Awareness of Sewage Pollution. For unauthorized discharges that directly impact a waterbody, initial notification to the public is made via email and text alert within two hours of the overflow start time or discovery. Downstream waterway users and regulatory authorities are required to be recipients of this notification. Templates for all reporting forms can be found in [Appendix C](#).

[Table 3](#) presents SSO events and associated details including type of overflow, date, estimated volume, where the sewage was discharged to (e.g., residential property/basement, ground/street surface, receiving water), root cause, and corrective actions taken to resolve the cause of the surcharge/overflow. [Figure 8](#) displays these events on a map of Lowell. Lowell experienced thirty nine (39) sewer surcharges in 2023; all of which occurred in combined areas of the collection system.

Table 3. Sewer Surcharges & Overflows (2023)

Surcharge Type	Date & Time Overflow Started /Discovered	Date & Time Overflow Stopped	Location	Source of Notification to Lowell	Cause	Estimated Volume (Gal)	Catch Basin or Surface Waterbody Reached and Estimated Volume	Corrective Actions Taken	Date Reported to EPA and MassDEP	Date of the Last Event that Occurred at Same Location
SSO (Sanitary Sewer Manhole)	6/26/2023 3:05 PM	6/26/2023 3:19 PM	35 Eagle Court	Level monitor alert notification	Rain event	Unknown	Pawtucket Canal Unknown	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/27/2023	11/12/2021
SSO (Sanitary Sewer Manhole)	6/27/2023 4:05 AM	6/27/2023 4:08 AM	35 Eagle Court	Level monitor alert notification	Rain event	Unknown	Pawtucket Canal Unknown	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/27/2023	6/26/2023
SSO (Sanitary Sewer Manhole)	6/27/2023 4:07 AM	6/27/2023 4:13 AM	35 Windward Road	Level monitor alert notification	Rain event	Unknown	Unnamed wetland Unknown	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/27/2023	9/02/2021
SSO (Sanitary Sewer Manhole)	6/26/2023 3:06 PM	6/26/2023 3:20 PM	401 Lakeview Avenue	LRWWU Staff	Rain event	Unknown	Ground Surface (no release to surface water)	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/27/2023	No previous SSOs have occurred at this location.
SSO (Sanitary Sewer Manhole)	6/26/2023 3:04 PM	6/26/2023 3:20 PM	67 Payne Street	Level monitor alert notification	Rain event	Unknown	Pawtucket Canal Unknown	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/27/2023	7/19/2022
SSO (Sanitary Sewer Manhole)	6/27/2023 4:03 AM	6/27/2023 4:09 AM	67 Payne Street	Level monitor alert notification	Rain event	Unknown	Pawtucket Canal Unknown	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/27/2023	6/26/2023
SSO (Sanitary Sewer Manhole)	6/28/2023 5:20 PM	6/28/2023 6:22 PM	35 Windward Road	Level monitor alert notification	Rain event	Unknown	Unnamed wetland Unknown	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	6/29/2023	6/27/2023
SSO (Sanitary Sewer Manhole)	7/3/2023 3:06 AM	7/3/2023 3:16 AM	35 Windward Road	Level monitor alert notification	Rain event	1,600 gallons	Unnamed Wetland 1,600 gallons	Given the substantial rainfall, LRWWU is committed to undertaking through inspections of gravity sewer mains both upstream and downstream of impacted manholes. Our primary objectives are to ensure uninterrupted flow within the collection system. Furthermore, we will conduct comprehensive assessments of catch basins in the affected area to insure efficient collection of stormwater runoff.	7/3/2023	6/28/2023
SSO (Sanitary Sewer Manhole)	7/14/2023 12:20 PM	7/14/2023 12:33 PM	657 Middlesex Street (Eagle Ct)	Level monitor alert notification	Rain event	450 gallons	Pawtucket Canal Unknown	LRWWU is committed to conduct thorough inspections of gravity sewer mains both upstream and downstream of the impacted manhole. Our primary objective is to ensure uninterrupted flow within the collection system.	7/14/2023	6/27/2023

SSO (Sanitary Sewer Manhole)	7/14/2023 12:19 PM	7/14/2023 12:34 PM	67 Payne Street	Level monitor alert notification	Rain event	410 gallons	Pawtucket Canal Unknown	LRWWU is committed to conduct thorough inspections of gravity sewer mains both upstream and downstream of the impacted manhole. Our primary objective is to ensure uninterrupted flow within the collection system.	7/14/2023	6/27/2023
SSO (Sanitary Sewer Manhole)	7/16/2023 8:46 AM	7/16/2023 8:50 AM	67 Payne Street	Level monitor alert notification	Rain event	10 gallons	Pawtucket Canal Unknown	LRWWU is committed to conduct thorough inspections of gravity sewer mains both upstream and downstream of the impacted manhole. Our primary objective is to ensure uninterrupted flow within the collection system.	7/17/2023	7/14/2023
Backup into Property	7/24/2023 9:44 AM	7/21/2023 7:15 PM	17 Lura Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	Ground Surface (no release to surface water)	Excessive rain caused a 10-inch combined sewer line to backup onto the property of 17 Lura Street. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	7/24/2023	No previous SSOs have occurred at this location.
Backup into Property	7/24/2023 9:17 AM	7/21/2023 7:15 PM	47 Birch Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	Ground Surface (no release to surface water)	Excessive rain caused a 8-inch combined sewer line to backup onto the property of 47 Birch Street. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	7/24/2023	No previous SSOs have occurred at this location.
Backup into Property	7/24/2023 9:44 AM	7/21/2023 7:15 PM	88 Elliot Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	Ground Surface (no release to surface water)	Excessive rain caused a 12-inch combined sewer line to backup onto the property of 88 Elliot Street. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	7/24/2023	No previous SSOs have occurred at this location
Backup into Property	7/24/2023 9:44 AM	7/21/2023 7:15 PM	112 Corbett Street	Civic plus request submitted to the Utility by resident	Rain event & Downstream Pipe blockage due to root intrusion	Unknown	Ground Surface (no release to surface water)	Excessive rain caused an 8-inch combined sewer line to backup onto the property of 112 Corbett Street. Video inspection of the downstream sewer main uncovered roots in the line. These roots have since been cut and removed. This section of the sewer main has been added as a candidate to the Utility's CIPP lining list.	7/24/2023	No previous SSOs have occurred at this location
Backup into Property	7/24/2023 9:17 AM	7/21/2023 7:15 PM	138 Rea Street	Civic plus request submitted to the Utility by resident	Rain event & Downstream Pipe blockage due to root intrusion	Unknown	Ground Surface (no release to surface water)	Excessive rain caused an 8-inch combined sewer line to backup onto the property of 138 Rea Street. Video inspection of the downstream sewer main uncovered roots in the line. These roots have since been cut and removed. This section of the sewer main has been added as a candidate to the Utility's CIPP lining list.	7/26/2023	No previous SSOs have occurred at this location
Backup into Property	7/24/2023 9:17 AM	7/21/2023 7:15 PM	150 Rea Street	Civic plus request submitted to the Utility by resident	Rain event & Downstream Pipe blockage due to root intrusion	Unknown	Ground Surface (no release to surface water)	Excessive rain caused an 8-inch combined sewer line to backup onto the property of 150 Rea Street. Video inspection of the downstream sewer main uncovered roots in the line. These roots have since been cut and removed. This section of the sewer main has been added as a candidate to the Utility's CIPP lining list.	7/24/2023	No previous SSOs have occurred at this location
Backup into Property	7/25/2023 10:46 AM	7/21/2023 7:15 PM	190 Lawrence Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	Concord River Unknown	Excessive rain caused an 84-inch combined sewer manhole to surcharge into the backyard of 190 Lawrence Street. The sewer man was inspected, and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	7/25/2023	No previous SSOs have occurred at this location
Backup into Property	7/24/2023 9:17 AM	7/21/2023 7:15 PM	199 Crawford Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused a 10-inch combined sewer line to backup on to the property of 199 Crawford Street. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	7/24/2023	No previous SSOs have occurred at this location
SSO (Sanitary Sewer Manhole)	7/21/2023 5:59 PM	7/21/2023 6:35 PM	657 Middlesex Street (Eagle Ct)	Civic plus request submitted to the Utility by resident	Rain event	1,440.9 gallons	Pawtucket Canal Unknown	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	7/21/2023	7/14/2023
SSO (Sanitary Sewer Manhole)	7/21/2023 6:23 PM	7/21/2023 6:24 PM	67 Payne Street	Level monitor alert notification	Rain event	30.51 gallons	Pawtucket Canal Unknown	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	7/21/2023	7/16/2023

SSO (Sanitary Sewer Manhole)	7/21/2023 6:34 PM	7/21/2023 6:36 PM	Raven Road & Broadview Road intersection, by 246 Raven Road	Level monitor alert notification	Rain event & Pipe blockage due to root intrusion	46.72 gallons	Ground Surface (no release to surface water)	Past corrective actions taken at this area include the following – root cutting was performed in December 2021, followed by CIPP lining of the affected pipe segment (to prohibit further root growth) in February 2022. This is the first recorded overflow since these actions were taken. This overflow is attributed to extreme rainfall in a short duration.	7/21/2023	11/12/2021
SSO (Sanitary Sewer Manhole)	7/21/2023 6:10 PM	7/21/2023 7:14 PM	Windward/Douglas Road	Level monitor alert notification	Rain event	13,416.15 gallons	Unnamed wetland 13,416.15	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	7/21/2023	7/3/2023
Backup into Property	8/2/2023 2:19 AM	7/29/2023 7:30 PM	59 Charles Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused a 12-inch combined sewer line to backup onto the property of 59 Charles St. The sewer main was inspected, and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/2/2023	No previous SSOs have occurred at this location
Backup into Property	8/2/2023 11:34 AM	7/29/2023 7:30 PM	239 Princeton Boulevard	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused a 12-inch combined sewer line to backup onto the property of 239 Princeton Blvd. The sewer main was inspected, and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/2/2023	No previous SSOs have occurred at this location
Backup into Property	8/2/2023 12:28 PM	7/29/2023 7:30 PM	330 Douglas Road	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused a 42-inch combined sewer line to backup onto the property of 330 Douglas Rd. The sewer main was inspected, and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/2/2023	No previous SSOs have occurred at this location
Backup into Property	7/31/2023 5:12 PM	7/29/2023 7:30 PM	340 Douglas Road	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused a 42-inch combined sewer line to backup onto the property of 340 Douglas Rd. The sewer main was inspected, and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/1/2023	No previous SSOs have occurred at this location
SSO (Sanitary Sewer Manhole)	7/29/2023 7:04 PM	7/29/2023 7:34 PM	657 Middlesex Street (Eagle Ct)	Level monitor alert notification	Rain event	1,366.6 gallons	Pawtucket Canal 1,366.6 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	7/29/2023	7/21/2023
SSO (Sanitary Sewer Manhole)	7/29/2023 7:04 PM	7/29/2023 7:32 PM	67 Payne Street	Level monitor alert notification	Rain event	1,806.9 gallons	Pawtucket Canal 1,806.9 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	7/29/2023	7/21/2023
SSO (Sanitary Sewer Manhole)	7/29/2023 7:20 PM	7/29/2023 7:50 PM	Windward/Douglas Road	Level monitor alert notification	Rain event	5,548.7 gallons	Unnamed wetland 5,548.7 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	7/29/2023	7/21/2023
Backup into Property	8/8/2023 11:22 PM	8/8/2023 11:16 PM	47 Birch Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused an 8-inch combined sewer line to backup onto the property of 47 Birch St. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/8/2023	No previous SSOs have occurred at this location
Backup into Property	8/8/2023 11:00 PM	8/8/2023 11:16 PM	64 Foster Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused an 15-inch combined sewer line to backup onto the property of 64 Foster St. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/8/2023	No previous SSOs have occurred at this location
SSO (Sanitary Sewer Manhole)	8/8/2023 10:10 AM	8/8/2023 10:15 AM	67 Payne Street	Level monitor alert notification	Rain event	400 gallons	Pawtucket Canal 400 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	8/8/2023	7/29/2023

Backup into Property	8/8/2023 11:07 AM	8/8/2023 11:16 AM	88 Elliot Street	Civic plus request submitted to the Utility by resident	Rain event	Unknown	No release to surface water	Excessive rain caused an 8-inch combined sewer line to backup onto the property of 88 Elliot Dr. The sewer main was inspected and no blockages were found. The underlying cause of this backup is attributed to intense rainfall.	8/8/2023	No previous SSOs have occurred at this location
SSO (Sanitary Sewer Manhole)	8/8/2023 11:15 AM	8/8/2023 11:21 AM	239 Industrial Avenue	LRWWU Staff	Rain event	Unknown	River Meadow Brook Unknown	This SSO was brought on by excessive rainfall. LRWWU is committed to conducting through inspections of the gravity sewer main both upstream and downstream of the impacted manhole. Our primary objective is to ensure uninterrupted flow within the collection system.	8/8/2023	No previous SSOs have occurred at this location
SSO (Sanitary Sewer Manhole)	8/8/2023 10:10 AM	8/8/2023 10:15 AM	657 Middlesex Street (Eagle Ct)	Level monitor alert notification	Rain event	130 gallons	Pawtucket Canal 130 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	8/8/2023	7/29/2023
SSO (Sanitary Sewer Manhole)	8/8/2023 11:15 AM	8/8/2023 11:21 AM	Windward /Douglas Road	Level monitor alert notification	Rain event	1,560 gallons	Unnamed wetland 1,560 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	8/8/2023	7/29/2023
SSO (Sanitary Sewer Manhole)	8/10/2023 10:34 PM	8/10/2023 10:32	67 Payne Street	Level monitor alert notification	Rain event	320 gallons	Pawtucket Canal 320 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	8/11/2023	8/8/2023
SSO (Sanitary Sewer Manhole)	8/10/2023 10:32 PM	8/10/2023 10:29 PM	657 Middlesex Street (Eagle Ct)	Level monitor alert notification	Rain event	170 gallons	Pawtucket Canal 170 gallons	The area and alternative solutions are being evaluated as part of the Phase 3 PDR.	8/11/2023	8/8/2023

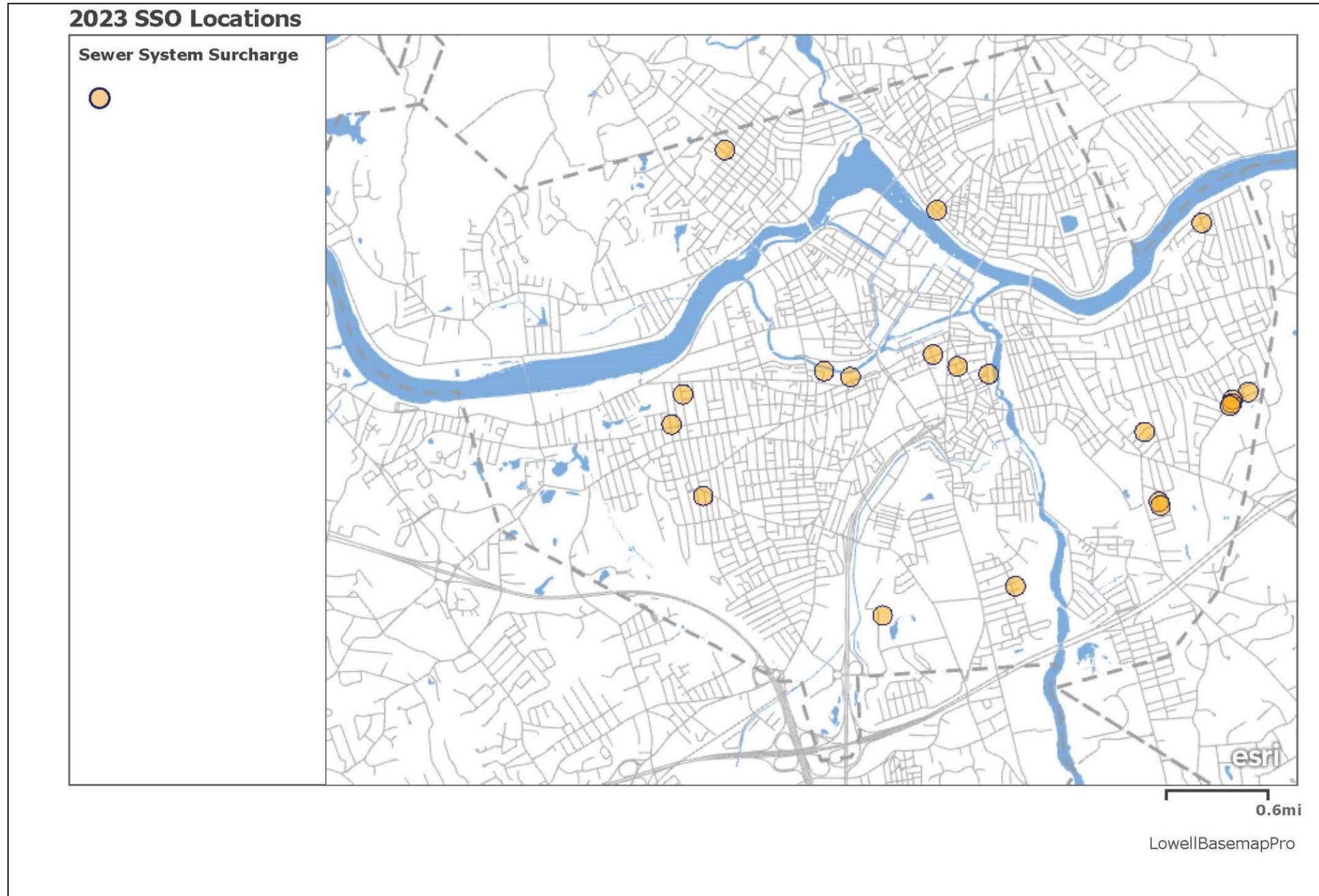


Figure 88. Sewer Surcharges & Overflows (2023)

2.6 Infiltration/Inflow Summary for Reporting Year 2023

The Utility developed an Infiltration/Inflow (I/I) Abatement Plan and Analysis Report to provide a comprehensive approach and schedule to identify and investigate locations of excessive I/I within the Utility's sewer system compliant with MassDEP regulation 314 CMR 12.04(2). In 2023, the Utility performed the following work:

1. Conducted a City-wide Flow Metering Program, see [Figure 9](#).
2. Conducted CCTV and manhole inspections during high groundwater periods in designated subareas 37, 38, and 51 with known and suspected sources of inflow, see [Figure 10](#).
3. Cleaning and CCTV inspection of Merrimack Canal siphon.
4. Removal of the Moody Street feeder canal cross connection estimated to be 0.15 MGD (below, left).
5. Complete design for repair of Kearney Square inflow defect estimated to be 0.15 MGD (below, right).



Findings and results from this work are to be summarized in an I/I Analysis Report in accordance with MassDEP guidelines and can be found by navigating to the appropriate link in [Appendix A](#). The I/I Analysis Report recommendations outline an 8-phase SSES, from 2023 to 2032, that include the following inspection approaches: smoke testing, building inspections, dye testing, flow isolation, CCTV inspections/cleaning, manhole inspections, siphon inspections/cleaning, and interceptor inspections. The SSES will organically drive future repair/rehabilitation projects within the Utility's collection system.

Properties are not inspected for I/I sources during a property transfer, but the Utility has also developed a private inflow control program which establishes criteria to require private inflow removal from highly impervious properties within the city that are undergoing substantial reinvestment. Projects that meet the criteria thresholds are required to detain the first inch of rainfall that falls across the impervious area on site. This is done to mitigate the effects that peak rainfall has on the collection system and minimize this rainfall's contributions to downstream sewer surcharges.

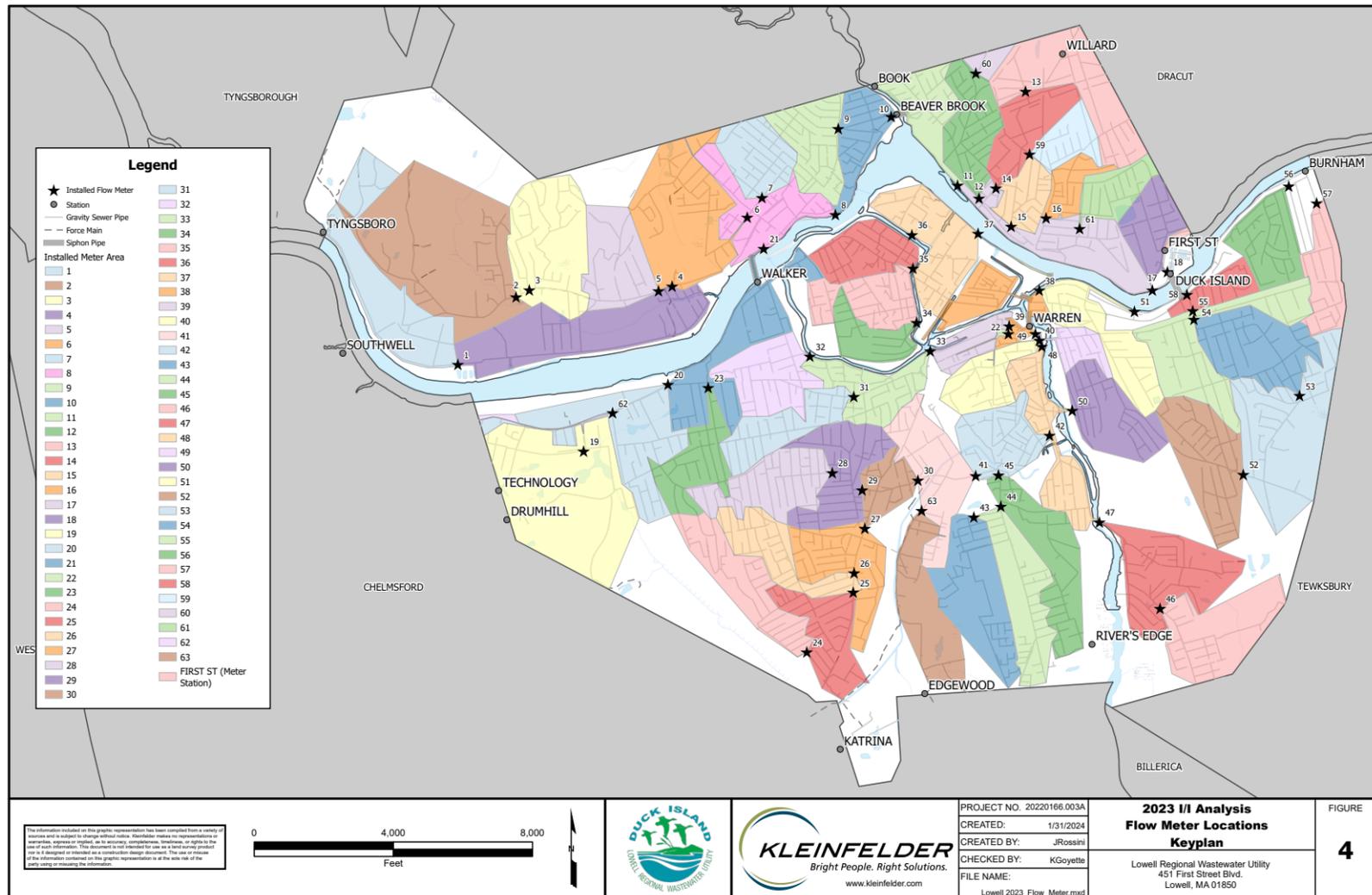


Figure 9. Flow Metering Areas

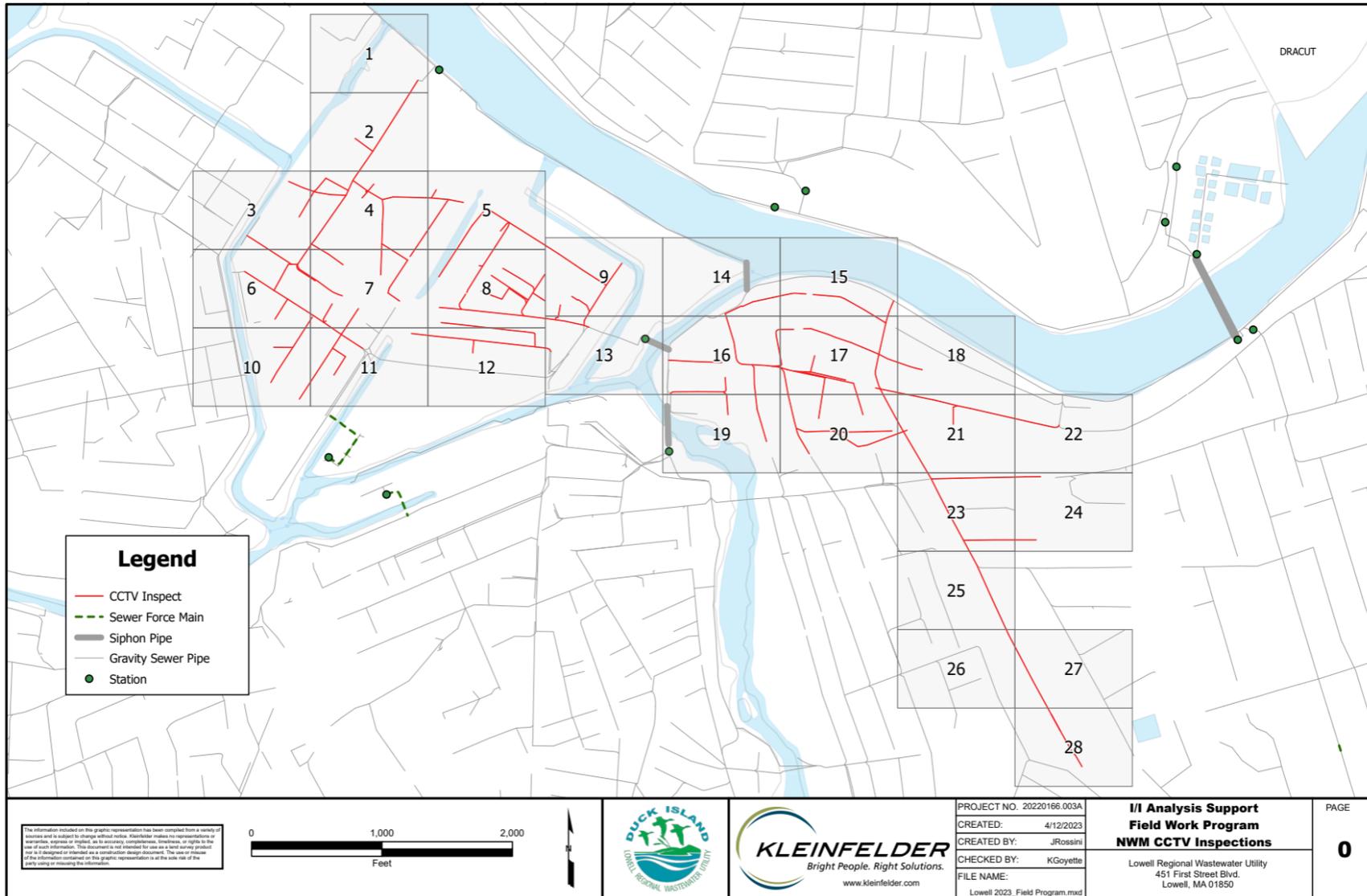


Figure 10. 2023 I/I Investigations

Additionally, the Utility continued to implement a program to analyze the flow in the sewers, mostly along the interceptors or collector pipes adjacent to rivers, streams and other waterbodies, for specific conductance to evaluate potential changes in specific conductance that might identify potential leaks of surface water into the sewer system. A thorough overview of this program can be found in supporting documentation online in [Appendix A](#), Inflow and Infiltration Control Plan.

The rolling twelve-month average daily flow through Duck Island was 33.0 MGD in 2023. This daily flow rate exceeded the target threshold of 80 percent of the facility’s 32 MGD design flow Based on this triggering threshold, under paragraph Part I.C.f of the NPDES Permit, the Annual Report shall include:

- (1) Plans for further potential flow increases describing how the Permittee will maintain compliance with the flow limit and all other effluent limitations and conditions; and
- (2) A calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year.

The exceedance of the flow criteria in the NPDES permit is attributed to an abnormally high year of precipitation, with 62.3 inches of rain that occurred in 2023. The average yearly rain fall over the last 3 calendar years (2020-2022) was 40.4 inches of rain. The key flow statistics required with this trigger are summarized below.

The Utility continues to make efforts to comply with both flow and other NPDES effluent limits. As discussed above, the Utility will complete inspections of all its large diameter interceptor and collector pipes adjacent to receiving waters to determine if there are any significant sources of I/I. System inspections along the interceptor system area also ongoing to identify any open manholes or sources of inflow. The Utility is also initiating a major I/I SSES program to identify and reduce sources of extraneous flow in the system and is also initiating a major program of sewer separation of its combined sewer system including the removal of three major inflows from Dracut that enter the sewer system (Humphreys’ Brook, Billings Street Wetlands, and Hovey Field), which will be completed in 2027. It is estimated that the removal of these surface water flow sources should eliminate 2-8 MGD of extraneous flow that is conveyed to Duck Island.

2.7 Infiltration/Inflow Summary Surrounding Communities 2023

The Utility’s Member Communities Wastewater Collection and Conveyance Systems are summarized in [Table 4](#). [Figure 11](#) shows Lowell and its member community’s gravity sewer systems.

Table 4. Community I/I Summary

Regional Community	Data Source	Miles of Pipe	Pipe Material	Pipe Age (years)	Pipe Diameters	Contribution to DIWWTF
Chelmsford	2021 I/I Plan	167	PVC, DI	40	N/A	Majority of the flow
Dracut	2017/2018 I/I Report	125	PVC, DI, RC, and AC	50	8” to 42”	Small portion of East Dracut goes to GLSD

Tewksbury	2018 I/I Report	158	N/A	40	N/A	Majority of the flow
Tyngsborough	2017 I/I Report	22	AC, DI	50		All flow (predominately via Dracut system)

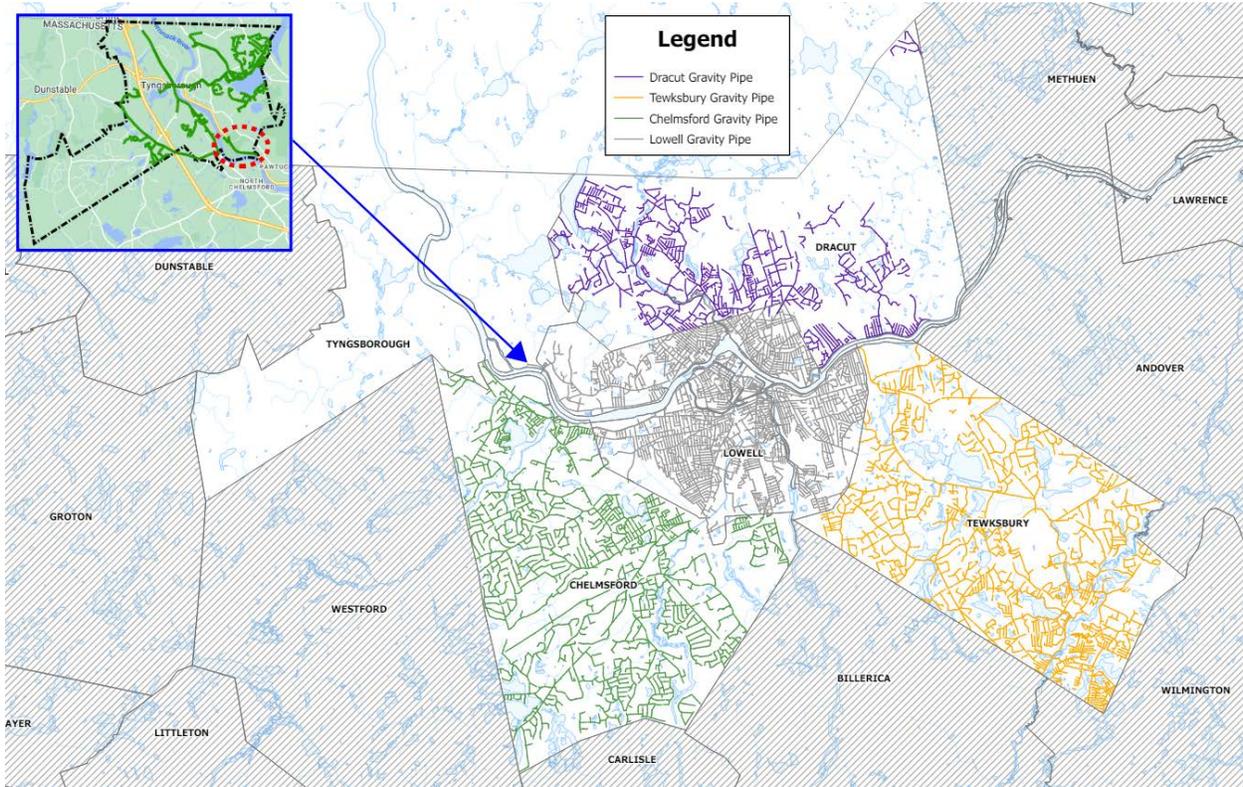


Figure 11. Lowell Communities Collection Systems

The Utility and its member communities flow data was compiled from a collection of sources. While Chelmsford and Tyngsborough’s data did not provide enough granularity for comprehensive I/I analyses, the average day, peak day, and peak monthly average flows were calculated. Given the variability in recorded flow frequency of the provided data, an I/I analysis was conducted solely for the DIWWTF, Dracut, and Tewksbury. With five-minute interval flow data and daily rainfall, average day I/I was able to be determined for the Duck Island, Dracut, and Tewksbury. Alternatively, with semi-weekly intermittent data, I/I was effectively indeterminate without the ability to evaluate diurnal patterns for Chelmsford and Tyngsborough. The average daily flows, peak daily flows, peak monthly average flows, and average day I/I were calculated. I/I analysis for the DIWWTF, Tewksbury, and Dracut were performed following MassDEP’s 2017 Guidelines for Performing I/I Analyses and Sewer System Evaluation Surveys (SSES).

Chelmsford, Dracut, and Tewksbury were found to contribute average daily flows of 2.89 MGD, 2.99 MGD, and 2.08 MGD respectively. A small tributary area of Tyngsborough contributed 0.03 MGD to their direct

connection along Pawtucket Boulevard. [Table 5](#) summarizes the Utility and its member communities flow characteristics for 2023.

Since Chelmsford and Tyngsborough flows are based on semi-weekly totals, I/I contributions could not be determined. Of the 7.99 MGD average daily flows conveyed to Duck Island from the member communities, at least 2.9 MGD are estimated to be I/I contributions from Dracut and Tewksbury. Monthly average dry-weather flows and monthly average infiltration for Lowell, Dracut, and Tewksbury are provided in [Table 6](#), [Table 7](#), and [Table 8](#). Inflow sources that consistently enter the system will be exhibited within these infiltration values, i.e. Humphrey's Brook, Billings Brook, and Hovey Field.

Table 5: 2023 I/I Analysis Lowell and Surrounding Communities

Flow Source	Parameter	MGD
Town of Chelmsford	AVG DAILY FLOW	2.89
	¹ AVG DAILY BASE SANITARY FLOW	N/A
	PEAK DAY FLOW	5.18
	PEAK MONTHLY AVG FLOW	3.14
	¹ AVG DAILY I/I	N/A
Town of Dracut	AVG DAILY FLOW	2.99
	AVG DAILY BASE SANITARY FLOW	1.55
	PEAK DAY FLOW	6.49
	PEAK MONTHLY AVG FLOW	3.65
	AVG DAILY I/I	1.44
Town of Tewksbury	AVG DAILY FLOW	2.08
	AVG DAILY BASE SANITARY FLOW	0.61
	PEAK DAY FLOW	4.90
	PEAK MONTHLY AVG FLOW	3.10
	AVG DAILY I/I	1.46
Town of Tyngsborough	AVG DAILY FLOW	0.03
	¹ AVG DAILY BASE SANITARY FLOW	N/A
	PEAK DAY FLOW	0.07
	PEAK MONTHLY AVG FLOW	0.04
	¹ AVG DAILY I/I	N/A
COMMUNITY MEMBERS TOTAL	AVG DAILY FLOW	7.99
	¹ AVG DAILY BASE SANITARY FLOW	N/A
	PEAK DAY FLOW	16.64
	PEAK MONTHLY AVG FLOW	9.93
	¹ AVG DAILY I/I	N/A
LRWWU DIWWTF (RAW)	AVG DAILY FLOW	33.10
	AVG DAILY BASE SANITARY FLOW	10.51
	PEAK DAY FLOW	81.81
	PEAK MONTHLY AVG FLOW	41.33
	AVG DAILY I/I	22.60
LRWWU DIWWTF (SOLO)	AVG DAILY FLOW	25.12
	AVG DAILY BASE SANITARY FLOW	5.43
	PEAK DAY FLOW	65.16
	PEAK MONTHLY AVG FLOW	31.40
	² AVG DAILY I/I	19.69

¹ Unable to determine parameter based on data provided

² Includes I/I contributions from Chelmsford and Tyngsborough

Table 6: Lowell I/I Dry Weather Analysis

Lowell (Duck Island) Influent Dry Weather Analysis						
Month	Monthly Total Rain (Inches)	Dry Weather Dates	*Average Daily Flow Parameters (MGD)			
			Raw	Night-time	Base Sanitary	Infiltration
Jan	6.87	1/28 - 1/30	40.86	38.69	13.78	27.08
Feb	1.27	2/14 - 2/16	24.90	20.92	10.26	14.64
Mar	7.34	3/10 - 3/12	28.62	24.83	11.24	17.38
Apr	0.70	4/20 - 4/22	22.62	18.80	9.46	13.16
May	4.04	5/26 - 5/28	23.45	19.97	9.47	13.98
Jun	8.76	6/21 - 6/23	20.47	17.37	8.31	12.16
Jul	9.82	7/7 - 7/9	33.32	30.48	11.99	21.33
Aug	8.89	8/2 - 8/4	32.31	29.16	11.90	20.41
Sep	5.89	9/5 - 9/7	29.34	25.41	11.55	17.79
Oct	2.16	10/26 - 10/28	25.59	25.61	7.66	17.93
Nov	2.18	11/1 - 11/3	27.05	23.50	10.60	16.45
Dec	7.52	12/7 - 12/9	23.84	19.97	9.86	13.98
Average:			27.70	24.56	10.51	17.19

*includes Combined Community Member Contributions

Table 7: 2023 Dracut Dry Weather Analysis

Dracut (Book, First, Willard Meters Compiled) Dry Weather Analysis						
Month	Monthly Total Rain (Inches)	Dry Weather Dates	Average Daily Flow Parameters (MGD)			
			Raw	Night-time	Base Sanitary	Infiltration
Jan	6.87	1/28 - 1/30	4.22	3.54	2.81	1.41
Feb	1.27	2/14 - 2/16	2.68	2.12	0.94	1.74
Mar	7.34	3/10 - 3/12	3.19	2.58	1.40	1.79
Apr	0.70	4/20 - 4/22	2.57	1.73	1.00	1.56
May	4.04	5/26 - 5/28	2.60	1.91	1.32	1.27
Jun	8.76	6/21 - 6/23	2.35	1.55	1.28	1.07
Jul	9.82	7/7 - 7/9	3.01	2.49	2.15	0.86
Aug	8.89	8/2 - 8/4	2.46	2.01	1.61	0.85
Sep	5.89	9/5 - 9/7	2.55	1.89	1.78	0.77
Oct	2.16	10/26 - 10/28	2.35	1.31	1.48	0.87
Nov	2.18	11/1 - 11/3	2.27	1.30	1.37	0.91
Dec	7.52	12/7 - 12/9	2.41	1.23	1.40	1.01
Average:			2.72	1.97	1.55	1.18

Table 8: 2023 Tewksbury Dry Weather Analysis

Tewksbury (Burnham Meter) Dry Weather Analysis						
Month	Monthly Total Rain (Inches)	Dry Weather Dates	Average Daily Flow Parameters (MGD)			
			Raw	Night-time	Base Sanitary	Infiltration
Jan	6.87	1/28 - 1/30	2.82	2.63	0.71	2.11
Feb	1.27	2/14 - 2/16	2.16	1.73	0.78	1.38
Mar	7.34	3/10 - 3/12	2.01	1.84	0.54	1.47
Apr	0.70	4/20 - 4/22	1.80	1.50	0.60	1.20
May	4.04	5/26 - 5/28	1.85	1.60	0.58	1.28
Jun	8.76	6/21 - 6/23	2.00	1.76	0.59	1.41
Jul	9.82	7/7 - 7/9	2.54	2.26	0.73	1.81
Aug	8.89	8/2 - 8/4	2.14	1.85	0.66	1.48
Sep	5.89	9/5 - 9/7	2.13	1.92	0.59	1.53
Oct	2.16	10/26 - 10/28	1.81	1.51	0.60	1.21
Nov	2.18	11/1 - 11/3	1.64	1.48	0.46	1.18
Dec	7.52	12/7 - 12/9	2.00	1.85	0.52	1.48
Average:			2.08	1.83	0.61	1.46

3. CSO Reporting and Certification Summary 2023

Over the course of 2023, Lowell experienced 142 days of precipitation, as measured by the Duck Island gauge. Total precipitation for 2023 was 62.3 inches. The average yearly rain fall over the last 3 calendar years (2020-2022) was 40.4 inches of rain. Monthly High Flow and CSO data summaries are provided in [Section 3.3](#).

This precipitation required activation of Lowell's High-Flow Treatment mode 82 times throughout the year, resulting in the successful capture and treatment of 939 MG of flow in excess of the biological-treatment system capacity. CSO diversions related to these events occurred during 41 of these activations, resulting in a total of 873 MG with 334 MG (38%) coming from the four largest events.

The Utility follows the reporting procedures outlined in 314 CMR 16.00 Notification Requirements to Promote Public Awareness of Sewage Pollution. For unauthorized discharges that directly impact a waterbody, initial notification to the public is made via email and text alert within two hours of the overflow start time or discovery. Downstream waterway users and regulatory authorities are required to be recipients of this notification. Templates for all reporting forms can be found in [Appendix C](#).

3.1 CSO Records Certification

All data from High-Flow Treatment and CSO events are reviewed by the Utility staff prior to data being uploaded to the City website or reported to regulatory authorities. This review process is critical to ensuring accurate representation to the public regarding collection system and treatment plant performance during high-flow events. Electronic instruments are installed at key points throughout the collection system, and calculations are automated via Lowell's SCADA system to streamline this process; however, the recorded data is still reviewed by trained staff members to ensure that any potential miscalculations are corrected, ensuring that only correct and accurate data is reported. Fluctuations in levels at points in the collection system have the potential to trigger a false notification of an overflow, and need to be reviewed to ensure details are correct before data is uploaded.

As part of the review process, a member of the Utility's engineering group will review the calculated volumes and conditions that caused the high flow event to ensure data is consistent with the set parameters of high flow operation, and that the data is within expected ranges. This review process entails a detailed review of SCADA instrument records and, where necessary, recalculation of discharge volumes using external programs developed to consider infrequent but relevant flow conditions such as backwater effects from high river levels. SCADA instrument records may be used to compare levels, flows, or volumes at remote stations as well as rain volumes and river elevation. Following this review process, detailed reports are uploaded to the City's website, and are reported to relevant agencies.

The final record of CSO discharge volumes is presented in [Section 3.3](#) and is hereby certified by Lowell Engineering staff as a true and accurate estimation of all CSO discharges from Lowell's permitted outfalls in 2023; a signed certification statement can be found in [Appendix D](#). These records are stored at Duck Island in Lowell's Water Information Management System (WIMS).

3.2 CSO Station Inspection Certification

CSO structures are inspected regularly by maintenance personnel on the Structures Crew. The Structures Crew visits pump stations daily, all inspection records are collected digitally and managed by the Utility's engineering staff.

CSO diversion stations are inspected weekly by the same personnel. Structures are inspected to verify that the grounds are clear and accessible, including any need for landscaping services; record wet-well conditions (normal, flooded, evidence of flooding, high wet-well level); HVAC systems, lighting, and SCADA systems are functional; and perform basic cleaning tasks. Additionally, as part of each inspection, visual inspections of each associated CSO outfall for evidence of any dry-weather discharges are performed.

Records of these visual inspections are documented using doForm checklists unique to each station. The doForms are designed to host streamlined single-choice questions that guide recording personnel through the inspection. If a submitted inspection form contains any anomalous or concerning answers, an automatic alert is triggered and distributed to the Operations Manager, Maintenance Manager and Engineering Manager for review.

In 2023, all CSO structures were routinely inspected; observed issues are logged into the MP2 work-order system and/or discussed at the bi-weekly collection system meetings, as necessary. A signed certification statement can be found in [Appendix D](#).

3.3 Precipitation, High Flow Treatment & CSO Data

Table 9: 2023 HFM Data

Date	Duck Island Effluent		Duck Island Rain		Secondary Bypass Flow			Combined Sewer Overflows		
	Flow (MG)	Peak Hour (MGD)	Rain Days	Rain Inches	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)
Jan 2023	1,204	104.2	19	5.3	9	45.6	61.2	1	7.42	19.78
Feb 2023	870	52.6	7	0.8	0	0.0	0.0	0	0.00	0.00
Mar 2023	1,320	109.9	12	4.7	7	93.1	118.2	1	3.83	16.43
Apr 2023	1,082	106.7	10	4.4	3	31.2	51.5	2	4.73	18.75
May 2023	1,141	104.5	9	3.0	5	43.8	61.7	3	4.93	21.83
Jun 2023	943	100.6	19	7.8	12	41.3	57.0	6	6.42	101.41
Jul 2023	1,406	108.1	14	9.8	13	88.9	130.5	7	25.77	233.23
Aug 2023	1,331	110.7	12	8.9	8	71.0	95.7	7	9.43	139.84
Sep 2023	1,269	100.6	13	5.9	11	68.1	93.6	7	16.02	108.03
Oct 2023	1,059	99.6	7	2.2	2	9.5	10.6	2	5.68	7.78
Nov 2023	873	84.5	7	2.1	1	14.0	24.1	1	6.30	11.92
Dec 2023	1,346	105.0	13	7.5	11	144.0	234.9	4	37.87	193.54
Total	13,842	1,187.0	142	62.3	82	650.4	939.0	41	128.4	872.5
Max	1,406	110.7	19	9.8	13	144.0	234.9	7	37.9	233.2

Table 10: 2023 Monthly CSO Data

Date	Barasford Street			Beaver Brook			Merrimack Street			Read Street			Tilden Street			Walker Street			Warren Street			West Street		
	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)	Event (No.)	Duration (Hours)	Volume (MG)
Jan 2023	1	3.3	5.2				1	3.3	3.3													1	7.4	11.3
Feb 2023																								
Mar 2023	1	3.8	6.6				1	3.8	4.7				1	0.7	0.2							1	3.4	5.0
Apr 2023	2	2.5	3.5	1	0.9	0.3	2	4.7	7.3				2	2.5	0.5				1	0.5	0.7	2	2.8	6.5
May 2023	2	2.9	3.8	2	1.1	0.3	2	3.8	6.4				2	2.2	0.8				3	1.3	1.9	2	4.9	8.6
Jun 2023	4	4.6	8.4	5	3.2	5.2	5	6.4	23.1	3	0.8	0.2	4	4.4	6.8	4	2.7	6.3	5	4.6	32.1	4	5.3	19.2
Jul 2023	6	10.8	20.2	5	7.6	16.5	6	13.2	45.4	3	1.0	0.4	6	10.7	14.1	5	8.4	18.3	6	8.2	65.0	7	25.8	53.5
Aug 2023	5	6.5	13.9	5	4.3	8.5	7	9.4	36.2	2	0.2	0.0	6	8.5	9.6	3	3.8	11.5	5	6.1	35.4	6	8.1	24.7
Sep 2023	3	8.8	17.0	5	5.9	6.0	3	10.1	26.7				7	11.1	6.3	2	2.5	4.7	4	4.5	13.5	4	16.0	33.8
Oct 2023	1	0.1	0.0	1	0.3	0.1	1	0.7	0.9				1	1.0	0.3				1	0.4	0.5	1	5.7	6.0
Nov 2023				1	0.5	0.2	1	1.6	2.2				1	1.4	0.2							1	6.3	9.4
Dec 2023	3	23.5	44.9	2	5.0	6.2	3	22.7	59.8				3	10.7	4.9				2	4.6	9.9	4	37.9	68.0
Total	28	66.7	123.6	27	28.8	43.2	32	79.8	215.9	8	1.9	0.6	33	53.3	43.6	14	17.3	40.8	27	30.3	159.0	33	123.6	246.0
Max	6	23.5	44.9	5	7.6	16.5	7	22.7	59.8	3	1.0	0.4	7	11.1	14.1	5	8.4	18.3	6	8.2	65.0	7	37.9	68.0

4. Nine Minimum Controls Report

The Nine Minimum Controls (NMC) are required under the Utility’s NPDES permit. [Table 11](#) lists each NMC, the documentation requirements, and where in this report (or on outside links) additional supporting information can be found.

Table 11. Nine Minimum Controls

Control	Documentation Requirements	Reported At/Details
1. Proper operation and regular maintenance programs for the sewer system and combined sewer overflow points	<ul style="list-style-type: none"> a. Organizational O&M responsibilities chart b. Funding allocated for O&M c. List of critical facilities and structures (regulators, tide gates, pumping stations, sections of sewer lines prone to sedimentation or obstruction) and inspection plan (locations, frequency, procedures, documentation, reporting of periodic and emergency inspections and maintenance) 	<ul style="list-style-type: none"> a. Section 2.1.1 b. Section 2.3 c. Appendix A
2. Maximize Use of the Collection System for Storage	<ul style="list-style-type: none"> a. Identification of maintenance or design deficiencies that restrict the use of otherwise available system capacity b. Adequacy of tide gate maintenance and repair procedures c. Document the method for optimal setting of regulators d. Document procedures for identification and removal of obstructions to flow. Include a summary of the locations where sediment is removed, the number of times each year the sediment is removed and the total quantity of material removed each year 	Appendix A: Combined Sewer Overflow Plan, for details pertaining to the Utility’s High Flow Management Plan and CMOM procedures.
3. Review and modification of the Industrial Pretreatment Program (IPP) to assure CSO impacts are minimized	<ul style="list-style-type: none"> a. Review legal authority and identify those activities for which the community has or can obtain authority to address CSO induced water quality violations (e.g., authority to require non-domestic dischargers to store wastewater during precipitation events or require them to implement runoff controls) b. Inventory non-domestic dischargers that may contribute to CSO induced water-quality violations c. Assess whether identified dischargers cause or contribute to CSO induced water-quality violations by using monitoring, dilution calculations or other reasonable methods d. Evaluate and propose feasible site-specific modifications to address non-domestic dischargers identified as significant 	Appendix A: Pretreatment Report. This document is submitted separately by the Utility’s Pretreatment Coordinator.
4. Maximization of flow to the treatment facility	<p>Evaluate and implement where possible:</p> <ul style="list-style-type: none"> a. Use of off-line or unused POTW capacity for storage of wet-weather flows b. Use of excess primary treatment for treatment of wet-weather flows. If the use of excess primary capacity will result in violations of the NPDES permit limits, the community shall get approval from the permitting authority prior to implementation 	<p>Appendix A: High Flow Management Plan (HFMP). This documents the procedure that follows the logic:</p> <ul style="list-style-type: none"> 1. Maximize flow to the Duck Island treatment facility 2. Maximize use of available storage in the collection system’s interceptors upstream of flow-control gates 3. Prevent sewer surcharging by diverting flow through CSO stations
5. Prohibition of CSO discharges during dry weather	<ul style="list-style-type: none"> a. Document that monitoring and inspections are adequate to detect and correct dry-weather overflows (DWOs) in a timely manner b. Document that inadequate DWOs due to inadequate sewer system capacity have been eliminated c. Document that DWOs due to clogging of pipes and regulators or other maintenance problems have been eliminated to the maximum extent practicable 	<ul style="list-style-type: none"> a. Section 3.3 b. Section 2.5 c. Section 2.5

Control	Documentation Requirements	Reported At/Details
6. Control of solid and floatable material in CSO Discharges	<p>Document that low-cost control measures to reduce solids and floatables discharged from CSOs have been implemented to the maximum extent practicable. Alternatives shall include:</p> <ul style="list-style-type: none"> a. Baffles in regulators or overflow structures b. Trash racks in CSO discharge structures c. Static screens in CSO discharge structures d. Catch basin modifications 	<p>Street sweeping is implemented bi-annually throughout Lowell, which serves to reduce the amount of litter washed into the collection system. Catch basins have hoods to minimize the amount of floatable leaving the basin, and are deep-sumped to minimize the amount of solids leaving the basin. Further opportunities will be explored to further reduce discharge of solids and floatables from CSO outfalls in Lowell.</p> <p>More details at Appendix A</p>
7. Pollution prevention programs that focus on contaminant reduction activities	<ul style="list-style-type: none"> a. Prevention through increased public education and awareness b. Control of disposal (garbage receptacles, collection and education) c. Control of illegal dumping (law enforcement, public education, disposal programs) d. Street cleaning e. Hazardous waste collection days 	<ul style="list-style-type: none"> a. Lowell’s website was revised to include visual graphics depicting how the <i>collection</i> and <i>treatment</i> systems operate, and how they can take actions to reduce impacts on operations and maintenance. The Utility attended multiple public events including Lowell Folk Fest. b. Hazardous waste collection days are held regularly at Duck Island and other programs are actively managed by the City’s Solid Waste and Recycling Office. c. The Utility supports a catch basin labeling program to notify residents not to dispose of wastes in these receptacles. d. Bi-annual street sweeping, which is coordinated with the City’s DPW, saw to the prevention of 1,052 tons of debris from entering the collection system. e. Addressed at (b)
8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts	<ul style="list-style-type: none"> a. Ensure that the public receives adequate notification of CSO impacts on pertinent water use areas, particularly beach and recreational areas affected b. Where applicable, provide users of these types of areas with a reasonable opportunity to inform themselves of the potential health risks c. The minimum control level, found in Section C.2.e. of the permit, is posting of CSO discharge points 	<p>A description of the Utility’s CSO Public Notification and Reporting Plan can be found in Section 3.2 of this document.</p>
9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls	<ul style="list-style-type: none"> a. If possible, initiate monitoring and/or inspection activities above and beyond the minimum control levels specified in this permit b. Examples include CSO monitoring or receiving water monitoring for pollutants of particular concern to better characterize quality of the CSOs and their impacts on all receiving waters 	<p>As part of 314 CMR 16.00 reporting procedures, an affected area was determined for CSO, treatment plant bypass, and SSO discharges from the combined sewer system to potential receiving waterbodies.</p> <p>The affected area due to a CSO release from Lowell’s regulator(s) extends approximately 12.3 miles downstream. The affected areas for treatment plant bypass and SSO discharges were estimated to be 591 feet and 222 feet respectively; however, for the purpose of notification distribution, the CSO area of affect is used.</p> <p>More details are provided in Appendix A, Combined Sewer Overflow Plan</p>

Appendix A: The Utility Online Webpage

The Utility makes electronic copies of all submissions to the regulatory agencies publicly available on the City's website. This includes supporting documentation to this Annual Report. This page is accessible via the following [link](https://www.lowellma.gov/1076/): <https://www.lowellma.gov/1076/>

The reader is encouraged to review the posted documentation, referenced within this report, for a more detailed overview of the Utility's core operational programs related to the operation and maintenance of its collection system.

The following are links to specific reports and submissions referenced directly within the 2023:

Inflow and Infiltration Analysis Report 2023:

<https://lowellma.gov/DocumentCenter/View/25284>

Centralville Sewer Separation Preliminary Design Report:

<https://lowellma.gov/DocumentCenter/View/25108>

Pretreatment Annual Report:

<https://lowellma.gov/DocumentCenter/View/22634>

High Flow Management Plan:

<https://lowellma.gov/DocumentCenter/View/22823>

Inflow and Infiltration Control Plan:

<https://lowellma.gov/DocumentCenter/View/20979>

Combined Sewer Overflow Plan:

<https://lowellma.gov/DocumentCenter/View/21016>

Appendix B: Lowell Wastewater Job Descriptions

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JOB TITLE: MAINTENANCE MANAGER

SECTION: WASTEWATER

REPORTS TO (JOB TITLE): EXECUTIVE DIRECTOR

JOB TITLES SUPERVISED: MAINTENANCE SUPERVISOR

HEAD ELECTRICIAN

INSTRUMENTATION ELECTRICIAN

MECHANIC IIIs

MECHANIC IIs

MECHANIC Is

TV INSPECTION OPERATOR

COLLECTION SYSTEM SUPERVISOR

JOB TITLE: MAINTENANCE MANAGER

JOB PURPOSE:

Efficiently maintain the Wastewater Treatment Facility and Collection System in a cost effective manner and comply with all Federal, State and Local Regulations and Laws Training, scheduling, and monitoring staff; enforcing standards and procedures.

ESSENTIAL JOB RESULTS:

1. OVERSEE MAINTENANCE DEPT
 - Supervising all maintenance personnel
 - Scheduling and assigning employees and following up on work results
2. MAINTAINS THE MAINTENANCE DEPT
 - Initiating, coordinating, and enforcing standards and procedures
3. COMPLY WITH FEDERAL, STATE, AND LOCAL LEGAL REQUIREMENTS
 - Studying existing and new legislation
 - Enforcing adherence to requirements
 - Advising upper management on needed action
4. ENSURES OPERATION OF PLANT AND COLLECTION EQUIPMENT
 - Developing and enforcing preventive maintenance programs
 - Studying manufacturers instructions
 - Establishing repair and installation policies and procedures
 - Troubleshooting malfunctions
 - Coordinating trades people
 - Maintaining equipment and parts inventory
 - Evaluating new equipment and techniques
 - Recommending equipment purchases and replacements
 - Maintains integrity and safety of the Utility's vehicle fleet
5. IDENTIFIES MANAGEMENT AND EMPLOYEE CONCERNS
 - Surveying environmental, operations, and occupational conditions
 - Holding and attending Staff Meetings
 - Surveying and interfacing with employees
6. DETERMINES SERVICE EQUIPMENT, AND PERSONNEL REQUIREMENTS
 - Conducting inspections
7. MAINTAINS CLEAN WORKING ENVIRONMENT
 - Assigning housekeeping, custodial and landscaping duties
8. ACHIEVES FINANCIAL OBJECTIVES
 - Working within and monitoring the maintenance budget
 - Scheduling and analyzing for cost effectiveness

- Writes specifications for contracts to be bid
- Participates in the City's procurement process

9. MAINTAINS MAINTENANCE DEPARTMENT COHESIVENESS

- Setting policy and goals for collection system work, maintenance work, and preventive maintenance
- Enforcing policies and procedures

10. MAINTAINS MAINTENANCE STAFF

- Recruiting, interviewing, selecting orientating and training employees

11. MAINTAINS MAINTENANCE STAFF JOB RESULTS

- Coaching, counseling and disciplining employees
- Participates in the disciplinary process
- Planning, monitoring, and appraising job results

12. MAINTAINS PROFESSIONAL AND TECHNICAL KNOWLEDGE

- Attending educational workshops, seminars, courses or conferences
- Reviewing professional publications and establishing personal networks

13. COORDINATE FACILITY EFFORTS

- Interfacing with Operations and Engineering Divisions
- Exchanging information and scheduling mutual projects
- Managing assigned contractor activities

14. MAINTAINS MAINTENANCE EFFECTIVENESS

- Setting department goals
- Coordinating department functions
- Evaluating department functions for effectiveness

15. COORDINATE WITH OTHER CITY DEPARTMENTS

- Interfacing with other City Departments
- Availing needed resources

16. ORDER AND TRACK SUPPLIES AND SPARE PARTS

- Maintaining records and usages
- Conferring with Maintenance Supervisor, Head Electrician, Instrumentation Electrician and Collection System Supervisor
- Tracking amounts used

17. KEEPS EXECUTIVE DIRECTOR INFORMED

- Reviewing, analyzing and summarizing information
- Identifying trends
- Submitting written reports

18. MAINTAINS SAFE WORKING ENVIRONMENT

- Establishing and enforcing safety rules, regulations, and procedures
- Attending safety seminars
- Acting on reported safety concerns
- Member of the Utility's Safety Group
- Following Safety Group recommendations

19. MAINTAINS HISTORICAL RECORDS

- Filing and compiling logs, reports, records, charts and related documents
- Managing Utility's CMMS Program

20. CONTRIBUTES TO TEAM EFFORT

- Accomplishing related results as needed.

ENVIRONMENT

PHYSICAL DEMANDS

Balancing Crouching Hearing Seeing Sitting Carrying Feeling Kneeling Close
 Standing Climbing Fingering Lifting Far Stooping Crawling Grasping Pulling
 Color Talking Depth Walking

EXPOSURES

Airborne Particles Explosives Muscular strain Temperatures Caustics Fumes
 Noise Toxicants Chemicals High places Odors Vibrations Electrical
 Moving parts Vision strain Weather

SUPERVISORY-MANAGEMENT RESPONSIBILITY

Hire/discipline/terminate Assign and check work Train Plan/appraise job results

Number of employees supervised 1 - 20

CITY OF LOWELL
Job Posting
Please Post: June 11, 2019
Deadline: June 25, 2019
Wastewater Utility
Collection Systems Supervisor

Job Title: Collection Systems Supervisor (2900-05, 2661)
Department: WWTP
Reports To: Maintenance Superintendent
May Report to: Maintenance Supervisor, Head Electrician
Union: MVEA Waste Water Unit II
Salary: \$1,234.70 (min) to \$1,396.78 (max) per week; 40hrs/week
FLSA Status: Non Exempt

SUMMARY

Ensures proper maintenance of entire sewer system in a safe, cost effective and efficient manner complying with all regulations

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

1. SUPERVISE SUBORDINATES, MAINTAINS STAFF JOB RESULTS

By

- Assigning and delegating tasks
- Coordinating work activities
- Inspection and check of subordinates (Mechanics and TV Inspection Operators) work and job performance
- Coaching and counseling subordinates
- Recommends disciplinary action
- Participates in the disciplinary process

2. MAINTAINS SEWER SYSTEM

By

- Coordinating all activities
- Installation of new equipment
- Maintenance inspection and repair of all existing systems

3. MAINTAINS COLLECTION SYSTEM

By

- Training subordinates
- Having a thorough knowledge of the collection system, structures, policies and procedures
- Following policies and procedures
- Carrying out assignments
- Ensuring working order of equipment
- Ensure subordinates perform requirements
- Reporting and recording abnormalities
- Taking corrective action

- Reporting needed changes
- Responsible for TV Inspection Crew
- Responsible for Wastewater related street sweeping program
- Responsible for catch basin cleaning program
- Responsible for root treatment program
- Responsible for sewer line heavy cleaning program
- Responsible for sewer lining program
- Required to carry a cell phone

4. ENSURES PROPER OPERATION OF SEWER SYSTEM

By

- Performing preventative maintenance requirements
- If needed, follow manuals, schematic diagrams, blueprints, and other specifications
- Investigates illegal entry and discharges into the sewer system
- Troubleshooting

5. MAY INSTALL NEW EQUIPMENT/MAKE REPAIRS TO EXISTING EQUIPMENT

By

- Using all equipment available
- Managers and coordinates wastewater contractors

6. REPAIR AND MAINTAIN SEWER SYSTEM AND ALL ASSOCIATED STRUCTURES

By

- Diagnosing problems
- Informing user (s) if necessary
- Informing Maintenance Superintendent and/or Maintenance Supervisor
- Coordinating repairs with outside contractors and/or City Engineer and/or related City departments

7. CONTROLS DOWNTIME OF SEWER SYSTEM

By

- Expediting needed repairs and/or cleaning in a timely manner

8. COORDINATES ROUTINE AND EMERGENCY WORK

By

- Informing outside contractors of needs Directs and operates equipment and personnel where required

9. MAINTAINS SEWER COLLECTION EQUIPMENT, PARTS AND SUPPLY INVENTORIES

By

- Checking stock to determine inventory level
- Anticipating needed equipment, parts, and supplies
- Reporting needs

10. CONSERVES SEWER SYSTEM RESOURCES

By

- Using equipment and supplies as needed to accomplish job results

11. MAINTAINS SEWER COLLECTION EQUIPMENT

By

- Performing minor repairs to all associated equipment

- Report any malfunctioning equipment

12. PROVIDES SEWER SYSTEM INFORMATION

By

- Answering questions and requests
- Enters collection system information into computer data base
- Enters collection system calls into computer data base

13. PREPARES SEWER SYSTEM REPORTS

By

- Collecting, analyzing, and summarizing information and trends
- Submitting written reports

14. MAINTAIN PROFESSIONAL AND TECHNICAL KNOWLEDGE

By

- Attending educational workshops
- Reviewing technical publications
- Establishing personal networks
- Maintain required licenses

15. MAINTAINS CONTINUITY AMONG WORK TEAMS

By

- Documenting and communicating actions, irregularities and continuing needs

16. WORK SAFTLY

By

- Knowing and following facility safety rules and regulations
- Attending in plant and outside safety seminars and courses
- Reporting unsafe conditions
- Consider safety aspects of jobs before assigning or performing
- Issues confined space entry permits for collection system jobs
- Keep subordinates informed and updated of safety procedure changes and updates

17. COORDINATE WITH OTHER CITY DEPARTMENT PERSONNEL

By

- Availing needed resources
- Represents the Utility at applicable Conservation Commission hearings
- Represents the Utility at DPD Projects Meetings
- Represents the Utility on litigation involving the collection system
- Determines and obtains police details as needed
- Obtains necessary permits for collection system work
- Provides City Engineers and Utility Engineers with as built of sewer repairs

18. MAINTAINS CLEAN WORKING ENVIRONMENT

By

- Assigning and performing housekeeping, custodial, and landscaping duties

19. HELPS THE PUBLIC

By

- Being courteous
- Investigate complaints promptly

- Investigates claims of damage caused by the collection system
- Assure prompt action

20. CONTRIBUTES TO TEAM EFFORT

By

- Being courteous
- Investigate complaints promptly
- Investigates claims of damage caused by the collection system
- Assure prompt action

SUPERVISORY RESPONSIBILITIES

Supervise between 1-15 employees. Assign and check work of subordinates. Train subordinates and plan/appraise job results.

EDUCATION and/or EXPERIENCE

Required to have a high school education or GED due to the nature of the equipment and system mechanics working with and within;

The variety of duties will require experience in at least one of several fields involved in plant maintenance;

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

LANGUAGE SKILLS

Ability to read and comprehend simple instructions, short correspondence, and memos. Ability to write simple correspondence. Ability to effectively present information in one-on-one and small group situations to customers, clients, and other employees of the organization.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

REASONING ABILITY

Ability to apply common sense understanding to carry out detailed but uninvolved written or oral instructions. Ability to deal with problems involving a few concrete variables in standardized situations.

CERTIFICATES, LICENSES, REGISTRATIONS

CDL with hoisting engineer's license required.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Must meet physical requirements for Commercial Drivers as set forth under 49 CFR 391.41; samples are listed below:

While performing the duties of this job, the employee is frequently required to stand; walk; sit; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; talk or hear; taste or smell, climb, carry objects, crouch, grasp, lift, and pull. The employee must occasionally

lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to moving mechanical parts, fumes or airborne particles, toxic or caustic chemicals, outside weather conditions, extreme cold, extreme heat, risk of electrical shock, explosives, toxicants, risk of radiation, and vibration. The employee is occasionally exposed to wet and/or humid conditions and high, precarious places. The noise level in the work environment is usually loud.

The City of Lowell is a smoke and drug free employer and requires a physical with drug screen and CORI, post offer.

Qualified individuals may send application/resume with cover letter to the Human Relations Office, Mary Callery, HR Director Room 19 - City Hall, Lowell, MA 01852 by 8:00 PM on the deadline of June 25, 2019. Applicants may also send application/resume with cover letter to fax 978-446-7102 or email to cityjobs@lowellma.gov

EOE/AA/504 Employer

CITY OF LOWELL
Job Description
Please Post: January 13, 2021
Deadline: Open Until Filled
Waste Water Treatment Plant
Television Inspection Operator

Job Title: Television Inspection Operator (2600- 28, 2848)
Department: WWTP
Reports To: Maintenance Superintendent; Head Collection System Operator
May Report To: Maint. Supervisor; Plant Electrician; Instrumentation Electrician
Union: MVEA WWTP, Unit I
FLSA Status: Non Exempt
Salary: \$23.1653 (min) to \$26.5265 (max) per hour (40 hours per week)

SUMMARY

Set up and operation of TV Inspection equipment, including cameras, winches and all related equipment. Perform video inspection of wastewater utility collection system infrastructure.

ESSENTIAL DUTIES AND RESPONSIBILITIES

include the following. Other duties may be assigned.

- Operates the TV camera and video related equipment associated with internal pipeline inspections.
- Participates in precision shop and field work calibrating, troubleshooting, installing, repairing and maintaining internal pipeline inspection equipment.
- Performs preventive maintenance on all related equipment to insure its dependability and readiness.
- Insures the vehicle is fully stocked at all times to insure immediate response.
- Insures all equipment is secured daily, or when left unattended.
- Orders and maintains inventory of necessary supplies.
- Insures vehicle and all related equipment is always presented in a clean and workmanlike condition.
- Locates sources of problems with all equipment by observing all equipment in operation; Observes and listens for problems during equipment operation; Making Necessary repairs.
- Removes defective equipment by dismantling device; Using necessary tools available
- Controls Downtime by performing preventive maintenance: Making repairs, adjustments, or new installation as expeditiously as possible; Performing Mechanic I duties that may include, but not limited to, operating the Vaccon trucks, CSO and pump station inspections, screenings removal and other duties, etc. Performing all other duties assigned.
- Provides television information by Answering questions; Passing on information; Maintaining video library for work performed

- Performs required television equipment maintenance by performing repairs to television equipment; Troubleshooting and making recommendations to accomplish job results; Operate television equipment and vehicle
- Installs new equipment by using hand and power tools and measuring devices
- Performs preventive maintenance by knowing lubrication and adjustment requirements on related equipment; Maintaining a clean work environment
- Maintains professional and technical knowledge by attending educational workshops, seminars, and courses; reviewing professional publication; Maintaining required licenses
- Helps the public by being courteous; Investigating complaints promptly; Assuring prompt action
- Works Safely by knowing facility rules and regulations; Attending in-house and outside safety seminars and courses; Reporting unsafe conditions
- Maintains clean work environment by performing housekeeping and custodial duties
- Contributes to team effort By: Accomplishing related results as needed

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

EDUCATION and/or EXPERIENCE

Required to have a high school education or GED due to the nature of the equipment and system mechanics working with and within;

The variety of duties will require experience in at least one of several fields involved in plant maintenance; At least five years experience required in associated field.

CERTIFICATES, LICENSES, REGISTRATIONS

Commercial Driver's License from Registry of Motor vehicles. Good driving record.

License commensurate with equipment repairing. Hoisting License required.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence.

Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

REASONING ABILITY

Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form. Ability to deal with problems involving several concrete variables in standardized situations.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, or feel or operate objects, tools, or controls and reach with hands and arms. The employee frequently is required to stand and talk or hear. The employee is occasionally required to walk; sit; climb or balance; stoop, kneel, crouch, or crawl; and taste or smell. The employee must frequently lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly exposed to moving mechanical parts. The employee is frequently exposed to vibration. The noise level in the work environment is usually moderately loud office setting.

The City of Lowell is a smoke and drug free employer and requires a physical with drug screen and CORI, post offer.

Qualified individuals should send application/resume with cover letter to the Human Relations Office, Mary Callery, HR Director, Room 19 - City Hall, Lowell, MA 01852 by the Deadline, Open Until Filled. Applicants may also send application/resume with cover letter to fax 978-446-7102 or email to cityjobs@lowellma.gov

EOE/AA/504 Employer

City of Lowell
Job Posting
Please Post: March 24, 2021
Deadline: Open Until Filled
Wastewater Utility
Maintenance Mechanic I

Job Title: Maintenance Mechanic I (2600-23, 2880)
Department: Wastewater Utility
Reports To: Maint. Supt; Plant Engineer; Head Mechanic & Skilled Mechanic
Union: MVEA WWTP Unit I
Salary: \$806.96 (min) to \$977.53 (max) weekly; 40 hours/week
FLSA Status: Non-exempt

SUMMARY

Performs equipment maintenance, installation and repair work on process and domestic equipment and piping systems found in a large complex wastewater treatment plant and outlying structures both in existence and to be added in the future. Must be able to perform work at a lower grade.

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.

Responsible for routine maintenance tasks as well as working under mechanics in repair and installation of domestic and process piping and equipment systems.

Must be capable of a wide variety of physical tasks in carrying out instructions received from the head mechanic and mechanic.

Typical duties may include but are not limited to assisting in removal or breakdown of equipment for maintenance or repair, cleaning and unplugging line process lines, preventative maintenance including greasing and oil requirements of various equipment items.

Repair and maintenance of both on and off plant vehicles are part of the maintenance mechanic's normal duties.

Also included in duties are the maintenance of buildings, tanks and wet well structures in site and outlying structures.

Due to the nature of the installation, these tasks are sometimes difficult and unpleasant.

Driving a dump truck, pick-up truck, van or mack sludge vehicle is also included in this position for on plant site use and between plant and outlying structures.

SUPERVISORY RESPONSIBILITIES

May exercise working supervision over a small group comprised of laborers and at times operations personnel on loan to the maintenance department.

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or

ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

EDUCATION and/or EXPERIENCE

Required to have a high school education or GED due to the nature of the equipment and system mechanics working with and within; Knowledge of plant and equipment maintenance is required as well as experience in wastewater treatment of a similar application. A minimum of five years experience in building and machine maintenance is required. Education and training should indicate ability to function well in machine and building maintenance environment.

LANGUAGE SKILLS

Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals. Ability to write routine reports and correspondence. Ability to speak effectively before groups of customers or employees of organization.

MATHEMATICAL SKILLS

Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

REASONING ABILITY

Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form. Ability to deal with problems involving several concrete variables in standardized situations.

CERTIFICATES, LICENSES, REGISTRATIONS

Current and valid Commercial Driver's and Hoisting license required, must be obtained within 1 year of appointment. Good driving record.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. Must meet physical requirements for Commercial Drivers as set forth under 49 CFR 391.41; samples are listed below: While performing the duties of this job, the employee is frequently required to stand. The employee is occasionally required to walk; sit; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; talk or hear; and taste or smell. The employee must occasionally lift and/or move up to 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to moving mechanical parts. The employee is occasionally exposed to wet and/or humid conditions; high, precarious

places; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; risk of radiation; and vibration. The noise level in the work environment is usually loud.

The City of Lowell is a smoke and drug free employer and requires a physical with drug screen and CORI, post offer.

Qualified individuals should send application/resume with cover letter to the Human Relations Office, Mary Callery, HR Director Room 19 - City Hall, Lowell, MA 01852 by the Deadline: Open Until Filled. Applicants may also send application/resume with cover letter to fax 978-446-7102 or email to cityjobs@lowellma.gov

EOE/AA/504 Employer

POSITION: ENGINEERING MANAGER

REPORTS TO: EXECUTIVE DIRECTOR

SUPERVISION

EXERCISED: Engineering Supervisor
 Staff Engineers
 Pretreatment Coordinator

JOB PURPOSE: Supervises and directs the engineering and pretreatment activities of the utility. Supervises and directs activities of contractors and consulting engineers working for the Utility. Supports, assists, and advises operation, lab, and maintenance departments in operating and maintaining the utility in the best interest of the City. Develops and maintains plans, records, and files of engineering and pretreatment activities.

ESSENTIAL JOB RESULTS

1. OVERSEE ENGINEERING DIVISION:

- Supervising Staff Engineers, Pretreatment Coordinator and Engineering Supervisor
- Scheduling and assigning employees and follow up on work results

2. MAINTAINS ENGINEERING DIVISION:

- Initiating, coordinating, and enforcing standards and procedures

3. COMPLIES WITH FEDERAL, STATE, AND LOCAL LEGAL REQUIREMENTS

- Studying existing and new legislation
- Enforcing adherence to requirements
- Advising management on needed actions
- Maintains communication with regulatory agencies regarding engineering, pretreatment and inter-municipal activities
- Confers with municipal, state, and federal officials and with outside consultants on technical and administrative matters

4. MAINTAINS ENGINEERING STAFF JOB RESULTS:

- Coaching, counseling, and disciplining employees
- Participates in the disciplinary process
- Planning, monitoring and appraising job results

5. ACHIEVES FINANCIAL OBJECTIVES:

- Assists Executive Director on financial grant and loan programs and applications, filing for grants, and adherence to conditions set forth in such grants/loans.
- Scheduling expenditures
- Analyzing variances
- Initiating corrective actions

6. COORDINATE FACILITY EFFORTS:

- Participating in plant wide projects aimed at the improvement of operations, maintenance, and management
- Consulting with operations and maintenance supervisors to provide engineering and technical advice and assistance in the solution of new, complex, or unusual problems of an engineering nature in the design operation and maintenance of the utility and related facilities
- Interfacing with maintenance and operations
- Exchanging information
- Scheduling mutual projects

7. MAINTAINS ENGINEERING EFFECTIVENESS:

- Setting Division goals
- Coordinating department functions
- Evaluating department functions for effectiveness
- Responsible for developing specifications, plans, contracts, and bidding documents for work the Utility desires to let out to contract or purchase.
- Responsible for the proper supervision and inspection of contracted work to insure conformance to specifications.
- Reviews and advises on change orders that occur during the progress of construction.
- Reviews and approves payment requests for contracted work.

8. COORDINATE WITH OTHER CITY DEPARTMENTS:

- Interfacing with other city department heads
- Availing needed resources

9. OVERSEE PRETREATMENT AND INTERMUNICIPAL ACTIVITIES:

- Meeting daily with Pretreatment Coordinator
- Coordinating pretreatment program requirements
- Coordinating intermunicipal requirements
- Oversees the intermunicipal agreements and adherence to the intermunicipal agreements
- Review inspections, sampling, test results, work schedules and reports
- Review results

10. MAINTAIN ENGINEERING COHESIVENESS:

- Setting policy and goals
- Enforcing policies and procedures

11. KEEPS EXECUTIVE DIRECTOR INFORMED:

- Advising Executive Director on all matters pertaining to engineering, pretreatment and intermunicipal functions
- Reviewing, analyzing and summarizing information
- Identifying trends
- Submitting written reports

12. HELPS THE PUBLIC:

- Being courteous, assessable and prompt
- Investigates complaints promptly, assuring prompt action

13. MAINTAINS ENGINEERING STAFF

- Recruiting, interviewing, selecting orienting, and training Employees
- Preparing personnel schedules and enforcing work rules in accordance with established utility policies
- Responsible for staffing, training, resolution of personnel problems, grievances and related issues for the Engineering Division
- Directing and supervising the performance of duties and tasks of personnel assigned to work under his direction

14. MAINTAINS HISTORICAL RECORDS:

- Filling and compiling logs, reports, records, charts, and related documents

15. MAINTAINS PROFESSIONAL AND TECHNICAL KNOWLEDGE:

- Attending educational workshops, seminars, courses or conferences
- Reviewing professional publications
- Establishing personal networks
- Maintaining required licenses

16. IDENTIFIES MANAGEMENT AND EMPLOYEE CONCERNS:

- Surveying environmental, operational and occupational conditions
- Holding and attending staff meetings
- Surveying and interfacing with employees
- Developing, recommending and executing new or improved current or long range plans, policies, procedures, and practices relative to the utility

17. MAINTAINS SAFE WORKING ENVIRONMENT:

- Establishing and enforcing safety rules, regulations, and procedures
- Attending safety seminars
- Acting on reported safety concerns
- Follow safety committee recommendations

18. MAINTAINS CLEAN WORKING ENVIRONMENT:

- Assigns housekeeping, custodial and landscaping duties

19. CONTRIBUTES TO TEAM EFFORT

- Accomplishing related results as needed
- Performing administrative and technical duties as assigned
- Performing other duties as assigned
- Subject to call for emergency work during any given 24-hour period
- Required to carry a beeper

REQUIREMENTS AND QUALIFICATIONS

- A college bachelors degree in sanitary, civil, environmental or mechanical engineering. A Masters Degree is preferred.
- Engineer In Training (EIT) certification preferred

- Possession of a Massachusetts Grade 6 Operator certification
- Thorough knowledge of the principles, practices and procedures of modern professional, environmental engineering, particularly as applied to wastewater treatment
- Thorough knowledge of the principles, methods, procedures, systems, equipment and materials used in designing, construction, operating and maintaining a large, activated sludge wastewater treatment plant and associated facilities
- Thorough knowledge of the occupational hazards and safety precautions involved in the work
- Considerable knowledge of industrial wastes and their effect on wastewater processes and equipment
- Considerable knowledge of standard laboratory methods in the examination of wastewater
- Ability to plan, administer, coordinate and direct the engineering, pretreatment and intermunicipal activities of a large activated sludge wastewater treatment plant
- Ability to plan, assign, supervise and review the work of subordinates
- Ability to establish and maintain effective working relationships with subordinates, government officials, consultants, industrial officials, and the general public
- Ability to express oneself clearly and concisely, orally and in writing
- Must be reliable, thorough, dependable with the ability to work both independently and as head of a team
- Provide positive leadership and management control to the engineering personnel by his/her actions and examples
- Must be able to accept instruction, formulate plans of action, implementation changes, and ensure their compliance
- Must present a neat, courteous and professional appearance and attitude at all times

POSITION: ENGINEERING SUPERVISOR

**REPORTS TO: ENGINEERING MANAGER
EXECUTIVE DIRECTOR**

SUPERVISION

EXERCISED: Staff Engineers
Pretreatment Coordinator

JOB PURPOSE: Supervises and directs the engineering and pretreatment activities of the utility. Supervises and directs activities of contractors and consulting engineers working for the Utility. Supports, assists, and advises operation, lab, and maintenance departments in operating and maintaining the utility in the best interest of the City. Develops and maintains plans, records, and files of engineering and pretreatment activities.

ESSENTIAL JOB RESULTS

1. OVERSEE ENGINEERING DIVISION:

- Supervising Staff Engineers and Pretreatment
- Scheduling and assigning employees and follow up on work results

2. MAINTAINS ENGINEERING DIVISION:

- Initiating, coordinating, and enforcing standards and procedures

3. COMPLIES WITH FEDERAL, STATE, AND LOCAL LEGAL REQUIREMENTS

By

- Studying existing and new legislation
- Enforcing adherence to requirements
- Advising management on needed actions
- Maintains communication with regulatory agencies regarding engineering, pretreatment and inter-municipal activities
- Confers with municipal, state, and federal official and with outside consultants on technical and administrative matters

4. MAINTAINS ENGINEERING STAFF JOB RESULTS:

- Coaching, counseling, and disciplining employees
- Participates in the disciplinary process
- Planning, monitoring and appraising job results

5. ACHIEVES FINANCIAL OBJECTIVES:

- Assists Executive Director on financial grant and loan programs and applications, filing for grants, and adherence to conditions set forth in such grants/loans.
- Scheduling expenditures
- Analyzing variances
- Initiating corrective actions

6. COORDINATE FACILITY EFFORTS:

- Participating in plant wide projects aimed at the improvement of operations, maintenance, and management
 - Consulting with operations and maintenance supervisors to provide engineering and technical advice and assistance in the solution of new, complex, or unusual problems of an engineering nature in the design operation and maintenance of the utility and related facilities
 - Interfacing with maintenance and operations
 - Exchanging information
 - Scheduling mutual projects
7. MAINTAINS ENGINEERING EFFECTIVENESS:
- Setting Division goals
 - Coordinating department functions
 - Evaluating department functions for effectiveness
 - Responsible for developing specifications, plans, contracts, and bidding documents for work the Utility desires to let out to contract or purchase.
 - Responsible for the proper supervision and inspection of contracted work to insure conformance to specifications.
 - Reviews and advises on change orders that occur during the progress of construction.
 - Reviews and approves payment requests for contracted work.
8. COORDINATE WITH OTHER CITY DEPARTMENTS:
- Interfacing with other city department heads
 - Availing needed resources
9. OVERSEE PRETREATMENT AND INTERMUNICIPAL ACTIVITIES:
- Meeting daily with Pretreatment Coordinator
 - Coordinating pretreatment program requirements
 - Coordinating intermunicipal requirements
 - Oversees the intermunicipal agreements and adherence to the intermunicipal agreements
 - Review inspections, sampling, test results, work schedules and reports
 - Review results
10. MAINTAIN ENGINEERING COHESIVENESS:
- Setting policy and goals
 - Enforcing policies and procedures
11. KEEPS EXECUTIVE DIRECTOR INFORMED:
- Advising Executive Director on all matters pertaining to engineering, pretreatment and intermunicipal functions
 - Reviewing, analyzing and summarizing information
 - Identifying trends
 - Submitting written reports
12. HELPS THE PUBLIC:
- Being courteous, assessable and prompt
 - Investigates complaints promptly, assuring prompt action

13. MAINTAINS ENGINEERING STAFF:

- Recruiting, interviewing, selecting orienting, and training Employees
- Preparing personnel schedules and enforcing work rules in accordance with established utility policies
- Responsible for staffing, training, resolution of personnel problems, grievances and related issues for the Engineering Division
- Directing and supervising the performance of duties and tasks of personnel assigned to work under his direction

14. MAINTAINS HISTORICAL RECORDS:

- Filling and compiling logs, reports, records, charts, and related documents

15. MAINTAINS PROFESSIONAL AND TECHNICAL KNOWLEDGE:

- Attending educational workshops, seminars, courses or conferences
- Reviewing professional publications
- Establishing personal networks
- Maintaining required licenses

16. IDENTIFIES MANAGEMENT AND EMPLOYEE CONCERNS:

- Surveying environmental, operational and occupational conditions
- Holding and attending staff meetings
- Surveying and interfacing with employees
- Developing, recommending and executing new or improved current or long range plans, policies, procedures, and practices relative to the utility

17. MAINTAINS SAFE WORKING ENVIRONMENT:

- Establishing and enforcing safety rules, regulations, and procedures
- Attending safety seminars
- Acting on reported safety concerns
- Follow safety committee recommendations

18. MAINTAINS CLEAN WORKING ENVIRONMENT:

- Assigns housekeeping, custodial and landscaping duties

19. CONTRIBUTES TO TEAM EFFORT:

- Accomplishing related results as needed
- Performing administrative and technical duties as assigned
- Performing other duties as assigned
- Subject to call for emergency work during any given 24-hour period
- Required to carry a beeper

REQUIREMENTS AND QUALIFICATIONS

- A college bachelors degree in sanitary, civil, environmental or mechanical engineering. A Masters Degree is preferred.
- Engineer In Training (EIT) certification preferred

- Possession of a Massachusetts Grade 6 Operator certification
- Thorough knowledge of the principles, practices and procedures of modern professional, environmental engineering, particularly as applied to wastewater treatment
- Thorough knowledge of the principles, methods, procedures, systems, equipment and materials used in designing, construction, operating and maintaining a large, activated sludge wastewater treatment plant and associated facilities
- Thorough knowledge of the occupational hazards and safety precautions involved in the work
- Considerable knowledge of industrial wastes and their effect on wastewater processes and equipment
- Considerable knowledge of standard laboratory methods in the examination of wastewater
- Ability to plan, administer, coordinate and direct the engineering, pretreatment and intermunicipal activities of a large activated sludge wastewater treatment plant
- Ability to plan, assign, supervise and review the work of subordinates
- Ability to establish and maintain effective working relationships with subordinates, government officials, consultants, industrial officials, and the general public
- Ability to express oneself clearly and concisely, orally and in writing
- Must be reliable, thorough, dependable with the ability to work both independently and as head of a team
- Provide positive leadership and management control to the engineering personnel by his/her actions and examples
- Must be able to accept instruction, formulate plans of action, implementation changes, and ensure their compliance
- Must present a neat, courteous and professional appearance and attitude at all times

City of Lowell
Job Posting
Please Post: December 15, 2020
Deadline: Open Until Filled
Staff Engineer
Lowell Regional Wastewater Utility
Anticipated Vacancy

Job Title: Staff Engineer (2300-08, INC, 2840)
Department: Lowell Regional Wastewater Utility (LRWWU)
Reports To: Wastewater Engineering Supervisor; Executive Director
Union: MVEA - WWTP Unit IIP
FLSA Status: Non Exempt
Salary: \$1,087.45 (min) to \$1,246.48 (max) per week; 40hrs/week

SUMMARY

A Wastewater Engineer is responsible for management and administration of various tasks and programs within the LRWWU Engineering Division. A Wastewater Engineer provides technical support and project management assistance to the Wastewater Engineering Manager, the Wastewater Engineering Supervisor, and other division staff.

QUALIFICATIONS

The requirements listed below are representative of the knowledge, skill, and ability required of the Engineering Supervisor. To perform this job successfully, an individual must meet the education and experience requirements and be able to perform each essential duty satisfactorily.

EDUCATION AND EXPERIENCE

- A bachelor's degree in civil/environmental engineering, environmental studies, physical sciences, or a comparable area of study is required.
- Certification as an Engineer-In-Training (EIT) is preferred.
- Experience with engineering design, project management is required and program administration, especially in the municipal wastewater treatment industry, is preferred.

ESSENTIAL DUTIES AND RESPONSIBILITIES

Below are some of the essential duties and responsibilities of the position. Depending upon experience, education, skills, and the needs of the LRWWU Engineering Division, the duties described below may or may not be assigned. Other duties not listed below may be assigned by the Engineering Manager as deemed necessary to fulfill the overall objectives of the department.

- Administer tasks in any of the following division programs: Inter-Municipal Program (IMP), Storm-Water Management (SWM), Utility Safety Program, Industrial Pretreatment Program (IPP), Fats, Oil & Grease (FOG) Program, Long Term Control Program (LTCP), Capital Improvements Program (CIP), Geographical Information Systems (GIS), Website Development, and Supervisory Control and Data Acquisition (SCADA) Management. Task include permitting, inspection, correspondence, billing, regulatory compliance, planning and

design, project management, environmental monitoring, program implementation and maintenance, contractor oversight, and database management.

- Participate in design review process and make recommendations for design revisions; support other members of department, including operations and maintenance personnel; supervise contractors and consultants during design, bidding, and construction of projects, as required.
- Craft reports and other documents that describe work activities; create spreadsheets, tables, charts that summarize data and convey information; maintain electronic and paper files, including design reports, meeting minutes, technical memoranda, computer programs, correspondence, databases, and other records.
- Participate in planning and implementation of program objectives; support other Wastewater Engineering staff by providing technical assistance and support; participate in team projects and support efforts of other group members as needed. This includes assistance with pretreatment and intermunicipal responsibilities, as well as engineering projects, if necessary.
- Participate in Wastewater department programs and projects as needed; provide technical assistance to the operations and maintenance divisions; respond to emergency calls outside of normal working hours; keep Executive Director and Engineering Manager informed of Wastewater Engineering functions; interact in a professional manner with city departments, other organizations, public officials, and the general public.
- Refine skills related to mathematical concepts and calculations; enhance knowledge of the principles and practices of wastewater / stormwater treatment and transport; advance proficiency in organizing technical materials and writing letters; improve knowledge of federal and state regulations related to wastewater and stormwater management.
- Obtain and maintain professional licenses and certifications; establish and utilize professional networks; attend educational workshops, conferences, and seminars; reviews technical publications and refine knowledge
- Contribute to the preparation and submittal of reports and correspondence to the United States Environmental Protection Agency and the Massachusetts Department of Environmental Protection; maintain a working knowledge of relevant rules and regulations; coordinate and communicate with other agencies as needed; comply with federal, state, and local legal requirements.
- Collaborate with the Wastewater Engineering Manager, the Wastewater Engineering Supervisor, and other staff members in the LRWWU Engineering division regarding all project work; attend staff meetings as necessary.
- Interact with supervisors in other LRWWU divisions as needed, particularly the Operations Superintendent, Maintenance Superintendent, and Executive Director.
- Foster a safe and productive work environment by engaging in effective work practices and procedures; perform housekeeping and custodial duties as needed.

CERTIFICATES, LICENSES, AND REGISTRATIONS

- Engineer-In-Training certification is preferred.
- Valid motor vehicle license is required; commercial driver's license is preferred.
- Wastewater treatment operator's and wastewater collection system licenses are preferred.
- Hazwoper emergency responder training is desired.

LANGUAGE SKILLS

Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business

correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the public.

MATHEMATICAL SKILLS

Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry, trigonometry, and calculus. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

COMPUTER SKILLS

Ability to utilize computer programs such as *Word*, *Excel*, *PowerPoint*, and *Access*. Ability to create tables, charts, and spreadsheets and facility with email messaging. Familiarity with *AutoCad* and *GIS* a plus.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret information presented in written, oral, schematic, or schedule form.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally required to stand; walk; sit; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; talk or hear; and taste or smell. The employee must occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally exposed to moving mechanical parts; high, precarious places; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and vibration. The noise level in the work environment is usually moderate.

The city of Lowell is a smoke and drug free employer and requires a physical with drug screen and CORI, post offer.

Qualified applicants should send resume/application with cover letter to Mary Callery, HR Director, Human Relations Office, Room 19 City Hall, Lowell, MA 01852 by Deadline: Open Until Filled. Applicants may also send resume and /or application to fax # 978-446-7102 or email to cityjobs@lowellma.gov

EOE/AA/504 Employer

City of Lowell
Job Description
Please Post ~ January 8, 2008
Deadline ~ January 18, 2008
Pretreatment Coordinator
Lowell Regional Wastewater Utility

Job Title: *Pretreatment Coordinator*
Department: Lowell Regional Wastewater Utility (LRWWU)
Reports To: Wastewater Engineering Supervisor; other designated personnel
Salary: *\$822.29 (min) to \$947.86 (max) per week*

SUMMARY

The Pretreatment Coordinator implements the LRWWU Industrial Pretreatment Program (IPP) by managing the daily activities of the program and coordinating the efforts of other staff members assigned to support the program.

ESSENTIAL DUTIES AND RESPONSIBILITIES

Below are the essential responsibilities of the position. Other duties not listed below may be assigned by the Wastewater Engineering Supervisor as deemed necessary to fulfill the overall objectives of the industrial pretreatment program and other LRWWU programs.

- Review industrial sewer user permit applications and craft sewer user permits.
- Conduct sewer user facility inspections and surveillance visits, and write inspection reports.
- Manage sewer user monitoring database, including data input of self monitoring and utility monitoring results.
- Assist with sewer user monitoring program, including the collection of sewer discharge samples.
- Maintain electronic and paper pretreatment program files, including sewer user database, permits, inspection reports, sampling results, and correspondence.
- Correspond with industrial sewer users regarding all aspects of the pretreatment program.
- Prepare and submit pretreatment reports and correspondence to the United States Environmental Protection Agency and the Massachusetts Department of Environmental Protection.
- Create and transmit a variety of sewer user bills and abatements.
- Implement a Fats, Oils & Grease (FOG) Program.
- Develop pretreatment program documents such as IPP enforcement response plan, IPP local limits, FOG control plan, and local sewer use ordinance.
- Coordinate a hazardous spill response program.
- Understand federal and state regulations related to sewer discharges and industrial pretreatment programs.
- Participate in team projects and support the efforts of other group members.
- Inform Wastewater Engineering Supervisor of pretreatment program activities.
- Foster a safe and productive work environment by engaging in effective work practices and procedures.

QUALIFICATIONS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and ability required for the position.

EDUCATION AND EXPERIENCE

- A bachelor's degree in engineering, science, environmental studies, or a comparable degree is preferred.
- Knowledge of the principles and practices of industrial and municipal wastewater treatment is desired.
- Facility with mathematical concepts and calculations related to wastewater treatment is required.
- Proficiency in organizing technical materials, writing letters, and project management is required.

- Ability to read, interpret, and understand regulations and laws related to wastewater treatment is required.
- Familiarity with wastewater sample collection and analysis is required.

LANGUAGE SKILLS

Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the public.

MATHEMATICAL SKILLS

Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

REASONING ABILITY

Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret information presented in written, oral, schematic, or schedule form.

CERTIFICATES, LICENSES, AND REGISTRATIONS

- Valid motor vehicle license is required.
- Wastewater treatment operator's license is preferred.
- Wastewater collection system license is preferred.
- Hazwoper emergency responder training is preferred.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally required to stand; walk; sit; use hands to finger, handle, or feel; reach with hands and arms; climb or balance; stoop, kneel, crouch, or crawl; talk or hear; and taste or smell. The employee must occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is occasionally exposed to moving mechanical parts; high, precarious places; fumes or airborne particles; toxic or caustic chemicals; outside weather conditions; risk of electrical shock; and vibration. The noise level in the work environment is usually moderate.

The city of Lowell is a smoke and drug free employer and requires a physical with drug screen and CORI, post offer.

Qualified applicants send resume/application to the Human Relations Office, Room 19 City Hall, Lowell, MA 01852 by 4:00 pm on: Deadline - January 18, 2008
EOE/AA/504 Employer

S:\WWTP\Asstpret.jbx

Appendix C: Overflow Notification Templates

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Overflow Start Notification Template

This is a public notification that as of {Event Start Date and Time} discharges of {Overflow Type} are currently underway at the Lowell Wastewater Utility and its diversion structures.

Diversions occur only when necessary to reduce risks to public health and safety that would otherwise result from street flooding and property damage. We are constantly working to improve our high-flow management program in order to reduce the volume and frequency of these discharges. Overflow discharges can occur in multiple ways. Blended wastewater overflows are a mixture of treated and partially treated wastewater. Combined Sewer overflow (CSO) diversions are an untreated mixture of stormwater and sewage. The tables below give details on active outfalls.

Blended Wastewater

Outfall #	Name	Latitude	Longitude	Receiving Water	Average Discharge Volume (MG)	Active/Inactive
35	Lowell Wastewater Facility	42.645	-71.2888	Merrimack River	6.23	Active/Inactive

Combined Sewer Overflows

Outfall #	Name	Latitude	Longitude	Receiving Water	Average Discharge Volume (MG)	Active/Inactive
002-SDS#1	Walker Station	42.646	-71.3341	Merrimack River	0.995	Active/Inactive
007-SDS#2	Beaver Brook	42.659	-71.3193	Beaver Brook	0.53	Active/Inactive
008-SDS#3	West Station	42.653	-71.3103	Merrimack River	3.4	Active/Inactive
011-SDS#4	Read Station	42.648	-71.3011	Merrimack River	0.02	Active/Inactive
012-SDS#5	First Street	42.648	-71.2909	Merrimack River	0	Active/Inactive
020-SDS#6	Warren Station	42.643	-71.305	Concord River	1.86	Active/Inactive
027-SDS#7	Tilden Station	42.651	-71.3115	Merrimack River	0.43	Active/Inactive
030(1)-SDS#8	Barasford Station	42.645	-71.2884	Merrimack River	1.025	Active/Inactive
030(2)	Merrimack Station	42.645	-71.2888	Merrimack River	2.43	Active/Inactive

Avoid contact with these water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants. A follow-up email will be distributed when these discharges have ceased.

Lowell Regional Wastewater Utility
451 First St Blvd (Rte-110) | Lowell, MA 01850
T: 978.674.1600 | E: csonotification@lowellma.gov
[Visit Our Website For More Information](#)

Overflow Update/Continuation Notification Template

This is a public notification that as of {Current Time} the {Overflow Type} discharge event that started at {Event Start Date and Time} is still underway at the Lowell Regional Wastewater Utility and its diversion structures.

Diversions occur only when necessary to reduce risks to public health and safety that would otherwise result from street flooding and property damage. We are constantly working to improve our high-flow management program in order to reduce the volume and frequency of these discharges. Overflow discharges can occur in multiple ways. Blended wastewater overflows are a mixture of treated and partially treated wastewater. Combined Sewer overflow (CSO) diversions are an untreated mixture of stormwater and sewage. The tables below give details on active outfalls.

Blended Wastewater

Outfall #	Name	Latitude	Longitude	Receiving Water	Average Discharge Volume (MG)	Active/Inactive
35	Lowell Wastewater Facility	42.645	-71.2888	Merrimack River	6.23	Active/Inactive

Combined Sewer Overflows

Outfall #	Name	Latitude	Longitude	Receiving Water	Average Discharge Volume (MG)	Active/Inactive
002-SDS#1	Walker Station	42.646	-71.3341	Merrimack River	0.995	Active/Inactive
007-SDS#2	Beaver Brook	42.659	-71.3193	Beaver Brook	0.53	Active/Inactive
008-SDS#3	West Station	42.653	-71.3103	Merrimack River	3.4	Active/Inactive
011-SDS#4	Read Station	42.648	-71.3011	Merrimack River	0.02	Active/Inactive
012-SDS#5	First Street	42.648	-71.2909	Merrimack River	0	Active/Inactive
020-SDS#6	Warren Station	42.643	-71.305	Concord River	1.86	Active/Inactive
027-SDS#7	Tilden Station	42.651	-71.3115	Merrimack River	0.43	Active/Inactive
030(1)-SDS#8	Barasford Station	42.645	-71.2884	Merrimack River	1.025	Active/Inactive
030(2)	Merrimack Station	42.645	-71.2888	Merrimack River	2.43	Active/Inactive

Avoid contact with these water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants. A follow-up email will be distributed when these discharges have ceased.

Lowell Regional Wastewater Utility
451 First St Blvd (Rte-110) | Lowell, MA 01850
T: 978.674.1600 | E: csonotification@lowellma.gov
[Visit Our Website For More Information](#)

Overflow Cease/End Notification Template

This is a public notification that as of {Event End Date and Time} the discharges of {Overflow Type} have ceased.

Diversions occur only when necessary to reduce risks to public health and safety that would otherwise result from street flooding and property damage. We are constantly working to improve our high-flow management program in order to reduce the volume and frequency of these discharges. Overflow discharges can occur in multiple ways. Blended wastewater overflows are a mixture of treated and partially treated wastewater. Combined Sewer overflow (CSO) diversions are an untreated mixture of stormwater and sewage. The tables below give details on the outfalls for the Lowell Regional Wastewater Utility.

Blended Wastewater

Outfall #	Name	Latitude	Longitude	Receiving Water	Average Discharge Volume (MG)	Active/Inactive
35	Lowell Wastewater Facility	42.645	-71.2888	Merrimack River	6.23	Inactive

Combined Sewer Overflows

Outfall #	Name	Latitude	Longitude	Receiving Water	Average Discharge Volume (MG)	Active/Inactive
002-SDS#1	Walker Station	42.646	-71.3341	Merrimack River	0.995	Inactive
007-SDS#2	Beaver Brook	42.659	-71.3193	Beaver Brook	0.53	Inactive
008-SDS#3	West Station	42.653	-71.3103	Merrimack River	3.4	Inactive
011-SDS#4	Read Station	42.648	-71.3011	Merrimack River	0.02	Inactive
012-SDS#5	First Street	42.648	-71.2909	Merrimack River	0	Inactive
020-SDS#6	Warren Station	42.643	-71.305	Concord River	1.86	Inactive
027-SDS#7	Tilden Station	42.651	-71.3115	Merrimack River	0.43	Inactive
030(1)-SDS#8	Barasford Station	42.645	-71.2884	Merrimack River	1.025	Inactive
030(2)	Merrimack Station	42.645	-71.2888	Merrimack River	2.43	Inactive

Avoid contact with these water bodies for 48 hours after the discharge or overflow ceases due to increased health risks from bacteria and other pollutants.

Lowell Regional Wastewater Utility
451 First St Blvd (Rte-110) | Lowell, MA 01850
T: 978.674.1600 | E: csonotification@lowellma.gov
[Visit Our Website For More Information](#)

Overflow Text-Message Alerts

Start

This is a public notification that as of {Event Start Date and Time} discharges of {Overflow Type} are currently underway at the Lowell Wastewater Utility and its diversion structures.

Lowell Regional Wastewater Utility
451 First St Blvd (Rte-110) | Lowell, MA 01850
T: 978.674.1600 | E: csonotification@lowellma.gov
WEB: <https://www.lowellma.gov/1287>

Update

This is a public notification that as of {Current Time} the {Overflow Type} discharge event that started at {Event Start Date and Time} is still underway at the Lowell Regional Wastewater Utility and its diversion structures.

Lowell Regional Wastewater Utility
451 First St Blvd (Rte-110) | Lowell, MA 01850
T: 978.674.1600 | E: csonotification@lowellma.gov
WEB: <https://www.lowellma.gov/1287>

End

This is a public notification that as of {Event End Date and Time} the discharges of {Overflow Type} have ceased.

Lowell Regional Wastewater Utility
451 First St Blvd (Rte-110) | Lowell, MA 01850
T: 978.674.1600 | E: csonotification@lowellma.gov
WEB: <https://www.lowellma.gov/1287>



Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program
Sanitary Sewer Overflow (SSO)/Bypass
Notification Form

FOR DEP USE ONLY

 Tax Identification Number

A. Reporting Facility

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility Information

Reporting Sewer Authority _____ Permit # _____

2. Authorized Representative Transmitting Form:

First Name _____ Last Name _____ Telephone No. _____

Title _____ E-mail Address _____

B. Phone Notifications:

See DEP Regional Office telephone and fax numbers at the end of this form.

1. **MassDEP staff** contacted: first name _____ last name _____

Date/Time contacted: Date _____ Time _____ am pm

2. **EPA staff** contacted: first name _____ last name _____

Date/Time EPA contacted: Date _____ Time _____ am pm

3. **Board of Health** contacted: First Name _____ Last Name _____

Date/Time contacted: Date _____ Time _____ am pm

4. **Others notified (select all that apply);** Conservation Commission

Harbormaster Shellfish Warden Division of Marine Fisheries

Downstream Drinking Water Supplier Watershed Association

Beach Resource Manager Other: _____ (specify)

C. SSO Information

1. SSO Discovered: _____ Date _____ Time _____ am pm

By: _____

2. SSO Stopped: _____ Date _____ Time _____ am pm

3. SSO Discharge from: Sanitary Sewer Manhole Pump Station

Backup into Property Other: _____ (specify)

4. SSO Discharge to: Ground Surface (no release to surface water)

Direct to Receiving Water _____ (surface water)

Catch basin to Receiving Water _____ (surface water)

Backup into Property Basement



Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program
Sanitary Sewer Overflow (SSO)/Bypass
Notification Form

FOR DEP USE ONLY

 Tax Identification Number

C. SSO Information (cont.)

Location: _____
 (Description of discharge site or closest address)

5. Estimated SSO Volume at time of this Report: _____

Method of Estimating Volume: _____

6. Cause of SSO Event:

Rain Event Pump Station Failure Insufficient Capacity in System

Treatment Unit failure

Sewer System Blockage: Pipe Collapse Root Intrusion Grease Blockage

Other: _____
 (Specify)

7. Corrective Actions Taken:

Impact Area cleaned and/or disinfected: Yes No

Corrective Actions Completed: Yes No

D. Comments/Attachments/Follow-up

I wish to provide (select all that apply):

Attachment Additional comments below: No additional comments or attachments

Additional comments and planned actions:



Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Watershed Permitting Program
Sanitary Sewer Overflow (SSO)/Bypass
Notification Form

FOR DEP USE ONLY

 Tax Identification Number

E. Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or 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.

 Signature of Authorized Representative

 Date Signed

Please keep a copy of this report for your records. When submitting additional information, include the MassDEP Incident Number from this report.

MassDEP Regional Office and EPA Telephone and Fax Numbers:

Northeast Region	Phone: 978-694-3215	Fax: 978-694-3499
Southeast Region	Phone: 508-946-2750	Fax: 508-947-6557
Central Region	Phone: 508-792-7650	Fax: 508-792-7621
Western Region	Phone: 413-784-1100	Fax: 413-784-1149
EPA Contact	Phone: 617-918-1870	Fax: 617-918-0870
DEP 24-hour emergency	Phone: 888-304-1133	

Appendix D: Signed CSO Records/Station Inspections Certifications

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LOWELL REGIONAL WASTEWATER UTILITY

WASTEWATER COLLECTION AND TREATMENT



Aaron Fox
EXECUTIVE DIRECTOR

SERVING LOWELL
CHELMSFORD
DRACUT
TEWKSBURY
TYNGSBORO

March 31, 2024

U.S. Environmental Protection Agency
EPA New England, Region 1
5 Post Office Square – Suite 100
Boston MA 02109

Massachusetts Department of Environmental Protection
Northeast Regional Office
150 Presidential Way
Woburn, MA 01801

Subject: Annual Certification Statement of CSO Discharges for NPDES Permit No. MA0100633

To Whom It May Concern,

On behalf of the Lowell Regional Wastewater Utility (LRWWU), I hereby certify that all CSO discharges from LRWWU's permitted outfalls have been recorded for the 2023 reporting period. CSO discharge records are kept on file.

These records include dates and times of CSO events, CSO volumes and durations, precipitation amounts, and wet weather flows treated by the Utility.

Respectfully,

Clifton Hall

Staff Engineer

LRWWU



LOWELL REGIONAL WASTEWATER UTILITY

WASTEWATER COLLECTION AND TREATMENT



Aaron Fox
EXECUTIVE DIRECTOR

SERVING LOWELL
CHELMSFORD
DRACUT
TEWKSBURY
TYNGSBORO

March 31, 2024

U.S. Environmental Protection Agency
EPA New England, Region 1
5 Post Office Square – Suite 100
Boston MA 02109

Massachusetts Department of Environmental
Protection
Northeast Regional Office
150 Presidential Way
Woburn, MA 01801

Subject: Annual Certification Statement of CSO Structure Inspections for NPDES Permit No. MA0100633

To Whom It May Concern,

On behalf of the Lowell Regional Wastewater Utility (LRWWU), I hereby certify that all CSO structures have been routinely inspected during the 2023 reporting period. Inspection records are kept on file.

These inspections include the date, the time, the inspectors, the general conditions of the facility, and notes on the operating condition of the facility.

Respectfully,

Robert Rocheleau

Head Collections System Manager