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01/30/2026
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION

City of Rutland
2025 Combined Sewer Overflow Control Project Report

Introduction

The City of Rutland's Wastewater Treatment Facility (WWTF) is a secondary conventional activated sludge treatment plant with phosphorus removal that serves the City's sanitary and combined sewer system. This collection system includes a total of four combined sewer overflow (CSO) outfalls that discharge into the Otter and East Creeks during significant wet weather events. Over the course of 2025 the City of Rutland experienced 20 separate rain events that resulted in a CSO. The total volume discharged during this past year totaled nearly 9.5 million gallons.

This report outlines those events and compares the data to recent years. In addition, it will address the City's compliance with Minimum Controls, the condition of the combined sewer system, and the status of the City's projects that are currently underway, which will contribute to the reduction of CSOs.

Required Content

(i) Compliance with Minimum Controls

(1) Proper operation and regular maintenance programs for collection systems and CSO outfalls:

The Wastewater Treatment and Wastewater Collection divisions operate the City's collection system, which includes all CSO outfalls, pump stations and sewer mains. One hundred percent of the system's catch basins, swirl separators, and sedimentation basins were inspected and cleaned.

Problematic areas that are prone to the collection of grease were inspected and cleaned as needed. Inspection reports outlining the maintenance that occurred are recorded and filed. In addition, routine maintenance of the City's siphons continues to occur as needed.

In recent years, this department has taken a more proactive stance against commercial businesses that discharge fats, oils, and grease into the collection system. When these instances are identified, the City issues a Notice of Violation and works with the property owner to mitigate the reoccurring issue. This approach has proven to be beneficial.

During 2025, the City did not issue a violation notice related to fats, oils, and grease, which is a direct result of the enforcement that took place during prior years.

(2) Maximum use of the collection system for storage without endangering public health or property, or causing solids deposition problems:

The City currently monitors four combined sewer overflow outfalls that incorporate weirs and/or flap gates at the outfall, as well as weirs upstream within the conduit. These outfall structures activate to relieve the combined sewer system during wet weather events. The weirs were designed and reconstructed over the years to improve storage capacity while preventing wastewater from backing up into streets and/or residential and commercial buildings.

During the 2025 construction season, the City hired Wind River Environmental to clean and inspect multiple sanitary and storm sewer mains. This effort will increase storage capacity with the wastewater collection system. In addition, as a result of these inspections, Public Works was able to identify previously unknown failures within the collection system.

More specifically, the Public Works Department completed spot repairs to sewer mains located on streets that are slated for road construction during the 2026 construction season. In addition, these inspections have brought the city's attention to two portions of the collection season that need rehabilitation. During the upcoming months, the city will be exploring funding sources for these projects.

***(3) Review and modification of pretreatment requirements to assure that CSO impacts are minimized*:**

The City monitors the wastewater of industrial/large commercial customers. A High Strength Surcharge is invoiced quarterly to these customers, based upon Total Suspended Solids (TSS) and Ultimate Oxygen Demand (UOD) standards.

There are numerous customers within the City of Rutland and Rutland Town that have pretreatment facilities on site. These customers include the following:

1. General Electric, Windcrest Road (Industrial Metals - Chem. Precipitation)
2. General Electric, Columbian Avenue (Industrial Metals - Chem. Precipitation)
3. Stowe Corporation (Industrial Metals - Chem. Precipitation)
4. Bodycote Surface Technologies (pH Adjustment)
5. Isovolta (Settling Lagoons)

***(4) Maximization of flow to the treatment plant for treatment consistent with an evaluation of alternative treatment options*:**

The City of Rutland has a long-standing history of implementing projects that increase the flow of combined sewage to the wastewater treatment plant in conjunction with combined sewer separation projects. Currently, the wastewater treatment plant has the capacity to treat 29 million gallons per day (MGD). However, the River Street Pump Station, which conveys one hundred percent of the City's sewage to the plant, has a capacity of 22 MGD.

The Long-Term Control Plan identifies projects that will increase the flow of wastewater to the treatment plant, as well as the plant's treatment capacity. As part of the LTCP, the City developed a 5-year Project Implementation Schedule. This schedule has since been revised following the receipt of a substantial amount of CSO ARPA funding.

Specifically, the City is scheduled to construct the following two CSO abatement projects during the 2026 construction season.

<u>Connor Park Storage</u>

This project has been advertised for construction. More specifically, the project was bid under two separate contracts; Contract #1 pertains to the fabrication of the precast concrete tank components and Contract #2 consists of the construction/assembly of the tank. At the time this report was written, a notice of intent to award both contracts was issued.

The bid documents incorporated two bid alternatives with respect to tank size. The city has elected to include bid alternates 1 & 2, which will result in the construction of a 612,00-gallon storage tank.

<u>Meadow Street Sewer Separation</u>

This project will be advertised for bid in the near future. The project consists of installing a new stormwater pipe below Meadow Street, from West Street to Connor Park. The removal of

stormwater from the combined sewer system will reduce the frequency and magnitude of CSOs and improve treatment capacity at the wastewater treatment facility.

CSO Check Valves

In 2023, the City hired Weston & Sampson to design this project. The project consists of installing check valves at the city' CSO 001 & CSO 002. This project will improve flow to the treatment plant, by preventing creek water from entering the combined sewer via the outfall during high water events. When creek water enters the system, it generates a significant bottleneck at critical locations within the network. Eliminating this bottleneck will increase the volume of combined sewage that's treated during rain events.

Up until recently, this project was put on hold, until bid pricing for the construction of the following two CSO projects is acquired. Following the bid opening of the Connor Park CSO Storage Project, the city reengaged Weston & Sampson. They are currently updating project cost estimates and preparing a Step III cost proposal. Following receipt of the revised cost estimates, the city will determine if there is adequate fundings to support this project.

(5) Prohibition of CSOs during dry weather:

There was no dry weather combined sewer overflow events in 2025.

(6) Control of solid and floatable materials in CSOs:

The City limits solid and floatable materials within CSO's through the maintenance of the collection system and streets.

In 2025, every catch basin in both the combined and sanitary systems was cleaned at least once. The City's downtown had its streets swept weekly. The remaining City streets were swept at least 3 times from May to October.

(7) *Establishment of pollution prevention programs to minimize contaminants in CSOs*:

The City maintains a stormwater web page (www.rutlandcity.org/stormwater) that educates residents about the adverse impacts of stormwater pollution and what they can do to mitigate it.

(8) *Public notification*:

In 2025, the City notified the public of CSOs through the Department of Environmental Conservation's "Combined Sewer Overflows and Untreated Discharges" reporting web page.

(9) *Monitoring*

(A)(i) *Precipitation monitoring system*:

The City operates two tipping bucket rain gauges, one at the WWTF and another at the Streets Department located on Spruce Street. The first records data for later download and the second transmits data for near real-time monitoring through a web-based platform. Both devices comply with the specification in the CSO Rule and the 1272 Order.

(A)(ii) *Flow monitoring system*:

The City has installed ultrasonic level sensors with telemetry devices at all CSO overflow structures. With this equipment the City can estimate the duration and magnitude of the overflow. The City has been in contact with the company that supplies the

telemetry equipment. Pending pricing, the City may upgrade the data collection software, which would improve internal reporting procedures.

The City also owns an additional 8 sets of flow metering equipment that are available throughout the course of the season to evaluate portions of the system if/when needed.

Recently, the City has begun to re-evaluate the current monitoring system. During 2025, the city installed new monitoring equipment at one outfall. Following a trial period, the city will determine whether or not to convert to new monitoring equipment at all of our outfalls.

(**ii)** ***The condition and operation of the CSS*****:**

The combined sewer system is in fair to good condition. There are many components that have aged significantly but still operate well. The City is continuously inspecting the condition of the combined sewer system to ensure that it's functioning efficiently and effectively.

The mapping of the system is continuously being evaluated, particularly when preparing for the construction season. Projects typically include the rehabilitation of existing manholes and the installation of new structures that allow personal to better inspect and maintain combined sewer mains. The City has a robotic sewer camera that can inspect many of these mains. Private contractors are hired on an annual basis to inspect the larger truck lines. From these inspections, new construction and rehabilitation projects are developed and executed.

The Engineering Department will continue recommending that the City replace the current camera equipment. This equipment has limitations. Upgrading it will allow the City to better inspect and manage the collection system.

In addition, the Engineering Department has been communicating with software companies that interpret camera inspection videos and rate the condition according to national standards.

Notable projects that took place during the 2025 construction season include the repairs to a sewer main on Granger Street that had collapsed. The surface condition of the roadway did not indicate that a failure had occurred. The issue was identified through camera inspection, which was scheduled in advance of the road work that's taking place in 2026.

(iii) The frequency, duration and magnitude of precipitation events leading to CSOs:

In 2025 the City experienced 20 rain events that resulted in CSOs from one or more of the four outfall locations. Table 1 summarizes the duration, overall magnitude, and maximum rainfall rates associated with these events. This information was derived from rain data that is collected on five-minute intervals.

2025 Rainfall Data					
Event #	**Date**	**Total Rainfall (Inches)**	**Storm Duration Contributing to CSO (H:M)**	**Average Rainfall Rate (in/hr)**	**Max Rainfall (in/hr)**
1	**6-Mar**	0.86	1:44	11.91	0.20
2	**3-Apr**	0.7	2:32	6.63	1.76
3	**2-May**	0.81	0:53	22.01	5.14
4	**9-May**	1.24	3:24	8.75	0.34
5	**10-May**	0.63	2:05	7.26	0.20
6	**17-May**	0.48	0:27	25.60	1.56
7	**31-May**	0.54	13:04	0.99	1.69
8	**27-Jun**	0.6	1:39	8.73	0.40
9	**19-Jun**	0.7	0:49	20.57	3.87
10	**1-Jul**	0.31	0:11	40.58	5.49
11	**20-Jul**	0.47	0:29	23.34	2.31
12	**27-Jul**	0.56	1:20	10.08	2.02
13	**24-Sep**	0.82	1:03	18.74	1.46
14	**25-Sep**	1.74	1:37	25.83	1.75
15	**8-Oct**	1.64	2:57	13.34	3.15
16	**20-Oct**	0.44	1:15	8.45	3.00
17	**20-Oct**	0.98	1:26	16.41	0.44
18	**31-Oct**	1.42	7:14	4.71	1.21
19	**19-Dec**	0.63	3:34	4.24	1.92
20	**29-Dec**	0.81	2:11	8.90	0.34
TOTAL		**16.38**	**49:54:00**		

TABLE 1

(iv) *The frequency, duration and magnitude of all CSOs from the system in the past year and comparison to prior years*:

Table 2 outlines the total CSO duration and magnitude associated with each storm event. Table 3 is a summary of this data for the entire year. Table 4 compares the frequency and magnitude of CSOs from 2025 to the previous 4 years.

2025 CSO Event Summary									
Event #	Date	Start	Stop	CSO Duration (H:M)	CSO Duration (Decimal)	CSO Volume (Gallons)	Total Rainfall (Inches)	Average Rainfall Rate (in/hr)	Max Rainfall (in/hr)
1	6-Mar	6:03 PM	7:47 PM	1:44	1.73	393,814	0.86	0.50	0.20
2	3-Apr	4:09 AM	7:09 AM	1:15	1.25	359,445	0.7	0.56	1.76
3	2-May	6:07 PM	7:14 PM	1:07	1.12	346,260	0.81	0.73	5.14
4	9-May	10:32 AM	1:56 PM	3:24	3.40	582,767	1.24	0.36	0.34
5	10-May	4:47 AM	6:52 AM	2:05	2.08	473,334	0.63	0.30	0.20
6	17-May	5:31 PM	5:58 PM	0:27	0.45	80,253	0.48	1.07	1.56
7	31-May	11:23 PM	12:27 PM	1:04	1.07	542,320	0.54	0.51	1.69
8	27-Jun	11:02 AM	12:41 PM	1:39	1.65	152,574	0.6	0.36	0.40
9	19-Jun	9:36 AM	10:39 AM	1:03	1.05	378,908	0.7	0.67	3.87
10	1-Jul	2:23 PM	2:39 PM	0:16	0.27	25,600	0.31	1.16	5.49
11	20-Jul	3:59 PM	4:49 PM	0:50	0.83	134,807	0.47	0.56	2.31
12	27-Jul	7:22 AM	9:06 AM	1:44	1.73	114,133	0.56	0.32	2.02
13	24-Sep	4:11 AM	5:48 AM	1:37	1.62	183,819	0.82	0.51	1.46
14	25-Sep	6:37 PM	8:31 PM	1:54	1.90	635,578	1.74	0.92	1.75
15	8-Oct	2:54 AM	6:14 AM	3:20	3.33	1,107,464	1.64	0.49	3.15
16	20-Oct	10:41 AM	12:05 PM	1:24	1.40	380,476	0.44	0.31	3.00
17	20-Oct	9:55 PM	11:39 PM	1:44	1.73	243,260	0.98	0.57	0.44
18	31-Oct	5:49 AM	1:40 PM	7:51	7.85	2,516,255	1.42	0.18	1.21
19	19-Dec	12:24 PM	4:12 PM	3:48	3.80	354,934	0.63	0.17	1.92
20	29-Dec	9:05 AM	11:16 AM	2:11	2.18	481,354	0.81	0.37	0.34

TABLE 2

2025 CSO Summary				
Outfall	Average Duration (H:M per event)	Total Duration (H:M)	Average CSO Volume (Gal/event)	Total CSO Volume
CSO #001	1:59	37:52:00	269,145	5,382,895
CSO #002	1:29	28:26:00	66,608	1,332,160
CSO #009	1:29	28:26:00	103,495	2,069,900
CSO #005	1:40	20:00:00	35,120	702,400
TOTAL	-	**114:44:00**	**632,490.33**	**9,487,355**

TABLE 3

CSO Data Over 5-Year Period				
YEAR	**Number of CSO Storms**	**VOLUME (Gallons)**	**Total CSO Duration (H:M)**	**Average Volume Per Storm (Gallons)**
2021	25	8,681,758	69:08:00	347,270
2022	20	9,460,980	77:44:00	473,049
2023	15	3,904,853	62:49:00	260,324
2024	17	5,123,765	85:36:00	301,398
2025	20	9,487,355	114:44:00	632,490

TABLE 4

(v) The overall status of the Long-Term Control Plan (LTCP)

The City's consultant, Weston & Sampson Consulting Engineers, completed the final draft of the CSO LTCP in 2022.

Following the completion of the three previously outlined CSO mitigation projects, the City intends to evaluate their effectiveness and reopen the LTCP and determine how best to proceed moving forward.

The expectation is that we will focus on reducing the number of overflows that occur at CSO 1. This outfall in recent years has been the leading contributor to CSOs.

Recently, the City has been focused on designing a large storage facility upstream of CSO 1, mimicking the design of Connor Park Storage. This project, in conjunction with the replacement of the Otter Creek Interceptor, in theory could generate a large amount of storage capacity.

Recently, the Engineering Department contacted a landowner that owns a vacant lot that adjoins the River Street Pumpstation. They stated that they would be willing to explore the idea of selling this parcel to the city. This land may also provide the city with the necessary real estate to construct a CSO Storage Facility, which in theory would provide a benefit to all the city's outfall locations.

(vi) Key CSO control accomplishments, highlighting those that reduced the frequency and magnitude of CSOs; projects under design; and construction that occurred in the previous year.

A large sewer main located downtown was cleaned of all grit/sediment. This effort resulted in an increase in combined sewage storage capacity within the system.

The Connor Park CSO Storage Project was recently awarded.

The Meadow Street Separation Project will be bid in the near term.

The design plans for a utility replacement project on Center Street and Wales Street is nearing completion. This project includes the replacement of sewer mains on both streets and a storm sewer to be located Center Street. This project will include a new streetscape that will incorporate green stormwater features. Collectively, this will have a positive impact on future CSOs.

One of the City's streetscape projects including the reduction of impervious surface on Cottage Street and within the Justice Square Parking Lot. Excess impervious surface was removed, and new green space was created. Although minor, this project will have a positive impact on future CSOs.