



**ONEIDA COUNTY DEPARTMENT OF
WATER QUALITY & WATER POLLUTION CONTROL**

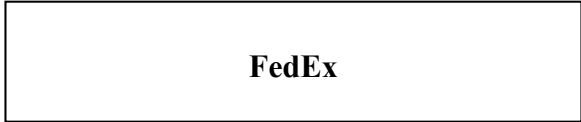
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Anthony J. Picente, Jr.
County Executive

Steven P. Devan, P.E.
Commissioner

October 29, 2020

Gregg Townsend, P.E.
Regional Engineer
NYS Department of Environmental Conservation
317 Washington Street
Watertown, NY 13601



Carol Lamb-Lafay, P.E.
Director – Bureau of Water Permits
Division of Water
NYS Department of Environmental Conservation
625 Broadway, 4th Floor
Albany, NY 12233

Re: Oneida County Sewer District
Quarterly Progress Report – 3rd Quarter 2020

Consent Order No. R6-20060823-67

Dear Mr. Townsend and Ms. Lamb-Lafay:

On behalf of Oneida County, I am providing for your review and comment Oneida County's Quarterly Progress Report for the 3rd Quarter – 2020 as required per Section XIII – Reporting Requirements of the Consent Order. This document summarizes the status and progress of work completed between July 1, 2020 and September 30, 2020 in support of Consent Order compliance requirements.

Please feel free to contact me should you have any questions or need additional information.

Sincerely,

**THE ONEIDA COUNTY DEPARTMENT OF
WATER QUALITY & WATER POLLUTION CONTROL**

A blue ink signature of Steven P. Devan.

Steven P. Devan, P.E.
Commissioner

Enclosure: Quarterly Progress Report – 3rd Quarter 2020

cc: Anthony J. Picente, Jr. – Oneida County Executive
Peter M. Rayhill, Esq. – Oneida County Attorney
Karl E. Schrantz, P.E. – OBG, Part of Ramboll
Howard LeFever, P.E. – GHD Consulting Services Inc.
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Randall Young – NYSDEC
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David Rarick, P.E. – NYSDEC
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**SANITARY SEWER COLLECTION SYSTEM
QUARTERLY PROGRESS REPORT
3RD QUARTER – 2020
ONEIDA COUNTY SEWER DISTRICT**

NYSDEC Consent Order R620060823-67



Prepared for

Oneida County Department of Water Quality
& Water Pollution Control

Steven P. Devan, P.E., Commissioner
51 Leland Avenue
Utica, NY 13502

October 29, 2020



Syracuse, NY



Syracuse, NY



Part of Ramboll

Utica, NY

**Sanitary Sewer Collection System
Quarterly Progress Report
3rd Quarter - 2020
Oneida County Sewer District
NYSDEC Consent Order R620060823-67**

Prepared for:

**Oneida County Department of Water Quality &
Water Pollution Control**

Prepared by:

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October 29, 2020



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1.0 INTRODUCTION

1.1 HISTORICAL BACKGROUND

The Oneida County Sewer District (District) was formed in 1965 through an act by the former Oneida County Board of Supervisors. It is administered by Oneida County through the Oneida County Department of Water Quality and Water Pollution Control (WQ&WPC), which is responsible for the operation of the District's facilities and personnel. District facilities include 45-miles of interceptor sewers, the Sauquoit Creek Pumping Station (SCPS), the Barnes Avenue Pumping Station, and the Water Pollution Control Plant (WPCP). The District services 15 municipalities, nine of which are within the SCPS Basin. These municipalities own and operate their own collection systems.

1.2 PURPOSE

The New York State Department of Environmental Conservation (NYSDEC) and Oneida County (County) entered a Consent Order (No. R620060823-67) due to sanitary sewer overflows (SSO) at the SCPS. In addition to the required mitigation of those SSOs, the Consent Order, with an effective date of December 12, 2011, requires the submission of Quarterly Progress Reports. The intent of this Quarterly Progress Report is to summarize the work that has been undertaken by the County between July 1, 2020 and September 30, 2020 (3rd Quarter of 2020) in support of the Consent Order compliance requirements.

2.0 ENGINEERING INVESTIGATIONS AND EVALUATIONS

During the 3rd Quarter of 2020, the County completed the following tasks related to engineering investigations and evaluations.

2.1 COLLECTION SYSTEM

2.1.1 Manhole Inspections

The manhole inspection program was completed in 2012. There were no additional manhole inspections completed during the 3rd Quarter of 2020.

2.1.2 Sanitary Sewer Televising

There are approximately 216-miles of sanitary sewer within the SCPS basin (30-miles of District interceptor sewer plus 186-miles of municipal sewer). In 2011, the County contracted with a firm (National Water Main Cleaning Co.) to perform closed circuit televising (CCTV) of these sanitary sewers. Televising data was collected electronically in the field using the nationally standardized Pipe Assessment and Certification Program (PACP) and incorporated into the County's data management software.

The 2011 initial televising contract resulted in approximately 79%, or 171-miles, of the 216-miles of sewers being televised. The remaining 21%, or 47-miles of sewers, were not inspected at that time due to: heavy debris in quantities beyond the scope of the contractual cleaning effort; small diameter pipe inhibiting effective CCTV inspections; lack of easement access to manholes and sewers; and buried manholes. These obstacles are primarily maintenance related and are being addressed through the District-wide Capacity, Management, Operations, and Maintenance (CMOM) program currently in various stages of implementation. Efforts are being made to CCTV and inspect additional sewers as a component of current and future sewer rehabilitation contracts.

During the 3rd Quarter 2020, no additional televising was performed. Including the original CCTV contract, and subsequent CMOM and rehabilitation related CCTV, a total of approximately 195-miles of sewer, or 90% of the total sewers in the SCPS basin, have been televised.

2.1.3 Dye Testing

The dye testing program was completed in 2012. There was no additional dye testing performed during 3rd Quarter 2020.

2.2 TREATMENT FACILITIES

Investigations, evaluations, and designs have been completed. Upgrades and new construction associated with the WPCP, SCPS, and New Force Main are in various stages of construction. Table 2.1 summarizes how the work has been segregated, and the status of each of the various planned construction contracts. Note: Contract numbers identified for the work at the WPCP and the SCPS/Force Main (C-1 through C-8), do not correlate to the sanitary sewer rehabilitation contracts (Contracts 2-16).

2.2.1 October 31, 2019 Flood Event

As reported previously, on October 31, 2019, an intense rainfall event caused widespread flooding in the Mohawk Valley. The rain gauge at the WPCP recorded 3.75 inches of rain, with a peak intensity of over 3 inches per hour. An inflatable plug was installed at the new 42-inch opening to the Influent Building. The open excavation outside the Influent Building filled with stormwater, and the plug gave way. The Influent Building was flooded nearly to the first floor level. Major equipment impacted by the flood included the submersible pumps, manually operated slide gates, an overhead crane motor, magnetic flowmeters, HVAC ductwork, lighting, and electrical conduit. The Motor Control Centers and Variable Frequency Drives are installed at the first floor level and were not impacted by the flood. As the pump station had not been started up or commissioned at the time of the flood, the relevant equipment manufacturers visited the site to recommend corrective actions. The on-site engineering team worked with the contractors, equipment suppliers, and the Owner to ensure all

damage was corrected prior to official start-up and commissioning activities. The electrical contractor replaced lighting, conduits, and wiring. The pumps did not require major rehabilitation as they are designed to operate under submerged conditions. A new sluice gate was installed at the 42-inch diameter opening, thereby eliminating the need for the temporary inflatable plug and providing a more permanent means of preventing flooding into the Influent Building. The identified corrective actions and repairs are now complete. All manufacturers have been onsite to inspect the repairs and have provided written certification that equipment is still under warranty. Startup of the four pumps and all three screens is complete. Additionally, the Combined Influent Building bypass is complete and the Combined Influent Building is online.

The flood event was particularly intense within the Sauquoit Creek drainage basin. As a result, there was extensive flooding along Sauquoit Creek including stream bank failures. Sections of the Sauquoit Creek Interceptor Sewer were damaged, which included stream bank failures that resulted in pipe exposures within the creek that caused debris and creek water to enter the sewer. Teams of County personnel walked the interceptor sewer route, documented the damage, and engaged a contractor to begin emergency repairs. Nine interceptor sewer locations were damaged. The three most critical have been repaired (Griffiths Place and Mill Street in the Town of Paris, and Oneida Street in Chadwicks/Town of New Hartford). Additional surface restoration (seeding, mulch, plantings) was done in April 2020. The remaining six locations are in various stages of design and the permitting process with NYSDEC and Army Corps of Engineers is ongoing. Total cost of repairs to the interceptor sewers are expected to cost between \$750,000 and \$1,000,000. The County continues to coordinate with FEMA regarding the disaster recovery assistance program.

The SCPS was also impacted by the flood event. The flooding of the sewer system due to the damages caused by the storm event carried gravel, rocks, debris, etc., through the Interceptor Sewers to the new Screening Building. Debris either become lodged in the screening/wash-press equipment or settled out in the influent channel creating significant labor effort to clean and repair. The Pumping Station flooded upwards of 12 to 14 feet of water on the drywell side. This impacted the pump instrumentation (temperature switches, vibration switches, etc.) that were mounted at the pumps. Heating and electrical equipment in the lower level was also submerged and damaged. In-kind instrumentation parts related to pump instrumentation/controls were replaced in May/June 2020. Exterior restoration (fine grading, seeding, mulching) related to the flood debris clean-up was generally completed during April/May 2020. The County continues to explore options for further flood mitigation of pumping station equipment and the facility itself in coordination with the FEMA disaster recover assistance program. Repairs to the Pumping Station (buildings and site) are estimated to cost between \$700,000 and \$1,000,000.

2.2.2 June 2, 2020 Grit Building No. 3 Submergence Event

On Friday, May 29, 2020, the plant operators initiated the process of cleaning two grit tanks in Grit Building No. 3. To clean the tanks, the sparge water system was utilized. The approximate flow rate of the sparge water is 20 gallons per minute (gpm). Sparge water discharge was directed to the sump pit in the basement of Grit Building No. 3. The design intent was to drain the tanks through three grit pumps in lieu of through the sump pit/sump pump 1204. Plant operators utilized sump pit/sump pump 1204 to drain the grit tanks in lieu of the three grit pumps. The sump pumps were not designed for this intended use. The sparge water continuously ran until Monday, June 1 where the flow rate of sparge water unknowingly exceeded the sump pump performance capabilities (<20gpm). The water level continued to rise in the basement level until it reached the motor control center and shorted out electrical power to several pieces of equipment including the sump pump. Flood water crested at an elevation of 4'-7" above the finished basement floor elevation, resulting in damage to the motor control center, network cabinet, control panels, grit pump motors, etc. Damaged equipment must now be replaced to maintain the functionality of the plant. The County and its engineering team are working with the contractors to replace damaged equipment, and an insurance claim is in progress.

Table 2.1

**Oneida County Sewer District
Summary of Contracts 3Q 2020**

Water Pollution Control Plant and Sauquoit Creek Pumping Station/Force Main

Contract No.	Title of Contract	Components of System Addressed	Status of Design	Status of NYSDEC Review	Status of Other Agency Reviews	Estimated Advertisement	Estimated ⁽¹⁾ Construction Start	Construction Progress	Estimated Construction Complete
1	Incinerator No. 2 Demolition	Demolition of Incinerator No. 2	Final	Approved	n/a	Bidding occurred during 1Q 2016; however, due to the outcome of bids, the demolition was added to Contract 2 by addendum on May 25, 2016.			
2	WPCP Solids Handling Upgrades	2 new egg-shaped digesters, 1 secondary digester w/gas holding cover, new waste activated sludge pumps, refurbish 4 gravity thickeners, new stand-by lime stabilization system, 2 new belt filter presses.	Final	Approved	n/a	Advertised April 4, 2016	Notice to Proceed September 27, 2016	Construction is substantially complete and all equipment is on-line.	April 2019
3A	Electrical Equipment Pre-Purchase (Digester 15kV)	Pre-purchase of major electrical components such as switch gears, transformers, and supporting power distribution equipment.	Final	n/a	n/a	April 2017	Equipment delivery October 2017	Equipment has been installed and tested. Training has been provided to the Owner.	N/A
4	Sauquoit Creek Force Main Upgrades	New 48-inch force main and rehabilitation of the existing force main, new flow metering and flow control vaults.	Final	Approved	Approved	Advertised December 15, 2017	July 2018	Approximately installed pipe: FRPM - 19,000 ft of 42inch, 4,200 ft of 36-inch, and 900 ft of 30 inch; Ductile Iron - 550 ft 48-inch, 600 ft 36 inch. Micro tunneling - Marcellus Construction/SECA Underground encountered substantial difficulties in advancing the work. After 5 months of effort, only 660 feet of pipe was installed by micro tunnel. Equipment breakdowns and site conditions required a change in approach from micro tunnel to open cut. Design Engineer (Brown and Caldwell) developed a new design for open cut construction. Coordination with NYSDOT and CSX is ongoing for the open cut thru the service road under the NYS Route 8/12 overpass. Open cut work westerly of the micro tunnel shaft has begun. Change Order memorializing the change in scope was prepared. Handrails and stairs installed at CARV vaults.	June 2022
5	Sauquoit Creek Pumping Station Upgrades	Replacement of existing pump station mechanical screen contained in a new screen building, 2 screenings washer/compactors and conveyor; replacement of existing standby generator capable of operating the station to pump peak flow during a power outage; electrical/HVAC upgrades; flow distribution structure at the WPCP.	Final	Approved	n/a	November 2016	July 2017	<u>Note - Site and buildings impacted by 7/1/2017, 1/24/2019, and 10/31/2019 ice jam/flooding events.</u> <u>New Screenings Building:</u> Facility is generally operational (building access/security pending); new emergency generator fully operational; SCADA/communication with WPCP fully functional; continued de-bugging of the Huber WAP system; Contractors working on punch list items. <u>Existing Pumping Station Building:</u> Electrical, HVAC, and plumbing renovations complete minus punch list items. interior pipe, wall, and floor painting completed; Pump 2 rotating assembly replaced; Functional testing completed on the new pump control system.	June 2020 (final completion is behind schedule due to damage/delays from flooding events and construction related items)

Table 2.1

Oneida County Sewer District
Summary of Contracts 3Q 2020

Water Pollution Control Plant and Sauquoit Creek Pumping Station/Force Main

Contract No.	Title of Contract	Components of System Addressed	Status of Design	Status of NYSDEC Review	Status of Other Agency Reviews	Estimated Advertisement	Estimated ⁽¹⁾ Construction Start	Construction Progress	Estimated Construction Complete
5.1	Barnes Avenue Pumping Station Upgrades	Relocation of pumping station to south side of CSX Railroad right-of-way; new, smaller, sustainable pumping station sized to accommodate actual flow rates.	0%	n/a	n/a	January 2021 (Estimated - pending add'l Program funding)	April 2021	Draft "Long Term Right of Entry" permit application has been prepared for site access via service road under NYS Route 8/12 bridge. Design is underway for pump station refurbishment. Design team is coordinating a new natural gas service to the pump station.	December 2021
6	WPCP Headworks Upgrades	New screening facility and pump station dedicated to sanitary flows from North Utica & Starch Factory Creek Interceptors; repurpose existing raw waste building for combined flow from City of Utica; new grit removal facilities; remodeling of the administrative building including new laboratory, control room, offices, training room, etc.	Final	Approved	Approved	March 2017	September 2017	<p><u>Influent Building:</u> 4 new influent pumps and 3 mechanically cleaned bar screens are installed and in operation.</p> <p><u>Combined Influent Building:</u> Refurbishment of building and equipment (4 pumps, 3 screens) is substantially complete. The wet well has been refurbished.</p> <p><u>Grit Removal:</u> Grit buildings No. 2 and 3 are substantially complete. Grit Building No. 3 was impacted by a flooding event on June 1, 2020; an insurance claim to replace damaged equipment is in progress. Grit Building No. 2 is currently receiving wastewater flow from the Combined Influent Building. Grit classification equipment in Grit Building No. 1 is in operation.</p> <p><u>Administration Building:</u> Significant rehabilitation of the building is complete, and the building has been officially re-occupied.</p> <p><u>Electrical:</u> New receiving structure/tower for 46kV equipment is installed and energized by the utility. New pre-fabricated Switchgear Building and Generator Buildings are installed and functional testing has been completed. Grounding grid complete. New generator fuel system and controls are installed.</p> <p>All 4 prime contractors (General, HVAC, Electrical, and Plumbing) are working on addressing punch list items.</p>	September 2020

Table 2.1

**Oneida County Sewer District
Summary of Contracts 3Q 2020**

Water Pollution Control Plant and Sauquoit Creek Pumping Station/Force Main

Contract No.	Title of Contract	Components of System Addressed	Status of Design	Status of NYSDEC Review	Status of Other Agency Reviews	Estimated Advertisement	Estimated ⁽¹⁾ Construction Start	Construction Progress	Estimated Construction Complete
7	WPCP Primary Treatment Upgrade/Disinfection	New rectangular primary settling tanks to replace existing circular tanks; new high rate disinfection system for wet weather combined sewer flows; new HRD outfall.	Final	Submitted December 9, 2016	n/a	Advertised November 28, 2017	May 2018	<p><u>HRD</u>: Excavation, pile driving, and concrete tank and backfill complete for HRD tank. Slide gate, flushing gates, and baffle wall installation complete. Majority of electrical conduit work and lighting complete.</p> <p><u>Primary Settling Tanks No. 1 and 2</u>: PSTs No. 1 and 2 are substantially complete and operational and all 4 prime contractors are addressing punch list items.</p> <p><u>Primary Settling Tanks No. 3 and 4</u>: Demolition of existing tanks complete. Excavation and pile driving for new tanks complete. Concrete work for new tanks ongoing.</p> <p><u>Disinfection Building</u>: Fire alarm replaced. Building roof replaced. Electrical conduit work ongoing. Yard piping from building to HRD tank complete. Construction of control room addition in progress with building slab, walls and brick facade complete and mechanical and electrical equipment installation ongoing.</p> <p><u>Administration and Operations Building</u>: Demolition of existing primary sludge degritting units complete. Installation of new primary sludge and primary scum piping, grit classifiers, and scum concentrator complete. Scum concentrator startup ongoing.</p> <p><u>Aeration Tank Distribution Structure</u>: Relocation of yard piping complete. Concrete and instrumentation work complete. Punch list items being addressed on instrumentation.</p> <p><u>HRD Outfall Structure and Outfalls</u>: Concrete work complete. HRD outfall work ongoing with installation of new HRD outfall piping in Mohawk River ongoing.</p>	December 2021
8	WPCP Secondary Treatment Process Upgrades	Replacement of existing blowers with more efficient units; refurbishment of the existing Blower Building including upgrades to electrical, HVAC, plumbing and structural systems; refurbishment of existing Aeration Tanks including replacement of existing diffusers and structural upgrades, refurbishment of existing Final Settling Tanks including replacement of existing clarifier mechanisms and structural upgrades; new Asset Management Building; upgrades to site wide civil infrastructure including stormwater, fencing and gates; revisions to site electrical system including demolition of existing substation.	Final (Pending Additional Scope)	Submitted February 2019	n/a	Estimated late 2020 (Pending additional program funding)	Estimated January 2021	n/a	March 2023

(1) - Estimated construction start = Notice to Proceed

3.0 MANAGEMENT PROGRAMS

3.1 COMPUTERIZED MANAGEMENT AND MAINTENANCE SYSTEM

The County purchased a Computerized Management and Maintenance System (CMMS) software system (Lucity) in 2009. This software is used to manage the sewer system data (mapping, inspections, etc.) obtained to date by the County. At the same time that the software was acquired, the County invested in computer hardware upgrades to support the CMMS. The County's Geographic Information System (GIS) Coordinator manages the system.

The County continues to utilize the CMMS for tracking and documenting sewer rehabilitation work, and uploading and managing new PACP data provided by the County's CCTV and sewer rehabilitation contractors on a regular basis.

The Consultant Team utilizes the CMMS in support of the sanitary sewer rehabilitation design efforts to identify defects and develop rehabilitation methodologies.

3.1.1 Asset Management

The County continues to maximize the use of its current CMMS software. At the same time, the County, with the assistance of the Consultant Team, continues to assess ways to optimize the CMMS with the long-term expanded asset management needs for the wastewater system. In accordance with Schedule C, Section B.4 of the Consent Order, the Consultant Team developed a proposed asset management program for the Department of Water Quality and Water Pollution Control. Under a previous authorization, the Engineering Team assisted the County with the process of receiving proposals for a new CMMS. Several candidate vendors provided demonstrations of their systems. Based on the proposals and demonstrations received, the "Sprocket" CMMS system by Dematic is the preferred software application for the WPCP. Barton and Loguidice, D.P.C was subcontracted by GHD (Consultant Team) and has started to customize the software for County use.

During the 3rd Quarter of 2020, the engineering team has been in discussions with County IT personnel regarding the location and details for the server to host the CMMS system. The Asset Register for equipment being installed in Contracts C-2, C-5, C-6, and C-7 is being compiled. The Asset Register includes preventative maintenance tasks and frequency, and will eventually be used to automatically generate work orders once the CMMS system is online.

Additionally in the 3rd Quarter of 2020, the engineering team finalized the design for a new "Asset Management Building" that will be installed south of the existing Maintenance Garage at the WPCP. This building is included in the Contract C-8 Bid Package that will be advertised in the 4th Quarter of 2020. The Asset Management Building features a racked storage system for spare parts, an inventory control system, and an office for parts clerk. A portion of the new building has been designed to house the County's new vector truck used for interceptor maintenance.

3.2 FLOW MONITORING PROGRAM AND HYDRAULIC MODEL

The County worked closely with the Dormitory Authority of the State of New York (DASNY) to secure the \$950,000 Economic Development Assistance Program (EDAP) funding allocation to support the extensive flow monitoring program proposed by the County and approved by NYSDEC on August 24, 2012.

The EDAP funds were ultimately made available by DASNY to the County in March 2014. Procurement of the flow monitoring equipment was advertised on June 9, 2014 and a contract was awarded on September 10, 2014 to ADS Environmental Services, LLC (ADS). ADS completed installation of 63 flow meters and five rain gauges in 2015. Two of the meters were installed to monitor flow to the County's Barnes Ave Pumping Station, and three are used to monitor flow in the City of Utica's combined sewers to aid in hydraulic model calibration and confirmation. There are 44 meters located in the Sauquoit Creek Pump Station (SCPS) drainage basin, and 14 meters located outside the SCPS basin. The flow meters and rain gauges have been consistently collecting flow data since their installation. Three new flowmeters were installed within the collection system tributary to the

Starch Factory Interceptor (outside of the SCPS Basin) in December 2019. The purpose of these meters was to isolate portions of the Starch Factory Interceptor basin so that areas of excess infiltration and inflow (I/I) could be identified. Usable data from these meters are currently limited because of the time of installation. The intent is to collect additional data to evaluate potential extraneous I/I in the Starch Factory Interceptor basin and further evaluation will occur after the spring wet season.

Flow metering data were made available to the County and its Consultant Team by ADS to evaluate the impact sanitary sewer rehabilitation, including manhole rehabilitation completed to date, may have on the amount of I/I entering the sanitary sewer system. Raw flow monitoring data, consisting of 5-minute measurements of depth and velocity, are reviewed by ADS technicians who are able to assess the reliability of the data, and “scrub” out data that is deemed not accurate based on inconsistencies in the expected predictable relationship between depth, velocity, and rate of flow.

After the data has been verified and scrubbed, ADS technicians input the cleaned-up data into Slicer, which is ADS’ proprietary flow analyzing software. Slicer enables the flow monitoring technician to automate identification of dry and wet weather days, define “typical” rain events for both summer and winter seasons, and analyze the rain event’s effect on the flow in the sanitary sewer. This forms the basis of evaluating the quantity of Rain Derived I/I, or RDII in large datasets.

The 2018 1st Quarter progress report presented the evaluation and findings of the hydraulic model calibrations, which were used to compare and evaluate the effectiveness of the I/I removal projects upstream of the SCPS. The 2019 1st Quarter progress report presented an update of the flow monitoring data and RDII analysis for summer 2018 and winter 2019 events. The 2020 1st Quarter progress report presented an update of the flow monitoring data and RDII analysis for summer 2019 and winter 2020 events, as well as comparison to historical flow monitoring data. Flow monitoring data and information from the County’s GIS system on the sewer rehabilitation work completed also were analyzed for each of the flow meters in the SCPS basin.

The analysis completed for 2020 1st Quarter observed a notable decrease in flows at the OKY-1B meter in the Village of Oriskany for 2019, especially considering that 2019 had a higher rainfall volume compared to 2018. While it is not known what occurred in this basin to cause this change, there was some bridge work performed upstream of this flow meter that may have impacted storm water discharges in this area, but the nature of the work is unknown. Review of recent flow monitoring data for the OKY-1B basin indicates this decreased flow trend has continued through the 3rd Quarter of 2020.

Overall, the results of the evaluations presented in the 1st Quarter 2020 Quarterly Report indicated that although a significant amount of sewer investigation and subsequent rehabilitation work has been completed, there still appears to be I/I entering the sewer system in certain areas of the system. These results in part may be attributed to high precipitation in 2019 that included a flood event in October 2019. Additional monitoring and investigation is ongoing.

3.3 PRIVATE PROPERTY INFLOW AND INFILTRATION REDUCTION PROGRAM

The document titled “Preliminary Planning Document – Private Property Inflow and Infiltration Reduction Program” was submitted to the NYSDEC on June 29, 2012 as required by Schedule A - Section B.2 of the Consent Order. The County, working through the Steering Committee, created a working group of appropriate private property inflow and infiltration (PPII)-oriented community representatives to map out a phased implementation plan.

An engineering Work Order for continuation of the PPII program was approved by the County in the 1st Quarter of 2020. Planning among the Consultant Team regarding the 2020 program elements includes identifying potential modifications to the County’s Sewer Use Rules and Regulations and drafting policy documents relative to private property I/I. These efforts, specifically related to direct coordination/meetings with the Steering Committee, are currently on hold due to the COVID-19 crisis.

3.4 CAPACITY, MANAGEMENT, OPERATIONS AND MAINTENANCE PROGRAM

The document titled “Preliminary Planning Document – Proposed CMOM Framework – Sauquoit Creek Pumping Station Basin Communities” was submitted to the NYSDEC on June 29, 2012 as required by Schedule A – Section B.3 of the Consent Order. The County, working through the Steering Committee, created a working group of appropriate CMOM-oriented community representatives to map out a phased implementation plan.

Fats, Oils, and Grease (FOG) Program: The OCSD and Oneida County Department of Health (OCDOH) are collaborating on the implementation of the Fats, Oils, and Grease (FOG) program. In the 3rd Quarter 2020, no inspections of Food Service Establishments (FSEs) were performed as the lead person at the OCDOH working on the FOG program left the County in January 2020 and a replacement has not been hired (more details provided in Section 9.1). To date, a total of 225 FSEs have been visited. The OCDOH anticipates conducting limited FOG inspections of new and existing facilities in the 4th Quarter of 2020. Initial visits are primarily for educational purposes, informing owners of the FOG program and best management practices (BMP). Inspectors also verify that proper plumbing fixtures are in place, and that FSEs follow the local and County sewer use ordinance in not releasing fat-laden wash water or cooking oils to the sanitary sewer system. Inspectors look for evidence that FSEs are utilizing BMPs, tracking grease trap maintenance, and keeping grease hauling records. 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. Facility characteristics, inspection details, and compliance status on each FSE is collected and tracked. In the future, the data will be entered in the County CMMS (Lucity), so that it can be linked with the growing collection system database.

4.0 SCHEDULE/MILESTONE DATES

4.1 APPROVED SCHEDULE

The following table represents the approved schedule as defined by the Consent Order (note that there were no changes to this schedule during the 3rd Quarter of 2020):

Description	Consent Order, Schedule "A" Date	Status
<u>Engineering Investigations and Evaluations</u>		
Dye Testing and Storm Sewer Report	June 30, 2012	Complete, Submitted June 29, 2012
Manhole Evaluation Report – Phase II	June 30, 2012	Complete, Submitted June 29, 2012
SCPS Evaluation Report	August 31, 2012	Complete, Approved November 28, 2012
WPCP Evaluation Report	August 31, 2012	Complete, Approved November 28, 2012
Treatment System Supplement (Report)	60 days after approval of WPCP Evaluation Report	Complete, Submitted January 25, 2013
Sewer CCTV Inspection Report – Phase II	April 30, 2013	Complete, Submitted April 25, 2013
Sewer CCTV Inspection Report – Phase III	April 30, 2014	Complete, Submitted April 29, 2014
Collection System Supplement (Report)	May 31, 2014 (extension granted to July 1, 2014)	Complete, Submitted June 30, 2014 Approved December 18, 2014
<u>Management Programs</u>		
Flow Monitoring Program	March 31, 2012	Complete, Approved August 24, 2012
Private Property I/I Reduction Program	June 30, 2012	Complete, Submitted June 29, 2012
CMOM Program	June 30, 2012	Complete, Submitted June 29, 2012
PPII Reduction Program Implementation	May 31, 2013	Began implementation in 4 th Quarter 2012
CMOM Implementation	May 31, 2013	Began implementation in 4 th Quarter 2012
Asset Management Plan	December 31, 2021	In development
<u>Remedial Measures</u>		
Semi-Permanent Alternative-Construction	December 31, 2016	Modified Consent Order effective 6/28/18 removed the requirement for construction of the semi- permanent alternative.
SSO Mitigation-Consent Order Compliance	December 31, 2021	In progress
<u>Reporting</u>		
Annual Work Plan	January 31, Annually	Submitted annually
Quarterly Progress Report	Quarterly	Submitted quarterly

Note: I/I – Inflow and Infiltration

4.2 MILESTONES

During the 3rd Quarter of 2020, the following milestone dates were met:

- Continuing to make progress toward compliance milestones.

4.3 MODIFIED ORDER – JUNE 28, 2018

Description	Consent Order, Schedule "A" Date	Status
Remedial Measures		
Contract 10 – Sanitary Sewer Mainline Rehabilitation Phase V – Whitesboro (V), Whitestown (T) – Completion	August 31, 2018	Certificate of Compliance submitted to NYSDEC August 30, 2018.
Contract 12 – Sanitary Sewer Mainline Rehabilitation Phase VII – Yorkville (V) – Completion	July 31, 2019	Certificate of Compliance submitted to NYSDEC June 28, 2019.
Contract 13 – Sanitary Sewer Mainline Rehabilitation Phase VIII – New Hartford (T) – Completion	August 31, 2018	Certificate of Compliance submitted to NYSDEC August 30, 2018.
Contract 14 – Sanitary Sewer Mainline Rehabilitation Phase IX – New Hartford (T) – Completion	December 31, 2018	Certificate of Compliance submitted to NYSDEC December 21, 2018.
Contract 16 – Sanitary Sewer Mainline Rehabilitation Phase X –Whitestown (T) – Completion	July 31, 2019	Certificate of Compliance submitted to NYSDEC June 28, 2019.

5.0 SEWER REHABILITATION

Active sewer rehabilitation work financed under CWSRF Project No. C6-6070-08-00, C6-6070-08-10, and C6-6071-02-00 are being administratively closed out. All projects have been tracked by contract number. The rehabilitation contracts were undertaken to reduce the amount of inflow and infiltration entering the system due to defects in interceptor sewers, mainline sewers, lateral connections, and manhole structures. Work under these sewer rehabilitation contracts typically included: a mix of cured-in-place-pipe (CIPP) lining; pipe joint and lateral grouting; open cut repairs; spot repairs; manhole repairs/replacement; and supplemental CCTV inspections. Information related to these sewer rehabilitation contracts is presented in Table 5.1. Required work per the Consent Order is essentially complete, and any remaining open contracts are going through the administrative closeout process. The Engineering Team continues to review available data and looks for additional sewer rehabilitation opportunities. A new contract, Contract 17 is being developed to address sewer rehabilitation in certain target areas. Analysis and planning will commence in Q4 2020 with construction anticipated to begin in Q3 2021.

Table 5.1

**Oneida County Sewer District
Summary of Contracts 3Q 2020**

Sewer Rehabilitation Contracts

Contract No.*	Title of Contract	Project Location/Description	CWSRF Project No.	Status of Design	Status of DEC/EFC/COUNTY Review	Miles of Rehabilitation ⁽²⁾	Estimated I/I Reduction (gal/day)	Current Contract Amount ⁽¹⁾	Contractor	Contract Status
2	Sanitary Sewer Manhole Rehabilitation - Phase 2	<u>District-wide</u> : Rehabilitation of approximately 1,278 sanitary sewer manholes.	C6-6070-08-00	Final	Approved	47	5,411,910	\$ 1,529,131.73	Green Mountain Pipeline Services	Project Complete; Closed Out
3	Sanitary Sewer Mainline Rehabilitation - Phase 1	<u>Villages of New York Mills, Oriskany, New Hartford, Whitesboro, and Yorkville; Towns of New Hartford and Whitestown</u>	C6-6070-08-00	Final	Approved	13	1,503,360	\$ 1,916,428.54	Insituform	Project Complete; Closed Out
4	Sewer Separation - Clinton/Henderson Street, NY Mills	<u>NY Mills</u> : Storm/Sanitary sewer separation.	C6-6070-08-00	Final	Approved	2	264,000	\$ 155,007.51	JJ Lane Construction	Project Complete; Closed Out
5	Sewer Repairs and Rehabilitation	<u>Villages of Whitesboro, New Hartford, Yorkville, New York Mills</u> : Storm/Sanitary sewer repairs and rehabilitation; manhole replacement and UV-CIPP lining.	C6-6070-08-00	Final	Approved	1	120,000	\$ 411,841.66	Central Paving	Project Complete; Closed Out
6	Sanitary Sewer Mainline Rehabilitation - Phase 2	<u>Villages of New Hartford and Clayville; Towns of New Hartford and Paris; City of Utica</u>	C6-6070-08-00	Final	Approved	15	1,130,000	\$ 2,086,525.00	Green Mountain Pipeline Services	Project Complete; Closed out
7	Sanitary Sewer Mainline Rehabilitation - Phase 3	<u>Towns of New Hartford and Whitestown: Glenhaven area (HHI-1 and WHN-31), the area west of the Whitesboro Parkway School and south of Clinton Street area (WHN-33), and Kellogg Road area (NHD-18)</u>	C6-6070-08-00	Final	Approved	13	630,000	\$ 2,060,644.00	Green Mountain Pipeline Services	Project Complete; Closed out
8	Sanitary Sewer Mainline Rehabilitation - Phase 4	<u>Town of New Hartford: Paris Road area (NHD-23)</u>	C6-6070-08-00	Final	Approved	14	249,000	\$ 1,143,410.78	National Water Main Cleaning Co.	Project Complete: Closed Out
10	Sanitary Sewer Mainline Rehabilitation - Phase 5	<u>Town of Whitestown and Village of Whitesboro: Area west of Henderson St., north of Mud Creek, south of Clinton St. and east of Clinton Rd; and areas of V. of Whitesboro that have not been previously rehabbed.</u>	C6-6070-08-10	Final	Approved	17	1,120,000	\$ 3,429,370.00	Green Mountain Pipeline Services	Project Complete; Closed Out



Table 5.1

**Oneida County Sewer District
Summary of Contracts 3Q 2020**

Sewer Rehabilitation Contracts

Contract No.*	Title of Contract	Project Location/Description	CWSRF Project No.	Status of Design	Status of DEC/EFC/COUNTY Review	Miles of Rehabilitation ⁽²⁾	Estimated I/I Reduction (gal/day)	Current Contract Amount ⁽¹⁾	Contractor	Contract Status
11	Sanitary Sewer Mainline Rehabilitation - Phase 6	<u>Town of New Hartford/Hamlet of Washington Mills:</u> Chapman Rd, Higby Rd., and Mohawk St. as well as side streets in Town of New Hartford (NHD-20).	C6-6070-08-10	Final	Approved	7	260,640	\$ 632,029.26	National Water Main Cleaning Co.	Project Complete; Closed Out
12 ⁽³⁾	Sewer Rehabilitation Project	<u>Village of Yorkville:</u> Areas of the Village not previously rehabbed (YKV-1).	C6-6071-02-00	Final	Approved	11	824,832	\$ 3,420,966.19	National Water Main Cleaning Co.	Base Project complete; Closed Out Unexpended balance of financing being used for supplemental I/I investigation and mitigation.
13	Sanitary Sewer Mainline Rehabilitation - Phase 8	<u>Town of New Hartford:</u> Residential subdivisions along Routes 12B and Merritt Place, situated south of Route 5B and Seneca Turnpike, and north of Sherrill Brook Park (NHD-6).	C6-6070-08-10	Final	Approved	5	280,000	\$ 802,838.50	National Water Main Cleaning Co.	Project Complete; Closed Out
14	Sanitary Sewer Mainline Rehabilitation - Phase 9	<u>Town of New Hartford:</u> Commercial district along Seneca Turnpike surrounding Sangertown Square Shopping Mall, south to a residential area situated between Seneca Turnpike and Clinton Rd., and a small residential area south of Clinton Rd. along Merritt Place (NHD-9).	C6-6070-08-10	Final	Approved	7	360,000	\$ 907,050.79	National Water Main Cleaning Co.	Project Complete; Closed Out
16	Sanitary Sewer Mainline Rehabilitation - Phase 10	<u>Town of Whitestown:</u> Residential area along Westmoreland Rd. and West St., south of the NYS Thruway, and north of Clinton Rd. (WHN-34, WHN-35, WHN-12 & WHN-36).	C6-6070-08-10	Final	Approved	3	270,000	\$ 386,042.00	National Water Main Cleaning Co.	Construction complete. Closeout documentation pending.
17	Sewer Rehabilitation Project - Phase 11	<u>Location to be determined</u> Flow data and mapping currently being assessed to determine location(s) most appropriate for continued sewer system rehabilitation	C6-6070-08-00	Planning	Tentative Submission Date - July 2021	To be determined from the assessment	To be determined from the assessment	Construction estimate to be prepared	tbd	Tentative Bid Date - September 2021

* - Contract 9 - Flow Monitoring Contract

(1) - Values are subject to change upon submission of final contractor close-out documentation. Some entries are contract bid amounts and will be updated when project closes out.

(2)- In order to estimate the manhole repairs in equivalent miles, the following calculation was used:

In the April 2012, Engineering Report, Sauquoit Creek Pumping Station Basin – Phase I-Mainline Pipe Rehabilitation – Contract No. 3, the length of line to be rehabilitated was 13-miles, and the corresponding flow to be removed is 1,503,360 gal/day, which calculates to 116,000 gpd/mile. Using the same 116,000 gpd/mile figure for Contract No. 2, an estimated 5,411,910 gal/day divided by 116,000 gpd/mile, is equivalent to 47-miles of rehabilitated sewers.

(3) - Formerly Contract 12 - Sanitary Sewer Mainline Rehabilitation - Phase 7. Financed by the Village of Yorkville.

BOLD - Value represents the Engineers estimate

6.0 ASSESSMENT OF REHABILITATION EFFECTIVENESS

See Section 3.2 for a discussion of the status of flow monitoring and hydraulic model update. Based on the completed work, and using estimated values of inflow and infiltration (I/I) removals provided in the Offset Plan and/or the approved Basis of Design engineering reports for the respective projects, the estimated reductions in I/I for each rehabilitation contract are shown in Table 5.1.

7.0 COMPLETED CAPITAL PROJECTS/FACILITY UPGRADES

Status of all capital projects and facility upgrades is provided in Table 2.1 and Table 5.1.

8.0 I/I OFFSET PROJECTS/NEW FLOWS

During the 3rd Quarter of 2020, new additions and subtractions to the I/I Offset Credit Bank were recorded by the County. All amounts are reported in gallons per day (gpd) after the application of the 5:1 offset ratio.

Community	Starting Balance	Credits Added	Location	Credits Used	Ending Balance
Town of New Hartford	1,838,297	0		0	1,838,297
Town of Paris	253,064	0		0	253,064
Town of Whitestown	1,053,954	0	43 Kurts Kourt (304.016-2-32)	320	1,053,634
Village of Clayville	59,069	0		0	59,069
Village of New Hartford	277,147	0		0	277,147
Village of New York Mills	166,523	0		0	166,523
Village of Oriskany	103,466	0		0	103,466
Village of Whitesboro	1,083,599	0		0	1,083,599
Village of Yorkville	159,082	0		0	159,082
Oneida County Business Park	43,027	0		0	43,027
Oneida County Sewer District	24,710	0		0	24,710
Totals	5,061,938	0		320	5,061,618

9.0 KEY PERSONNEL CHANGES

Key personnel changes, as they relate to the SSO Mitigation/Consent Order compliance project, are interpreted to be those staff members whose addition to or deletion from the project would be viewed by the County to either add resources or be a detriment to progress. Project staff includes County, satellite community, and Consultant Team personnel. The following is a summary of changes.

9.1 COUNTY STAFF

During the 3rd Quarter of 2020, Steven Devan, PE, Commissioner – Department of Water Quality and Water Pollution Control, announced his pending retirement effective December 31, 2020. Planning for his replacement is currently underway.

Additionally, the County has been under a hiring freeze due to the COVID-19 crisis. Therefore, the Health Department was not yet been able to continue its efforts to search for a suitable replacement to fill the position that works on the FOG program.

9.2 SATELLITE COMMUNITY STAFF

During the 3rd Quarter of 2020, there were no changes of key personnel to report.

9.3 CONSULTANT TEAM STAFF

During the 3rd Quarter of 2020, there were no changes of key personnel to report.

9.4 COVID-19 IMPACT

In March 2020, the COVID-19 crisis began affecting daily work routines for the County, Consultant Team and contractors. New York State Executive Orders (Order 202 and its amendments) for Essential Workers were followed. OCSD staff operated utilizing staggered work shifts in order to maintain social distancing and safe work conditions in efforts to minimize potential exposure to COVID-19. The County also initiated a hiring freeze that remained in place throughout the Quarter.

The Consultant Team continues to work on the project as necessary and in accordance with New York State and Oneida County Executive Orders combined with their own company guidance and modified procedures to maintain social distancing and safe work conditions. On-site staff is generally limited to key Construction Management, Construction Inspection, and Start-up/Commissioning personnel. Engineering/design personnel work remotely per the Governor's Executive Order 202. Engineering team presence onsite is allowed only with approval from the Commissioner.

As construction work also is considered essential to infrastructure, contractors continue to make progress on the various construction contracts, and have implemented practices to maintain social distancing and safe work conditions. Some vendors, subcontractors, and their employees have expressed concern about working at the site during the COVID-19 pandemic, which has the potential for schedule impacts. This has created challenges related to some equipment start up and associated training.

10.0 ADMINISTRATIVE ITEMS

10.1 WORK AUTHORIZATIONS

There were no new work authorizations issued during the 3rd Quarter of 2020.

10.2 PROJECT FINANCING

The following listing is from the CWSRF 2020 DRAFT Intended Use Plan (IUP), issued in July 2019, and includes financings for the County:

CWSRF PROJECT #	PROJECT NAME	TOTAL IUP AMOUNT
C6-6070-08-00 (Long-term financed)	I/I CORR [9 CONTRIBUTING COMMUNITIES] Phase 1 and 2a	⁽¹⁾ \$10,078,438 (includes \$4M Principal Forgiveness)
C6-6070-08-10 (Balance of unexpended funds from Original C6-6070-08-00 financing)	I/I CORR [9 CONTRIBUTING COMMUNITIES] Phase 1 and 2a	⁽¹⁾ \$11,721,562
C6-6070-08-01 (Multi-year)	I/I CORR [SSO - 9 Contributing Communities] Phase 2b, 3, 4, 5, & 6	\$15,000,000
C6-6070-08-02 (Long-term financed)	FM, PS REHAB [DESIGN AND PERMITTING PHASE] Phase 5a	⁽¹⁾ \$2,524,071
C6-6070-08-03 (Multi-year)	I/I CORR [SSO Phase 4]	\$7,663,000
C6-6070-08-04 (Annual List - Short-term financed)	FM Rehab, PS Rehab [CONSTRUCTION PHASE] Phases 5b	⁽¹⁾ \$97,000,000
	FM Rehab, PS Rehab [CONSTRUCTION PHASE] Phase 5b	⁽¹⁾ \$15,000,000
	Water Infrastructure Grant	⁽¹⁾ \$5,000,000
C6-6070-08-05 (Annual List)	STP UP (Phases 6A)	\$80,000,000
C6-6070-08-15	STP UP (Phase 6B)	\$120,000,000
C6-6070-08-06 (Long-term financed)	STP UP [SOLIDS HANDLING SYSTEMS DESIGN AND CONSTRUCTION]	⁽¹⁾ \$35,000,000

(1) - CWSRF Project Financing has closed, is no longer listed in IUP, but reflect the amount Oneida County is now repaying.

10.2.1 STP Upgrades [Phase 6B] C6-6070-08-05 - \$80 million

Closing on Long Term Financing (\$80M minus \$20M WIIA grant minus \$5M interest free = \$55M leveraged financing) occurred during the 3rd Quarter of 2020.

10.2.2 STP Upgrades [Phase 6B] C6-6070-08-15 - \$120 Million

This includes \$80 Million that closed on Short Term Financing in the 3rd Quarter of 2020.

10.2.2.1 Additional Bond Authorization

The balance of the C6-6070-08-15 financing (\$40 Million) requires an amendment to the County's current bond authorization. A public hearing for the additional bonding was held in August 2020. Action by the Oneida County Board of Legislators occurred in the 3rd Quarter of 2020.