

**WATER POLLUTION CONTROL AUTHORITY
TOWN OF SOUTH WINDSOR**

**REGULAR MEETING
MADDEN ROOM
SOUTH WINDSOR TOWN HALL**

AGENDA

**TUESDAY, OCTOBER 4, 2022
7:00 P.M.**

- A. Roll Call**
- B. Acceptance of Minutes of Previous Meetings**
 - 1. September 6, 2022 Regular Meeting
- C. New Business**
- D. Communications and Reports**
 - 1. Annual Report
 - 2. Superintendent Report
- E. Public Participation (Items not on the agenda)**
- F. Bills, Change Orders, Disbursements**
- G. Unfinished Business**
 - 1. Odor Control Improvements
- H. Executive Session**
- I. Adjournment**

WPCA COMMUNICATIONS AND REPORTS

October 4, 2022

The following is a monthly report from the Superintendent of Pollution Control as an appendix to the Water Pollution Control Authority meeting.

General Information

Residential Billing

The residential sewer user bills have been sent out and are due by the end of October. The billing list includes 8,672 accounts totaling \$3,685,600. This year 201 account holders qualified for the income eligible discount program costing a total of \$21,483.75. The net residential revenue due to the WPCA is \$3,664,116.25.

Accounts: 8,672

Gross Total: \$3,685,600.00

Discounted: \$ (21,483.75)

Net Total: \$3,664,116.25

LED Lighting Upgrade

We are working with an energy consultant to lower energy costs and improve lighting at the treatment plant. By upgrading the interior and exterior lighting fixtures we will see an annual projected savings of 67,000 kWh. Additionally, Eversource's incentive program is expected to provide \$18,700 towards the upgrade. The return on investment will be 5.7 years.

Treatment Plant and Collection Systems

Treatment Plant

Process

TREATMENT PLANT	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	AVERAGE
AVG FLOW (MGD)	1.92	2.13	2.79	2.92	2.63	2.76	2.61	2.57	2.54	2.39	2.10	3.17	2.54
BOD REMOVAL	98.0%	98.5%	98.5%	98.7%	95.7%	98.7%	98.6%	98.1%	98.9%	99.0%	98.7%	98.4%	98.3%
TSS REMOVAL	98.0%	98.9%	98.8%	99.0%	95.6%	99.0%	98.9%	97.9%	99.0%	99.1%	99.0%	99.1%	98.5%
NITROGEN LBS. (106 LBS. LIMIT)	87	85	113	115	95	87	86	96	84	95	100	85	94
NITROGEN mg/L	3.3	3.8	4.2	4.1	4.2	3.5	3.5	3.7	3.9	4.7	5.5	4.9	4.1

Maintenance

- Repaired valves in control building basement.
- Set up new dissolved oxygen probes and controllers in Aeration Basin 2.
- Replaced failing controller for ORP probes in Anoxic Zone.
- Repaired failing rubber gasket on Primary Clarifier 3 slide gate.
- Repaired crumbling concrete on stairs up to sodium hypochlorite room.

- Began revisions on Emergency Management Plans.
- Began revisions on Lockout/Tagout program as part of ConnOSHA voluntary consultation.
- Began working with CT DEEP, Eversource, and State Emergency Management personnel in working group to help facilitate quicker responses during emergencies, particularly as it pertains to pump stations.

Collection System

COLLECTION SYSTEM	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	TOTAL FT
CCTV (FEET)	0	2,080	2,000	1,200	2,642	1,950	8,538	4,681	0	3,033	5,129	3,695	34,948
Contracted CCTV	9,693	12,783	0	0	0	0	0	0	0	0	0	0	22,476
CLEANING (FEET)	6,050	2,700	4,100	4,000	1,363	1,550	3,677	1,500	1,739	4,413	7,047	6,275	44,414

- Replaced failed pressure transducer at Rye St pump station and ran new conduit and wiring to make the new device accessible from the wet well platform.
- Continued to perform CCTV work and line cleaning on cross country sewer lines.
- Repaired ruptured tubing on sodium hypochlorite system.
- Completed generator and UPS checks at all pump stations.
- Completed line cleaning and inspection of High School lateral for Board of Ed staff.
- Repaired Pump 1 at Avery St pump station after it became detached from the rail. Impeller and volute were replaced as was the pressure transducer.



Damage to the Avery Street pump impeller. The maintenance staff replaced the impeller and volute before putting the pump back in service.



On-call operators responded to an alarm at Avery Street Pump Station to find a pump had detached from the guide rails resulting in pump damage, inoperable level floats and tangled cords.

Emergency Call Outs

EMERGENCY CALL OUTS	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	TOTAL
TREATMENT PLANT	1	2	0	0	0	1	3	0	2	3	2	2	16
PUMP STATIONS	2	0	1	2	2	0	3	0	2	1	5	2	20
SEWER BLOCKAGES	0	0	0	0	1	0	0	0	0	1	0	0	2
CALL BEFORE YOU DIG	0	1	0	0	0	0	0	0	0	1	0	1	3
ODOR COMPLAINT	0	0	1	1	1	2	2	7	5	8	1	0	28

Capital Improvement Project Updates

Clark Street, Benedict Drive, Pleasant Valley Pump Station Upgrades

Nothing new to report.

Next Steps:

- *Engineer to perform Connecticut Environmental Policy Act (CEPA) Permit Review.*
- *Staff review and final comments.*
- *Submit design to DEEP for review and approval (min. 90-day review).*
- *WPCA and Town Council Resolution to enter into CWF agreement*
- *Bid project.*

Aeration Weir Gate Improvements

The WPCA approved transferring \$750,000 from FY21/22 CIP (Phase IV Part 1 Sewer System Improvements) to complete critical improvements to the aeration basin weir gates.

- Requested proposals for design, bid administration, and construction oversight services for on-call consultants.
- Weston & Sampson provided the most advantageous and cost-effective proposal for the project.
- Coordinating a kick off meeting to design and bid the project.

American Rescue Plan Act (ARPA) Funded Projects

Phase IV Sewer System Improvements

This project has been approved utilizing American Rescue Plan Act funds. The budget for this project is \$1,100,000.

- Manhole rehabilitation has begun.
- Green Mountain Pipeline is behind schedule and submitted an extension for substantial completion.
- Project is expected to be completed by the end of October.

UV Disinfection Upgrade

This project has been approved utilizing American Rescue Plan Act funds. The original budget for this project was \$1,300,000. In February 2022 the Authority approved transferring \$120,000 from this project to the Clark Street Bypass Valve project.

Nothing new to report.

Clark Street Bypass Valve

This project has been approved utilizing American Rescue Plan Act funds. The original budget for this project was \$100,000. In February 2022 the Authority approved transferring \$120,000 from the UV Disinfection Upgrade project to the Clark Street Bypass Valve project.

Nothing new to report.

Collection of Sewer User Fees and Delinquent Accounts

To be reported during the meeting.

Respectfully submitted by: Tony Manfre, Superintendent of Pollution Control

POLLUTION CONTROL FISCAL YEAR 2021-2022 REPORT

THE DIVISION OF WATER POLLUTION CONTROL is responsible for the collection, treatment, and discharge of wastewater. Activities include: wastewater treatment, sludge disposal, laboratory analysis, sewer line cleaning, inspection and repair, as well as treatment plant and pump station maintenance. This Division also assists the Parks & Recreation Department for the mechanical maintenance of the Veteran's Memorial Park swimming pool pump and filtration system.

During the past year, the Division treated 1.142 billion gallons of wastewater at a treatment efficiency of 99% Biochemical Oxygen Demand, 99% Total Suspended Solids and discharging an average of 100 pounds of nitrogen per day. The Town is required to maintain a treatment efficiency of 85% and discharge no more than 106 pounds of nitrogen per day under the current discharge permit issued by the Connecticut Department of Energy and Environmental Protection (DEEP). In treating the wastewater, 854 dry tons of solids were removed and transported to the Hartford Metropolitan District Facility (MDC) for final processing in accordance with the Town's participation in a cooperative regional sludge management program. Wastewater service is provided to 8,587 residences and 367 industrial and commercial businesses in South Windsor and Manchester. Service is provided to out of town properties in accordance with the provisions of inter-town sewer agreements. Through such agreement's communities are benefited by limiting the number of expensive pump stations which would otherwise have to be constructed and operated.

The Clark Street, Benedict Drive, and Pleasant Valley Pump Stations are in the design phase of a comprehensive rehabilitation. Each pump station is reaching its designed life expectancy. The smallest of the three pump stations to be upgraded is Pleasant Valley which accepts residential flow from the western portions of the Pleasant Valley Road area. The Benedict Drive Pump Station is the Town's second largest pump station and serves the eastern portion of town made up of mainly residential neighborhoods. Clark Street is the Town's largest pump station which accepts flow from the Benedict Drive Pump Station, portions of Manchester, and the south easterly section of South Windsor. This amounts to the conveyance of almost 50% of the Town's wastewater to the treatment plant located on Vibert Road. Construction is expected to begin in 2023.

In August the Water Pollution Control Authority accepted the Town's allocation of \$2,500,000 in American Rescue Plan Act (ARPA) funds which are funding three critical projects to improve the Town's sewer infrastructure and treatment of wastewater. "Phase IV Sewer and Manhole Rehabilitation" consisted of lining 40 pipe segments of 8"-30" sewer pipe and rehabilitating 28 manholes at a cost of \$1,100,000. Another \$1,000,000 was approved to fund upgrading the treatment plant's 20 year old Ultraviolet disinfection system. The design of the new system is underway and construction is expected to begin in 2023. The third project being supported by ARPA is the installation of a 16" underground valve on the Clark Street Pump Station's force main. The valve is a necessary appurtenance to isolate the pump station from the force main to replace failing valves inside the station and to prepare for the station upgrade.

LodeStar Energy announced that they successfully energized the Platt Hill Road Solar Project in Winchester in December. The project will deliver 33% of its net metering credits to the South Windsor WPCF. This is expected to save over \$500,000 over the next 20 years.

Anthony E. Manfre, Superintendent of Pollution Control

WATER POLLUTION CONTROL AUTHORITY - The Water Pollution Control Authority (WPCA) is a statutorily independent entity having complete jurisdiction over all elements of the sanitary sewer system within the Town. It is responsible for the proper functioning and continuous operation of South Windsor's sanitary sewage system which is essential for public health and safety, economic development, environmental protection, and the quality of life for those living and working in our Town. The Authority consists of seven (7) members and two (2) alternates appointed by the Town Council for staggered terms of four (4) years. Its members are citizens of the Town who volunteer their time to oversee and implement policies created by the Authority to protect the operation of the sewerage system, the environment, and ultimately, public health. By contract, it is administered through the municipal staff of the Town as the most cost-efficient means of executing legal mandates and daily operations. The Authority authorizes the annual budget, levies benefit assessments, establishes fair and reasonable sewer user charges, approves connections and expansions to the system, and applies for state and federal funds as authorized by Chapter 103 of the Connecticut General Statutes and Town of South Windsor Ordinances.

The thirteen staff, including eleven licensed operators, are responsible for the treatment plant, eleven pump stations, and one hundred thirty miles of sewer pipe, including twenty miles of cross-country lines. Together the Authority and Operations staff work as stewards of the treatment system and seek to provide the best value for the ratepayers. Planning for future needs of this complex and widespread system entails a degree of unavoidable uncertainty, including, exposure to unforeseen natural events, accidents, revenue fluctuations, and unplanned maintenance, facility repair, and improvements as the infrastructure ages. As the operation and maintenance of the wastewater treatment plant and collection system is funded

almost entirely through sewer user fees, Authority members establish fair and prudent fiscal policies to ensure adequate funding for proper maintenance, upgrade, repair and replacement of the system's components.

Electric utility costs comprise one of the largest budgetary line items consuming over eight percent of the Operation and Maintenance budget. The Town has contracted with Lodestar Energy to utilize an offsite solar field helping to defray these costs through electrical credits. The solar field became operational in December and the project will deliver 33% of its net metering credits to the South Windsor WPCF.

The Authority has been able to prioritize capital expenditures to prevent significant interruptions in service through a ten-year capital improvement program. When American Recovery Plan Act (ARPA) funds became available the Authority was prepared to allocate the \$2,500,000 that was received to begin three significant projects without impacting the sewer user fee. Phase IV Sewer & Manhole Rehabilitation is the final phase of recommended sewer system improvements from a 2015 sewer evaluation study. The project scope includes lining 40 pipe segments with diameters ranging from 8" to 30" along with rehabilitating 28 manhole structures that are in a deteriorated condition. The Authority approved upgrading the wastewater treatment plant's 20 year old Ultraviolet disinfection system. UV light is used to sterilize remaining organisms that have not been removed through the treatment process. The upgrade is under design and expected to be completed in 2023. The third project funded through ARPA is the installation of a 16" underground force main valve at the Clark Street Pump Station. The valve is vital to bypassing the station for maintenance and for the upgrade which is currently in the design stages.

In addition, the Authority and Operations Staff are in the design phase for improvements in odor control, beginning in Fiscal Year 2022-2023.

The Water Pollution Control Authority set the Fiscal Year 2021-2022 budget of \$5,281,334 of which \$4,129,123 is the operating budget. The remaining funds are allocated to debt service and capital projects. In recent years the Authority has taken proactive measures to rehabilitate the collection system infrastructure and meet reserve funding goals to ensure the stabilization of sewer user fees which has remained at \$415 for the last three years. To ensure that the revenue needs of the facilities are met, the Authority approved a \$10 increase in next years sewer user fees and revised the fee structure for apartment buildings to reflect a more equitable share of their sewer use.

The WPCA approved 3 residential connections and 7 commercial/industrial connections resulting in a total revenue of \$200,360. This included: Connection Charges of \$144,877, Capacity Charges of \$14,080, and Benefit Assessments of \$41,403.

During the Fiscal Year 2021-2022, there were 23 new residential connections and 4 Commercial/Industrial connections made to the public sewer system bringing the total connections to 8,616 residential and 367 commercial/industrial.

In 2015 the WPCA approved the implementation of the sewer user charge discount program for qualified residents. A qualified resident is a residential sewer user who is eligible for property tax relief under the State of Connecticut Qualifying Income for the Elderly and Totally Disabled Tax Relief Program. The application period is from February 1st through May 15th, the same period as the Town's Property Tax Relief Program. Application is made through the Human Services Department. During fiscal year 2021-2022 196 residents participated in the program resulting in \$20,107 in discounted residential fees.

Stephen Wagner, WPCA Chair