

Oneida County Sewer District Sanitary Sewer Overflow Mitigation Project

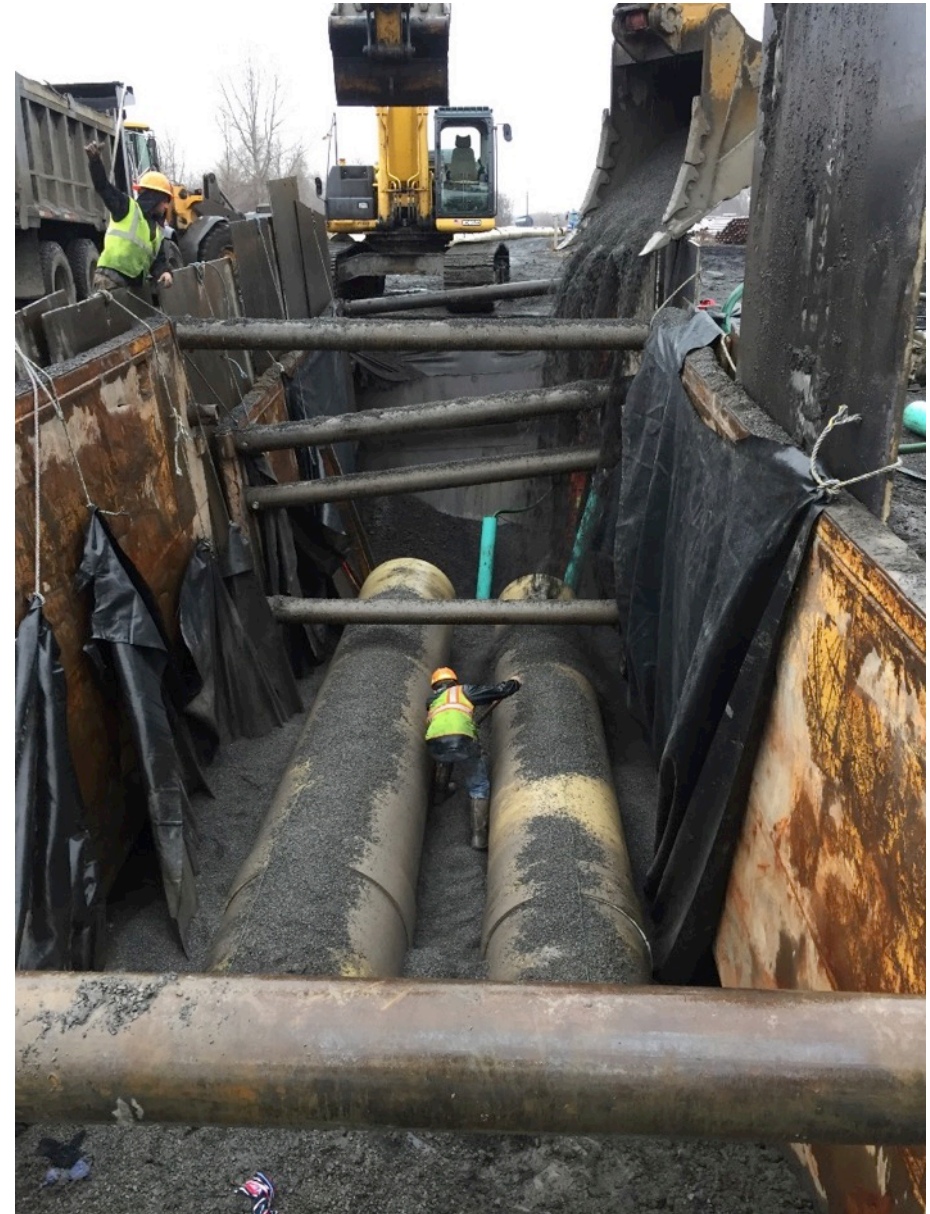


**STEERING COMMITTEE UPDATE MEETING
FIRST QUARTER – 2021**

FEBRUARY 25, 2021

Agenda

1. Introductions
2. 2021 Sewer Rate Schedule
3. Construction Project Status
4. Pending Sewer Rehabilitation Project
5. Private Property I/I
6. Topics for Next Meeting
 1. CMOM
 2. PPII Policies



2021 Sewer Rate Schedule

Basis	Fee
Metered Consumption	\$6.52 per 1,000 gallons of water consumed
Unmetered Consumption	50 gallons per person per day * \$6.52/1,000 gallons
Sauquoit Creek Surcharge	\$1.05 per 1,000 gallons of water consumed
Village of Whitesboro Surcharge	\$2.30 per 1,000 gallons of water consumed

- Public Hearing February 18, 2021
- Public Comment Period ends February 25, 2021
- Rates Effective April 1, 2021

Sewer Rehabilitation Update: Contracts 1 through 16

Contract No	Title of Contract	Project Location/Description	Miles of Rehabilitation	Current Contract Amount
2	Sanitary Sewer Manhole Rehabilitation - Phase 2	District-Wide	47	\$ 1,529,131
3	Sanitary Sewer Mainline Rehabilitation - Phase 1	Villages of New York Mills, Oriskany, New Hartford, Whitesboro, and Yorkville; Towns of New Hartford and Whitestown	13	\$1,916,428
4	Sewer Separation - Clinton/Henderson Street, NY Mills	NY Mills	2	\$ 155,007
5	Sewer Repairs and Rehabilitation	Villages of Whitesboro, New Hartford, Yorkville, New York Mills	1	\$ 411,841
6	Sanitary Sewer Mainline Rehabilitation - Phase 2	Villages of New Hartford and Clayville; Towns of New Hartford and Paris; City of Utica	15	\$ 2,086,520
7	Sanitary Sewer Mainline Rehabilitation - Phase 3	Towns of New Hartford and Whitestown	13	\$ 2,060,644
8	Sanitary Sewer Mainline Rehabilitation - Phase 4	Town of New Hartford	14	\$ 1,143,410

Sewer Rehabilitation Update: Contracts 1 through 16

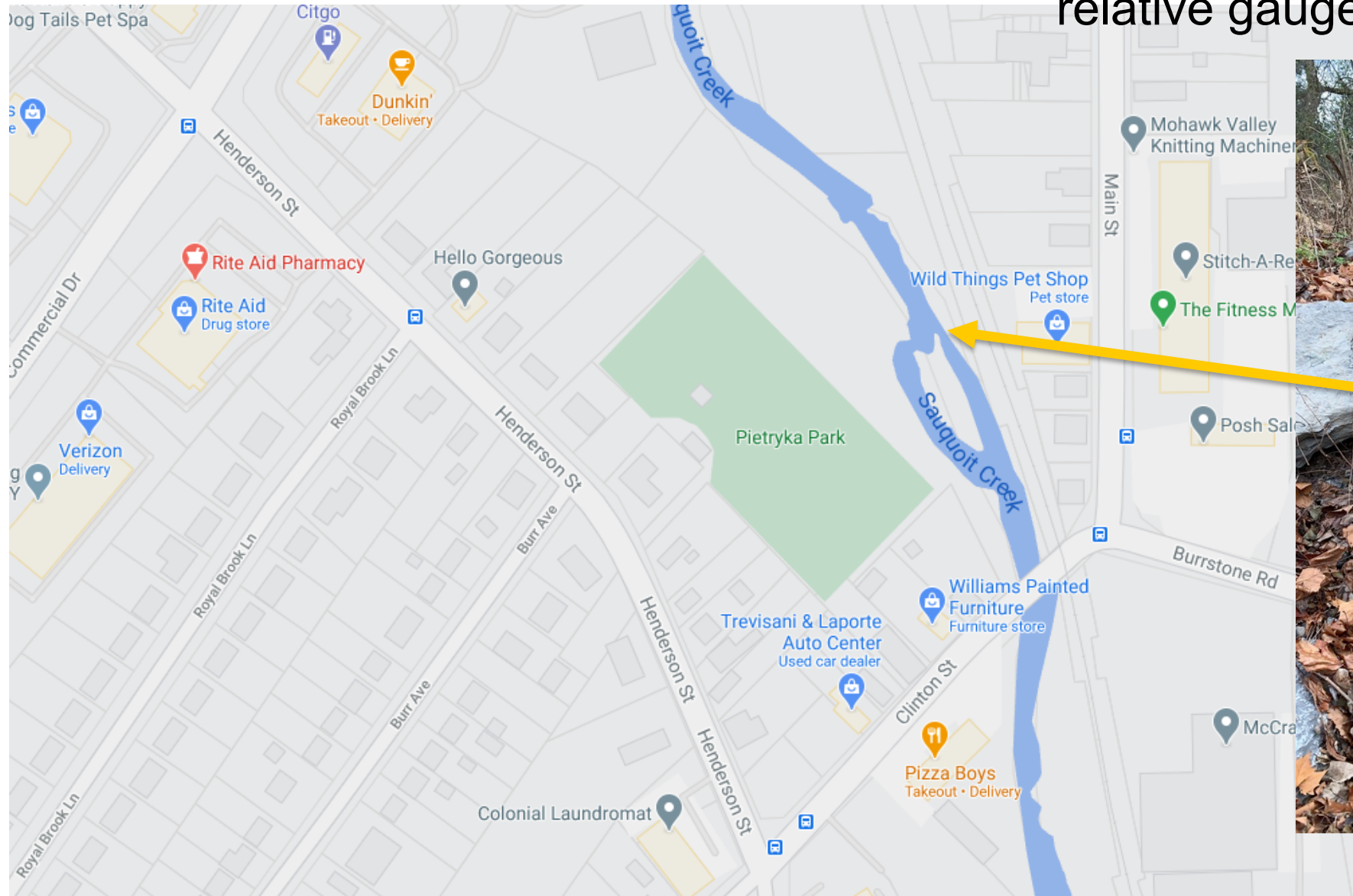
Contract No.	Title of Contract	Project Location/Description	Miles of Rehab.	Current Contract Amount
10	Sanitary Sewer Mainline Rehabilitation - Phase 5	Town of Whitestown and Village of Whitesboro	17	\$ 3,429,370
11	Sanitary Sewer Mainline Rehabilitation - Phase 6	Town of New Hartford/Hamlet of Washington Mills	7	\$ 632,029
12	Sewer Rehabilitation Project	Village of Yorkville:	11	\$ 3,420,966
13	Sanitary Sewer Mainline Rehabilitation - Phase 8	Town of New Hartford	5	\$ 802,838
14	Sanitary Sewer Mainline Rehabilitation - Phase 9	Town of New Hartford	7	\$ 995,407
16	Sanitary Sewer Mainline Rehabilitation - Phase 10	Town of Whitestown	3	\$ 386,042

Sewer Rehabilitation Update: Future Contract 17 (2021)

Contract No.	Title of Contract	Project Location/Description	Miles of Rehabilitation	Current Contract Amount
17	Sewer Rehabilitation Project - Phase 11	Location to be determined Flow data and mapping currently being assessed to determine location(s) most appropriate for continued sewer system rehabilitation	To be determined from the assessment	Construction estimate to be prepared

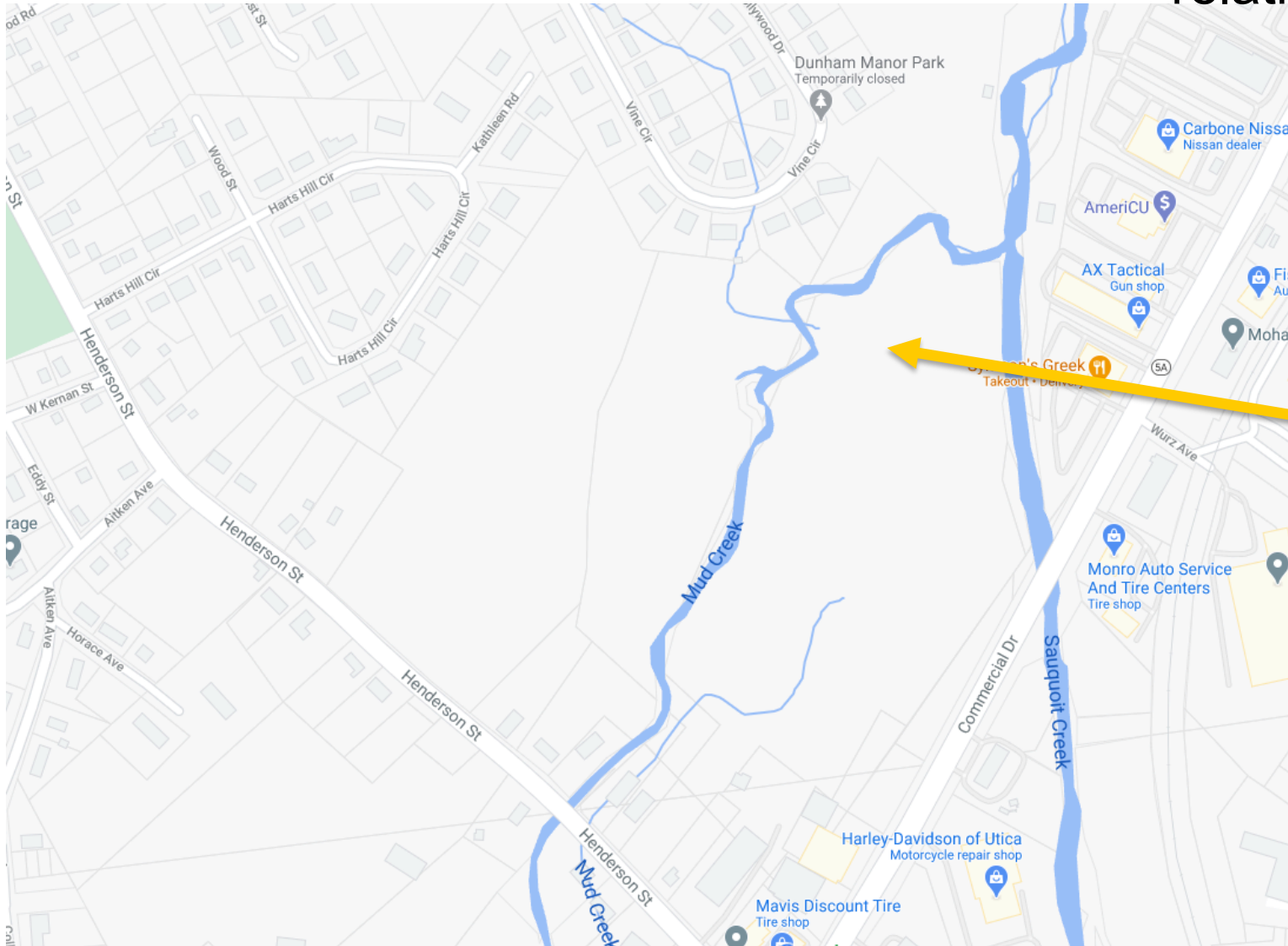
Potential Source of I/I: Manhole 471

The MH 471 defect is at approx. a relative gauge elev. of 5 feet



Potential Source of I/I: Manhole 41

The MH 41 defect is at approx. a relative gauge elev. of 3 feet



WPCP Upgrades



- Solids handling upgrades and energy recovery
- Food waste receiving facilities
- New 27 MGD pump station/screen facility for sanitary flow
- Refurbished 49 MGD pump station for City of Utica Flows
- Direct connection of SCPS force main to WPCP
- “Split Flow” treatment for sanitary and combined sewage
- New high rate effluent disinfection tank for wet weather CSO flows
- 2 new outfalls to Mohawk River
- Upgrades to secondary treatment system
- Asset Management and CMMS

WPCP Contract C-2: Solids Handling Upgrades

Solids Handling Upgrades Project Highlights

- 2 new egg shaped primary digesters (1.2 MG each)
- 1 secondary digester
- Energy recovery facility (600 kW)
- Power production for 25% of WPCP demand
- Decommission incinerators
- Food waste receiving facility
- \$47 million construction cost

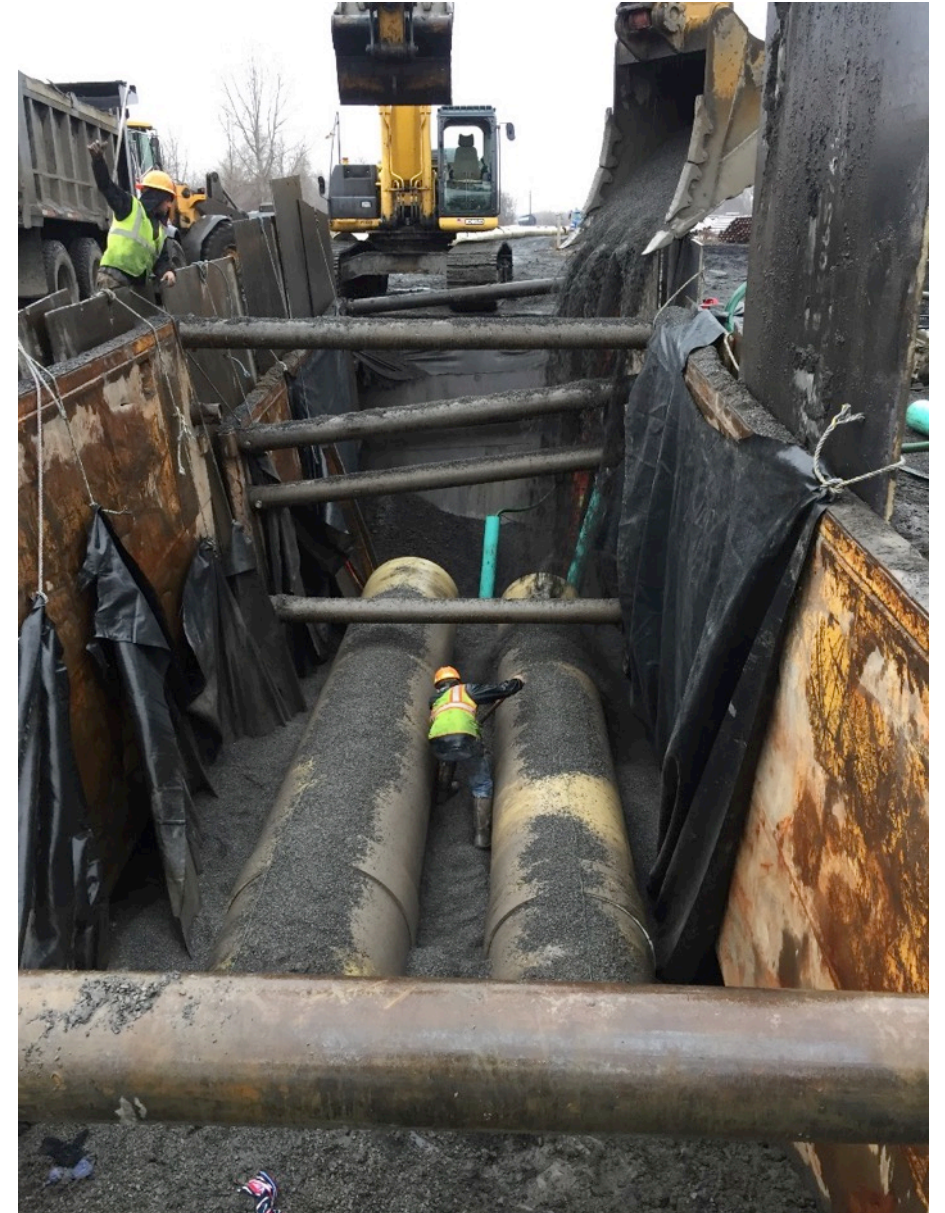


Power Savings

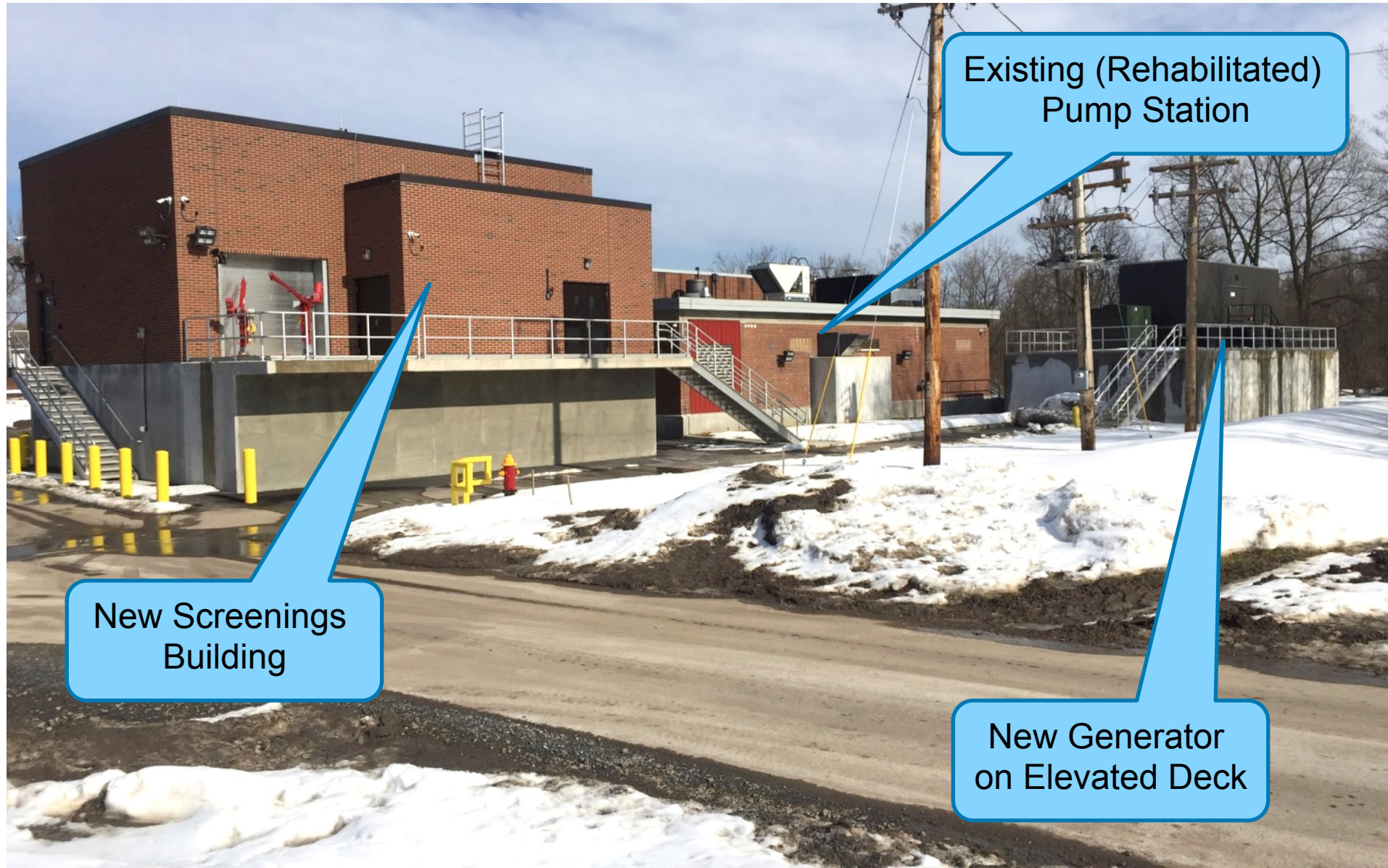
- 3 million kWh since startup
- \$170,000 savings in 2019

Contract C-4: SCPS Force main to WPCP

- New 48-inch force main (4.5 miles)
- Rehabilitate existing 30-inch force main
- Control valves for parallel operation
- Force main pigging station
- Double pipe trench for portions of the force main
- 2 miles of force main on piles
- Extensive work through wetlands
- Double pipe trench for portions of the force main
- 2 miles of force main on piles
- Extensive work through wetlands



Contract C-5: SCPS Upgrades



Contract C-6: Headworks Upgrades

- New sanitary pumping station (Dedicated to sanitary flow)
- Refurbished existing pumping station (Dedicated to combined flow)
- Improved screening and grit removal
- Split wet weather flows between City of Utica (CSO) and sanitary
- New grit facilities
- Miscellaneous buildings improvements
- Electrical service upgrades



Contract C-7: Primary Settling and HRD



New Outfalls to Mohawk River

New Tanks:
6 @ 220-ft. X 20-ft.
CAPACITY: 55.5 MGD

Existing Tanks:
2 @ 105-ft. Diameter
CAPACITY: 27.5 MGD

Contract C-8: Secondary Treatment Upgrades

- Bids received 2/3/21
- New aeration blowers and diffusers
- New parts storage/maintenance building
- Final Settling Tank Upgrade
- CMMS
- 2 Additional Microturbines
- Food Waste Receiving



WPCP Construction Status and Cost

Project		Current Status	Construction Cost
C-1	Incinerator Upgrades	Completed 2016	\$1,000,000
C-2	Solids Handling	Startup/Commissioning	\$45,700,000
C-3	Unit Substation	Completed 2018	\$700,000
C-4	SCPS Force Main	Construction 50% Complete	\$51,500,000
C-5	SCPS Upgrades	Construction 95% Complete	\$9,500,000
C-5A	Barnes Ave. Pump Station	Design 30% Complete	Estimated \$4,700,000
C-6	WPCP Headworks	Construction 95% Complete	\$70,500,000
C-7	Primary Settling & HRD	Construction 70% Complete	\$53,300,000
C-8	Secondary Treatment	Bids Received February 2021	\$60,000,000
Total			\$296,900,000

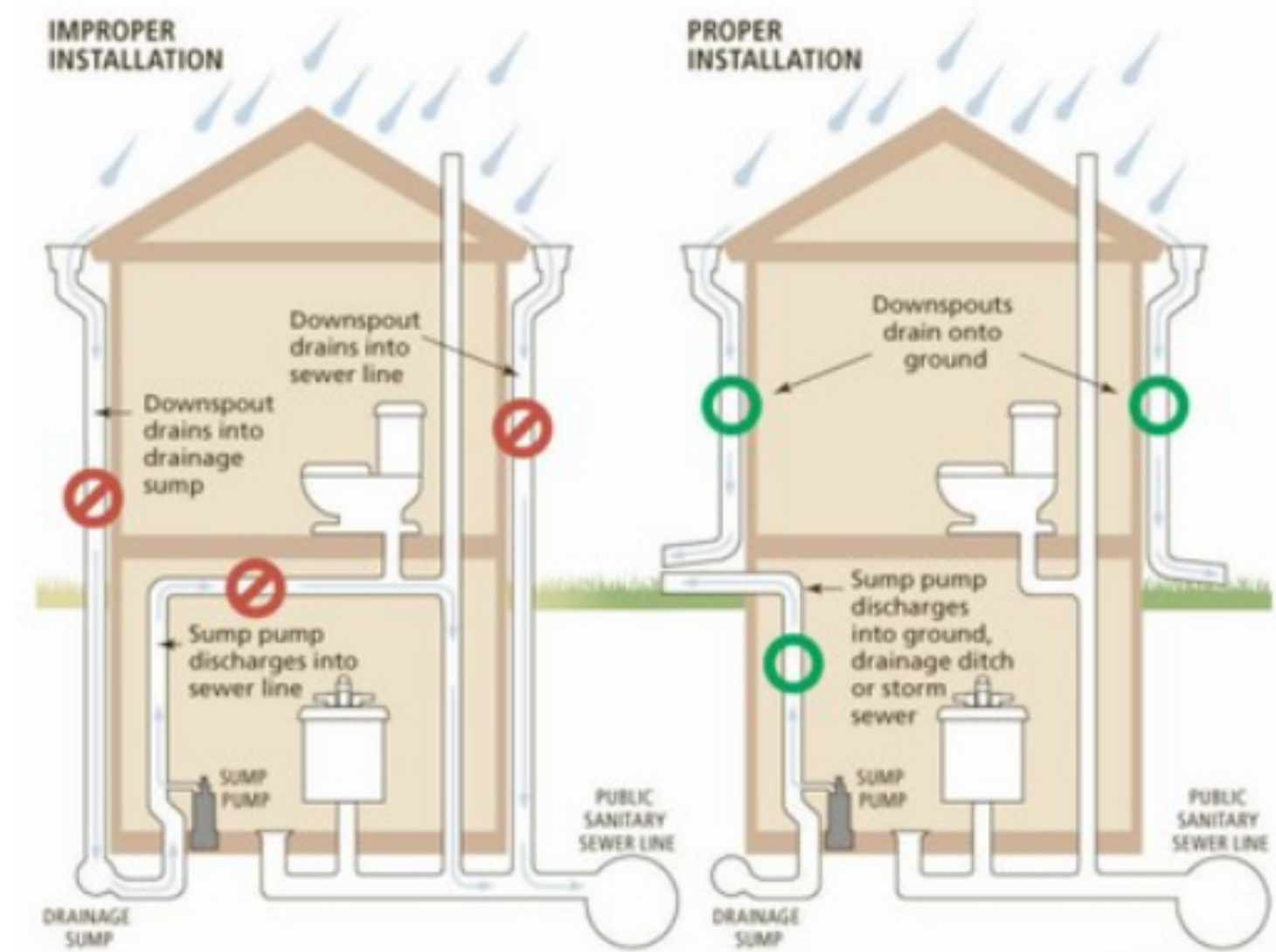
Program Cost Summary

Project Component	Cost
WPCP & SCPS Construction Costs (from previous slide)	\$296,900,000
Sewer System Rehabilitation Construction, I/I Mitigation	\$25,700,000
Engineering (Planning and Design), Construction Management, Resident Project Representation, Program Management	\$48,900,000
Legal, Fiscal, Administrative, NYSEFC Issuance Costs	\$6,600,000
Subtotal – Program Cost	\$378,100,000
Adjustments	
Grant: NYSDEC Water Infrastructure Improvement	(\$25,000,000)
Grant: NYSERDA Renewable Energy	(\$2,000,000)
Grant: Empire State Development	(\$1,000,000)
NYSEFC Principal Forgiveness (Sewer System Rehabilitation CWSRF financing)	(\$4,000,000)
NYSEFC Debt Service (Sewer System Rehabilitation CWSRF financing) paid only by Sauquoit Creek Basin Communities (minus \$4M Principal Forgiveness)	(\$21,700,000)
Net District-Wide Program Cost After Grants	\$324,400,000

Private Property I/I

Next Steps:

- Review Sewer Use Ordinance and Local Laws Time of sale property inspections and required repairs
- Focus on easy, low-cost fixes: disconnect sump pumps, roof leaders, etc.
- Do not focus on lateral repairs or costly foundation drain improvements
- Target areas for inspections and follow-up documentation that repairs were made
- Mandated by NYSDEC (Consent Order)



Public Information and Outreach



Goals

Transparency

Understanding

Involvement

OPERATION
*Ripple Effect*TM

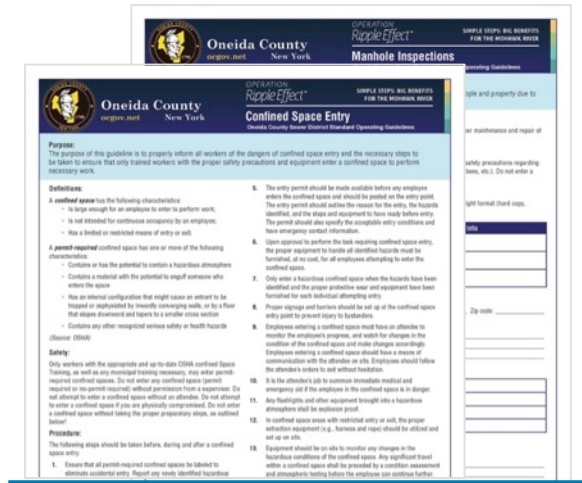
An Initiative of the Oneida County Sewer District

Resources and support

- Bi-monthly Operation Ripple Effect bulletin
- Operation Ripple Effect website
- Newsletter articles
- Brochures
- Posters
- Videos
- Social media
- Presentations

Public Information/Outreach: Municipalities

CMOM



This form is titled "Oneida County Confined Space Entry" and is part of the "OPERATION Ripple Effect" initiative. It includes sections for "Purpose," "Definitions," "Safety," and "Procedure." The "Purpose" section states that the guideline is to properly inform all workers of the dangers of confined space entry and the necessary steps to be taken to ensure that only trained workers with the proper safety precautions and equipment enter a confined space to perform necessary work. The "Definitions" section defines a confined space as one that is large enough for an employee to enter to perform work, is not designed for continuous occupancy by an employee, and has a limited or restricted means of entry or exit. The "Safety" section lists requirements for workers, including that they must be trained in confined space entry, have a permit required for entry, and use proper safety equipment. The "Procedure" section outlines the steps to be taken before, during, and after a confined space entry, including obtaining a permit, testing the atmosphere, and monitoring the worker.

Standard Operating Guidelines – A universal set of operating standards so that municipalities can more easily work together.



This form is titled "Oneida County Plan Review Procedures" and is part of the "OPERATION Ripple Effect" initiative. It includes sections for "Purpose," "Sewer Lateral Connections," and "Sewer Extensions." The "Purpose" section states that the document outlines the minimal requirements of review and inspection expected for each new lateral and extension connection. The "Sewer Lateral Connections" section lists requirements for permit applications, including that they must be submitted to the sewer department, include a site sketch, and be reviewed by a permit engineer. The "Sewer Extensions" section lists requirements for permit applications, including that they must be submitted to the sewer department, include a site sketch, and be reviewed by a permit engineer. The form also includes a section for "Permit Application Fee" and a section for "Permit Application Checklist."

Plan Review Procedures – Basic Procedures that set minimum levels of review and inspection for sewer lateral connections and sewer extensions.



This form is titled "Oneida County Best Management Practices FOG" and is part of the "OPERATION Ripple Effect" initiative. It includes sections for "Purpose," "Dry Clean Up," "Spill Prevention," and "Emulsifying Agents." The "Purpose" section states that the document outlines the minimal requirements of review and inspection expected for each new lateral and extension connection. The "Dry Clean Up" section lists requirements for food waste disposal, including that it must be disposed of in a designated area, not be poured down the drain, and not be used for cooking. The "Spill Prevention" section lists requirements for preventing spills, including that spills must be cleaned up immediately, not be poured down the drain, and not be used for cooking. The "Emulsifying Agents" section lists requirements for the use of emulsifying agents, including that they must be used in accordance with the manufacturer's instructions, not be poured down the drain, and not be used for cooking. The form also includes a section for "Permit Application Fee" and a section for "Permit Application Checklist."

Fats, Oils and Grease Program – A standard and centralized program to oversee the responsible disposal of FOG, which can decrease system capacity.

Reducing Inflow/Infiltration



PPII reduction education to promote voluntary action

- Communications support for pilot projects
- Mailings to property owners
- How-to videos
- Social media
- Brochures
- Presentations
- Media coverage

Special Initiatives

Flushable Wipes Information Campaign

- Press release
- TV spot on ABC, FOX, PNY, NBC, CBS
<https://www.youtube.com/watch?v=6lwica4O2M8>
- Online digital ads
- Social media messages and video clip
- Educational flyer
- Postcard
- Operation Ripple Effect website



FOG Education and Procedures Program

- FOG education literature for property owners
- FOG inspections literature for businesses
- YouTube videos
- Social media



Topics for Next Meeting

1. CMOM

- FOG Program
- Flowmonitoring
- Sewer System Design Standards
- Community Outreach

2. PPII Policies



Purpose:

To establish a consistent practice for cleaning sewers and removing grease, roots, and other debris that can accumulate, causing a loss of cross-sectional area and reduced capacity. Sewers which are consistently cleaned result in fewer emergency calls due to blockages, and provide municipal sewer operators the opportunity to schedule maintenance during regular working hours.

Procedure: Flush sewers from upstream to downstream with hydraulic jetting equipment, removing debris from the downstream manhole as follows:

1. Perform pre-work checks of all equipment, as indicated in the equipment operator's manual.
2. Wear appropriate PPE, as directed by the municipality's safety program.
3. Select cleaning nozzle according to type of cleaning required, and as suggested by equipment manufacturer. For general cleaning, use a nozzle sufficiently heavy to remain centered in the pipe during cleaning.
4. Locate the upstream and downstream manholes of the sewer section to be cleaned; position the equipment over the downstream manhole.
5. Set up traffic control signs, cones, barrels, and flags as appropriate for location where cleaning is being completed, in accordance with municipality's traffic safety program.
6. Observe the location of overhead wires and other obstructions that could interfere with the operation of the vacuum boom.
7. Open the downstream manhole, send second crew member to open and observe the upstream manhole. Protect open manhole with cones, etc. Do not leave open manholes unattended. Make general observations regarding the condition of manholes.
8. Insert a debris trap/basket to catch larger debris flushed from sewer.
9. Lower the jetter hose and nozzle, with a guide or roller to protect the hose, into the manhole and direct it into the sewer to be cleaned.
10. Increase the pump pressure sufficiently to propel the jet hose up the sewer. Hose speed should not exceed 30 feet per minute. Advance the hose to 25% of the total length of sewer and retrieve hose.
11. Observe the nature and quantity of material pulled back to the manhole:
 - a. If little to no debris is pulled back, continue to advance the nozzle to the upstream manhole and retrieve the hose back to the downstream manhole.



- b. If moderate to heavy debris is observed, continue to clean the pipe in "steps", maximum 25% of pipe length at a time until the entire pipe is cleaned.

12. Second crew member, staged at upstream manhole, verifies that nozzle reaches the upstream manhole.
13. The sewer can be considered clean when successive passes with a cleaning nozzle do not produce any additional debris in the wash water.
14. If large amounts of dirt, sand, gravel, rocks and pipe pieces are collected in the debris trap, a broken pipe or partial collapse should be suspected. Arrange for CCTV inspection of the pipe.
15. Remove the debris from the debris trap with a vacuum unit or other methods. Do not allow debris to escape to downstream sections. Observe the nature of the removed debris, and categorize according to Figure 1.
16. Record the upstream and downstream manhole numbers, date and time cleaned, weather conditions, crew members, length of sewer cleaned, and nature and quantity of the debris removed on a form developed by the municipality.

Type of Material	Clear (no debris)	Light	Moderate	Heavy
Debris (sand, grit, rock)	CL	DL	DM	DH



Questions?