

PROGRESS REPORT

2019-2020 System Improvements



Oneida County Sewer District Overflow Mitigation Project



FROM THE COUNTY EXECUTIVE

Over the course of more than a decade through careful, planned efforts by the Oneida County Sewer District (OCSD) representatives, engineers, and member municipalities, we've greatly changed our aging sewer system for the better.

In 2007, the decision to embark on this multi-million-dollar project was a major one. The task was

huge and unlike any we had encountered before: Rejuvenate our County's wastewater system across more than a dozen municipalities – or face hefty fines.

We're nearing the New York State Department of Environmental Conservation's 2021 consent order deadline and the strategic, collaborative progress we've made to date is tangible. From rehabilitation to the sewer pipes themselves, upgrades at our pumping and treatment facilities, to increased public awareness and understanding, we have seen the positive results of our decision to engage in a major investment and overhaul of our once-ailing system.

Thanks to our collaborative, planned approach, we never have to go back to the kind of neglect seen in our sewer system of the distant past. By embracing best practices and advanced technologies, such as the Oneida County Water Pollution Control Plant's new pair of anaerobic digestors, which processes wastewater sludge and sources separated organic food waste from the Oneida-Herkimer Solid Waste Authority into power – both reducing waste and providing a source of clean energy for plant operations. These upgrades, among the many others successfully completed, have positioned us as a leader in modern wastewater management.

As we look toward our County's future, we should continue to be diligent in securing the strength of our water and wastewater infrastructure to help ensure the health, safety, and vitality of our residents and businesses that call this region home for current and future generations.

Anthony J. Picente Jr.
County Executive
Oneida County



FROM THE COMMISSIONER

Our accomplishments have made the journey worth it. For more than a decade, we've researched, studied, and moved forward a project aimed to drastically overhaul our County's wastewater system.

With the guidance and input of our project steering committee, a group consisting of representatives from each District municipality, we've

made significant accomplishments outlined in this report.

I've said it before – thanks to the significant investments and efforts put into the Oneida County Water Pollution Control Plant, the treatment facility will become one of the largest wastewater facilities in New York State. It's something to be proud of.

Flow meters and rain gauges have been installed at numerous locations to provide us with accurate readings of the impact of wet-weather events in flood-prone areas...

Some of our other achievements include the televising of nearly 200 miles of sewer pipe to explore and confirm their condition and possible need for rehabilitation...

We've also rehabilitated miles of sewer and approximately 1,300 manholes to mitigate inflow, infiltration, and structural defects.

Steven P. Devan, P.E.

Commissioner

Oneida County Department of Water Quality and
Water Pollution Control

Water Pollution Control

In 2007, the New York State Department of Environmental Conservation (NYSDEC) issued a consent order on Oneida County that required the elimination of sanitary sewer overflows into the Mohawk River or face hefty fines. For more than a decade, a Steering Committee consisting of representatives from each municipality within the Sewer District has provided invaluable project oversight and direction. Every town and village in the District has had the opportunity to review the planning, engineering and cost aspects of the project, and ensure that their community's interests are represented in the mitigation plan currently underway.

Steering Committee

Pictured above is construction overview.

MEMBERS

Robert Palmieri Mayor, City of Utica	Gina LaMonte Zoning Officer/ Codes Enforcement Officer Town of Paris
Deb Day Engineer, City of Utica	Anthony Lucenti Town Supervisor, Town of Schuyler
J. Michael Mahoney Dep. City Engineer, City of Utica	Philip Johnson Highway Superintendent Town of Schuyler
Scott Mahardy Town Supervisor Town of Deerfield	Shaun Kaleta Town Supervisor Town of Whitestown
Randy Foley Building Inspector/ Codes Enforcement Town of Deerfield	Sal Granato Superintendent of Highways Town of Whitestown
Sam Arcuri Highway Superintendent Town of Deerfield	William Schmitt Attorney, Town of Whitestown
Glenn Asnoe Town Supervisor Town of Frankfort	Heather Messenger Mayor, Village of Clayville
Mishele Spaman Codes Officer, Town of Frankfort	Mike Steiger Community Representative Village of Clayville
Ronald Testa Highway Superintendent Town of Frankfort	Thomas Furlong Mayor, Village of Holland Patent
Brian Scala Town Supervisor, Town of Marcy	Ben West Wastewater Superintendent Village of Holland Patent
Richard Quigley Public Works Superintendent Town of Marcy	Donald Ryan Mayor, Village of New Hartford
Daniel Berkhoudt Codes Enforcement Officer Town of Marcy	Tom Hughes DPW Superintendent Village of New Hartford
Paul Miscione Town Supervisor Town of New Hartford	Ernie Talerico Mayor, Village of New York Mills
Mitch Ford Community Representative Town of New Hartford	Michael Reid Acting Highway Superintendent Village of New York Mills
Michael LaBuz Community Representative Town of New Hartford	John Constas Codes, Village of New York Mills
James Christian Jr. Town Supervisor, Town of Paris	Brian Moulton Street Superintendent Village of Oriskany
James Canaguier Highway Superintendent Town of Paris	Mick O'Connor Mayor, Village of Oriskany
	Chris Burtch Village Trustee Village of Oriskany

ACHIEVEMENTS

For more than a decade, Steering Committee members, consisting of representatives from each District municipality, have provided valuable system insight, data and project feedback to advance the Oneida County Sanitary Sewer Overflow Mitigation Project. The Steering Committee, made up of every chief elected official from the District plus an additional community representative and two at-large seats, serves an essential role in decisions affecting systems operations, management and costs. In addition, working groups have helped guide two critical community-based initiatives: Capacity, Management, Operation and Maintenance (CMOM) and Private Property Inflow and Infiltration (PPII).



Pictured is the primary settling tank pump gallery.

2019-2020 YTD Progress Highlights

As the county nears the December 31, 2021 consent order deadline, significant progress has been made in support of the consent order compliance requirements, including:

State of Our System

- Great progress has continued in identifying and completing rehabilitation and upgrade work for sewer treatment facilities and other infrastructure [Page 4]
- Progress continues through 2020 [Page 5]

Community Outreach and Education

- Continued public education efforts to increase project and program awareness
- Developed a school education program digital kit, designed to help teachers share important lessons concerning how to ensure the preservation of our environment and household best practices directly with students [Page 7]
- Reviewed results of Public Awareness Survey [Page 6]

Capacity, Management, Operations, and Maintenance

- Continued its successful Fats, Oils, and Grease (FOG) program into 2019, with food service establishment (FSE) inspections ongoing [Page 7]

Private Property Infiltration/Inflow (I/I) Program

- A pilot program property inspection program was conducted in the Town of New Hartford to determine if any of the homes reviewed were contributing to I/I in the sanitary sewer system [Page 7]

Pictured on the front cover is construction overview.



Ways we keep connected

Project updates are always available for interested residents, business owners, or public officials at RippleEffectOCSD.org. This site is regularly kept up-to-date with scheduled project bulletins, quarterly reports, as well as videos.

State of our System

The Oneida County Sewer District (OCSD) sewage collection system is made up of hundreds of miles of pipe, plus facilities, that deliver critical sewage disposal and treatment services throughout 15 municipalities.

Great progress has been made to upgrade our sanitary sewer system. When this project began, we were faced with an aging system, with some sewer pipes well over 100 years old. These pipes were damaged, choked with debris and cracked by tree roots. These issues allowed sewage to leak out and ground water to infiltrate, which can lead to blockages and backups, causing the overwhelmed system to dump excess water into the Mohawk River.

Our project milestones include:

- Approximately **195 miles** of sewer, or **90% of the total sewers** in the Sauquoit Creek Pumping Station basin have been **televised**
- **66 flow meters** and five rain gauges continue to operate within the collection system
- Approximately **155 miles** of sanitary sewer have been **rehabilitated**
- Approximately **1,300** sanitary sewer **manholes** have been **rehabilitated**

Pictured above is the newly-constructed anaerobic digesters.

Water Pollution Control Plant

Construction at the Water Pollution Control Plant (WPCP) has advanced significantly, with all new buildings erected and the newest progress equipment and piping installed. Additional achievements include:

- The plant decommissioned its incinerators in 2019, reducing air emissions. It now exclusively runs a pair of anaerobic digestors to process wastewater sludge and source separated organic food waste from the Oneida-Herkimer Solid Waste Authority. The biogas generated produces up to 600kW of electricity. Combined with newly installed energy efficient electrical equipment, power costs have been reduced by approximately 50% at the WPCP to date. Due in part to the success of the OHSWA food waste program, the WPCP will soon increase the production capacity to 1,000 kW, which will further reduce power costs.
- A new 42-inch diameter force main directly from the Sauquoit Creek Pumping Station (SCPS) to the plant is approximately 75% completed. This, along with rehabilitation of the existing 30-inch force main, will increase the capacity of the SCPS, thereby mitigating the sanitary sewer overflow (SSO).
- Combined sewage flows will be treated in parallel with the separate sanitary flows conveyed from the rest of the Oneida County Sewer District. This will allow combined flows to receive disinfection to comply with EPA regulations while sanitary flows receive secondary treatment to comply with the Clean Water Act. This unique system ensures that the capacity of the secondary treatment system is always maximized to treat non-CSO.

Sauquoit Creek Pumping Station

Final completion of upgrades at the SCPS was behind schedule due to damage and delays caused by multiple ice jams and flooding events. The most critical repairs – caused by the October 31, 2019 flood event – have been completed. Necessary repairs at the SCPS included damages caused by flood debris, heating and electrical equipment replacement, instrumentation replacement and exterior restoration. The pumping station is operational! A new forcemain is under construction (see page 5). Once complete, the capacity of the SCPS will increase significantly, thereby reducing sanitary sewer overflows.

Progress Continues Through 2020



Pictured above is construction overview.

Water Pollution Control Plant Headworks

Construction of the headworks project is nearly complete, including the refurbishment of the combined influent building and the rehabilitation of the administrative building, which has been officially re-occupied. The completion of upgrades at Grit Building No. 3 was impacted by a June 1, 2020 event, while Grit Building No. 2 is online and receiving wastewater flow from the Combined Influent Building.

Primary and Secondary Treatment Upgrades

Construction of new rectangular primary settling tanks is ongoing. The north primary tank is operational. The south tank is under construction.

Construction on the WPCP's secondary treatment process upgrades – including refurbishment of existing blower, aeration, and settling tank equipment – is estimated to begin in January 2021.

Sauquoit Creek Force Main

Installation of a new 42-inch force main is ongoing, and is estimated to be online toward the end of the first quarter 2021. Rehabilitation of the ex. 30-inch forcemain is expected to be completed by the fourth quarter 2021.

Barnes Avenue Pumping Station Upgrades

Upgrades to the Barnes Avenue Pumping Station are anticipated to begin in April 2021. The project is estimated to be completed by December 2021. The project will update antiquated pumps, controls, and other related equipment/building systems.

As we near the 2021 consent order deadline, the responsibility will shift to municipalities to complete their share of the remaining system rehabilitation.

Impact of COVID-19 Flushable Wipes

The improper disposal of “so-called” flushable wipes is a common issue that many wastewater treatment facilities across the country struggle with. In early 2020, the coronavirus pandemic caused the significant increase of the use of flushable wipes due to perceived nationwide shortages of toilet paper.

At the WPCP, the increased use of flushable wipes among Oneida County sewer district residents necessitated nearly daily cleanings of filter screens. A significant public education outreach campaign, aided by public statements and interviews with county leadership, social media content, and television ads, resulted in a return to “normal” cleaning frequency. The public education campaign is ongoing.

Public Education Community Outreach and Education

Eliminating sanitary sewer overflows and ensuring the proper condition of our sewer system isn't solely the job of district municipalities. Homeowners, business owners, and all residents in the District have a role to play.

Media and Public Relations: Informative articles and feature stories appeared in local news media.

Public Education Events: Informational booths were staffed at a number of events throughout the past year, including the most recent at the Oneida County Public Market in May 2020. Materials provided at these events shared insight on how to reroute, reclaim, and recharge excess rainwater thereby preventing it from entering the sewer system, as well as an informational handout that explains how wastewater is treated.

Educational displays: Pull-up banners with instructions on building rain gardens, use of rain barrels, and proper handling of fats, oils and grease have been made available to each member municipality for display in offices and other local community venues.

Mass Communications: Related to COVID-19 impacts and the problems caused by flushable wipes, more than 300 informational TV spots ran on WUTR and WKTV, reaching a total viewership of 65,140 individuals between the ages of 25 and 54 in the Utica-Rome area.

Informational flyers and web content: RippleEffectOCSD.org is a central hub of materials and educational content for those interested in learning more about Operation Ripple Effect™. The site features educational videos, DIY tutorials on how to reroute, reclaim and recharge excess rainwater and the importance of properly disposing of household trash. It also includes project bulletins, quarterly progress updates and annual reports.



Public Awareness Survey Results



The Operation Ripple Effect™ program aims to educate the public on how overflows into the Mohawk River occur during wet weather effects, and the positive changes they can make at home to help mitigate their own impact. These efforts hinge on public awareness of the overall campaign, as well as the specific lessons Operation Ripple Effect is imparting. A new public awareness survey was conducted in the fourth quarter of 2018 to gather comparative data to measure success over time, as well as identify areas that need additional emphasis for public information.

Compared to the 2016 public awareness survey, respondents reported some of the following:*



Overall Awareness

The awareness level of the “wet weather” causes of wastewater being discharged into the Mohawk River has remained strong, with 66% of residents now being familiar or somewhat familiar with the causes.



Rain Barrel & Rain Garden Solutions

Awareness of the use of rain barrels and rain gardens to eliminate sewer system overflows into the Mohawk River has increased 11%. Furthermore, the number of respondents with no familiarity of solutions decreased by 12%.



Fats, Oils & Grease

67% of residents were familiar or somewhat familiar with the fact that cooking fats and oils contribute to sewer blockages and problems, a 4% increase from the 2016 survey.



Flushable Wipes

When discussing the awareness that flushable wipes contribute to sewer blockage problems, 61% of residents were familiar or somewhat familiar of this fact—a 3% increase in awareness.

**Find the full report at RippleEffectOCSD.org*

School Education Program

In 2018 alone, the Mohawk River Champions school education program reached more than 600 students at schools and libraries within New Hartford, New York Mills, Whitesboro, Marcy, and Utica. Additionally, more than 200 students participated in summer programs.

In 2019, Operation Ripple Effect worked directly with educators to help arm them with the tools and supplies they needed to share important lessons directly with students on how to ensure the preservation of our environment.

Teachers at the Oneida-Herkimer-Madison BOCES were provided a digital program kit to help them incorporate these lessons into their curricula by sharing videos, printable materials and worksheets.

Program lessons include teaching students how to prevent sanitary sewer system blockages and overflows, along with what materials can and cannot go down the drain. They also have opportunities to learn how to keep clean stormwater from entering the sanitary sewer system by rerouting, reclaiming, and recharging excess water, which can include disconnecting a downspout, creating rain gardens to absorb excess rainwater, or capturing water with a rain barrel.



Capacity, Management, Operations, and Maintenance FOG Inspection Program

In 2018, the OCSD and Oneida County Department of Health (OCDOH) combined efforts to conduct inspections of foodservice establishments (FSEs) to assess fats, oils and grease (FOG) program compliance within the district. This program is designed to share best practices with foodservice owners, and ensure action as needed, to limit the amount of FOG entering the sewer system. When improperly disposed of, not only can FOG build up and cause blockages and backups, it can also reduce sewer capacity, causing overflows.

FSE inspections began during the third quarter of 2018, and continued in 2019. In doing so, inspectors verify that these establishments are managing their FOG and not releasing fat-laden wash water or cooking oils into the sanitary sewer system. At the end of 2019, more than 200 FSEs had been visited. While initial visits are largely for educational purposes, with inspectors informing owners of the FOG program and best practices, inspectors also look for evidence the FSE is following best management practices and have the proper plumbing fixtures in place.

Inspectors have found varying levels of FOG compliance, but most have been reportedly receptive to learning about the program and willing to allow inspection of existing facilities. In some cases, follow-up visits are made to ensure action on non-compliance.



Private Property Infiltration/Inflow (I/I) Program

Pilot Property Inspection Program

If a resident's sump pump or rain gutters connect to a drain in their cellar, it is more likely that it drains directly into the sanitary sewer system. These illegal sump pumps and rain gutters can overload the sanitary sewer system, causing backups in homes and on to streets while sending untreated sewage into the Mohawk River.

A pilot private property inspection program was conducted in summer 2019 at the Clinton View Road subdivision in the Town of New Hartford, as a typical example of many developments in New Hartford. Inspectors visually inspected the exterior of 35 properties and included a limited number of homeowner interviews. The interviews and inspections documented that no roof leaders were connected to the sanitary sewer, 14 sump pump discharge connections could not be determined, and of the four verified connections to sanitary, three were disconnected and one was unknown if functional.





Pictured above is the newly-constructed anaerobic digesters.



Anthony J. Picente Jr., County Executive

Steven P. Devan, P.E., Commissioner
Department of Water Quality Control and Water Pollution

For more news and reports, visit www.RippleEffectOCSD.org