

# WPCA COMMUNICATIONS AND REPORTS

May 3, 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

### Energy Consumption Report

The WPCA Chair, Steve Wagner, is also a member of the South Windsor Energy Committee. At the Committee's last meeting Steve reported that the sewer system electricity consumption increased by 11% since 2012, however, influent flows increased by 44% meaning the system's kilowatt hours per million gallons of flow *decreased* by 23%. The upcoming pump station improvements should further reduce our energy consumption. The following slide was shared with the Energy Committee during Steve's presentation:

	Year Ending 12/31/2012			Year Ending 2/28/2022			Change	
	Annual Mgal	Annual kWh	kWh/Mgal	Annual Mgal	Annual kWh	kWh/Mgal	kWh/Mgal	%
Sewer Plant		2,309,164	2,976		2,368,175	2,120	(856)	-29%
Pump Stations	776	511,297	659	1,117	750,555	672	13	2%
System Total		2,820,461	3,635		3,118,730	2,792	(843)	-23%

Change in System Flow							341 Mgal	44%
Change in Electricity Usage					298,269 kWh			11%

### Connecticut Occupational Safety and Health Administration (Conn-OSHA) Consultation

The South Windsor Public Works Department is taking advantage of Conn-OSHA's Consultation program to review each Divisions safety policies, practices and work environments. Under this program Conn-OSHA will make inspections and provide a report with a timeframe to make the corrections. The program is designed to voluntarily invite Conn-OSHA in for inspections and ultimately bring a facility into compliance without issuing a citation. Upon recommendations from the first consultation our staff is working on developing more robust, site-specific, Job Hazard Analysis reports.

### Odor Control Study

Last May Tighe & Bond was hired to perform an odor control study to identify odor sources at the treatment plant and surrounding area in response to odor complaints

from neighboring properties. The study included an evaluation of the performance of the treatment plant's odor control system and offered recommendations to mitigate any existing odors.

Sixteen samples were taken from the facility in June and July to analyze odor intensity, concentration, and character. Additionally, six off site odor surveys were conducted within a one-mile radius during the months of June, July, and August. Tighe & Bond is scheduled to present the study results to the WPCA and area residents at the June 7<sup>th</sup> Regular Meeting.

## Treatment Plant and Collection Systems

### Treatment Plant

#### *Process*

TREATMENT PLANT	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	AVERAGE
AVG FLOW (MGD)	2.61	2.57	2.55	4.67	3.57	4.15	2.93	2.67	2.51	2.63	3.10	3.30	3.11
BOD REMOVAL	98.6%	98.6%	99.0%	97.4%	98.4%	98.5%	98.5%	98.5%	98.7%	95.7%	98.7%	98.6%	98%
TSS REMOVAL	98.6%	98.6%	98.9%	97.4%	98.3%	98.2%	98.9%	98.8%	99.0%	95.6%	99.0%	98.9%	98%
NITROGEN LBS. (106 LBS. LIMIT)	86	96	87	142	102	115	97	97	88	95	88	97	99
NITROGEN mg/L	3.9	4.4	3.9	3.7	3.7	3.3	3.8	4.2	4.1	4.2	3.5	3.5	3.8

#### *Maintenance*

- Repaired faulty wiring on Main Plant Generator emergency stop switch
- Replacement of all back up batteries on Treatment Plant Fire Alarm Panels
- Performed exercising, greasing, and semiannual maintenance on all Treatment Plant Sluice Gates
- Cleaned all clarifier weirs, UV Chamber, Secondary 1 and 2 channel, and Parshall flume in preparation for disinfection season
- Performed all work necessary to put UV system back online for disinfection season. This included installing bulb wipers, desiccant packs, filling wipers with Lime Away chemical, performing UVT testing, and cleaning
- Worked with Kone Cranes to get all Treatment Plant and Pump Stations hoists inspected

### Collection System

COLLECTION SYSTEM	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	AVG FT
CCTV (FEET)	8,621	2,977	4,077	5,457	0	0	2,080	2,000	1,200	2,642	1,950	8,538	3,295
Contracted CCTV	21,414	18,569	10,254	0	0	9,693	12,783	0	0	0	0	0	6,059
CLEANING (FEET)	7,251	22,000	12,300	0	2,200	6,050	2,700	4,100	4,000	1,363	1,550	3,677	5,599

- Worked with VMS Construction to come up with a plan for the upcoming isolation valve installation at Clark Street Pump Station
- Performed annual maintenance on pump station generators
- Performed epoxy and ceramic coat repair on two submersible sump impellers and volutes

- Performed annual inspection and repair of Avery Street submersible pumps as shown in pictures below



*Accumulation of rags onto of submersible pump.*



*Top view of a volute which houses the pump impeller.*



*Submersible pump being removed from service for annual manitenance.*

## Capital Improvement Project Updates

### Clark Street, Benedict Drive, Pleasant Valley Pump Station Upgrades

- 60% design has been submitted to the Town from Arcadis and is undergoing staff review
- A pre-application meeting is being scheduled with DEEP
- Pre-permitting meetings are being setup with Town departments

#### *Next Steps:*

- *Engineer to perform Connecticut Environmental Policy Act (CEPA) Permit Review*
- *Project 90% design phase*
- *Submit design to DEEP for review and approval (min. 90-day review)*

## 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.*

- WPCA approved consolidating Phase IV Part 1 and Part 2 at the April 5<sup>th</sup> Regular Meeting and transferring funds from Part 1 to complete the weir gate improvements

## **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.*

- WPCA approved consolidating Phase IV Part 1 and Part 2 at the April 5<sup>th</sup> Regular Meeting
- Green Mountain Pipe began Pre-Construction CCTV inspection and heavy pipe cleaning

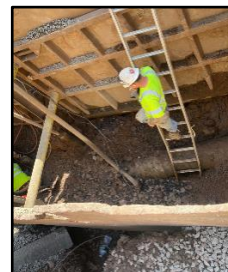
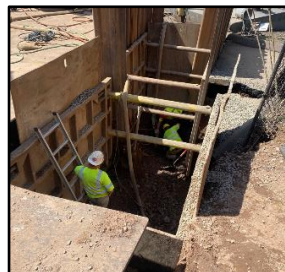
### UV Disinfection Upgrade

*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 this month

### 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.*



- VMS Construction was on site to dig a test pit the week of April 11<sup>th</sup>

- The excavation took longer than expected due to variations in the as-built plans and what was unearthed

## **Collection of Sewer User Fees and Delinquent Accounts**

Collector of Revenue Report

*To be provided at the meeting.*

*Respectfully submitted by: Tony Manfre, Superintendent of Pollution Control*