

**City of Port Washington  
Wastewater Utility  
2020 Annual Report**

**Operations Performance Summary**

The Wastewater Utility recorded a total annual influent plant flow of 566,180,000 gallons (-6.5 %) \* in 2020. The average daily plant flow was 1.55 million gallons versus 1.66 million in 2019. There were three bypassing events during 2020. They all occurred on May 17, with excessive rain and already saturated ground affecting each location – WWTP, Jackson Street, and Lift Station 1 all with reported overflows. Bypass estimates were 850,000 gallons for the WWTP, 150,000 gallons for Jackson Street, and 100,000 for Lift Station 1 overflow wet well.

Total rainfall in 2020 was 40.2 inches (-11.8 %).

The plant Influent Biochemical Oxygen Demand (BOD) loading was 925,267 pounds (+2.1%) for a daily average of 2,535 pounds, or 196 mg/l. The treatment plant reduced the BOD in the effluent to 69,852 pounds (+10.0 %) for the year and a daily average of 191 lbs, or 15 mg/l.

The plant Influent Suspended Solids (TSS) loading was 781,062 pounds (-5.2 %), for a daily average of 2140 pounds, or 165 mg/l. The treatment plant reduced the yearly effluent TSS to 45,629 pounds (+42.6 %), with a daily average of 125 pounds or 10 mg/l.

The plant influent phosphorus loading for the year was 21,478(-1.1 %) pounds for a daily average of 58.8 pounds or 4.5 mg/l. The treatment plant reduced the yearly effluent phosphorus to 2524 pounds (-1.2 %), with a daily average of 6.9 pounds or 0.53 mg/l. Phosphorus removal was achieved with 61,464 pounds (-11.7 %) of iron from a ferrous chloride solution.

The City of Port Washington Wastewater Utility Wisconsin Pollutant Discharge Elimination System (WPDES) permit, calls for effluent limits of the above mentioned evaluating criteria to be:

<u>Permit Limits</u>	<u>2020 discharges</u>	<u>% Removal</u>
BOD - 30 mg/l	69,852 lbs.	92.5 %
TSS - 30 mg/l	45,629 lbs.	94.2 %
Phosphorus - 0.9 mg/l	2,524 lbs.	88.2 %

In 2020 we were challenged like we've never experienced to produce a consistently great effluent to the lake. Both solids and BOD were up in our discharge to Lake Michigan. With the pandemic we felt that we were getting greater amounts of cleaner and sanitizer coming to the plant that interfered with our process. Even though we easily met permit standards, we feel that 2021 will be an improved year from a performance standpoint.

In 2020 the plant produced a total of 237 metric tons (-5.1 %) of anaerobic sludge.

The Sewage Utility Rates by an average of 5.5% in 2020 and planned increases were in effect for 2020.

**CITY OF  
PORT WASHINGTON**

**DEPARTMENT OF  
PUBLIC WORKS**

**WASTEWATER UTILITY**

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### **WWTP Capital purchases for 2020**

- TWAS pump rebuild \$2021
- Upgrade WWTP WIFI \$2937
- Replace L.S. 5 Check Valve \$2120
- Replace L.S. 1 pump Guide Rails \$ 5045
- Replace L.S. 5 pump Guide Rails \$3845
- Replace L.S. 2 Grinder \$ 25,294
- RAS pump rebuild \$15,227
- L.S. 5 Upgrade / Generator \$68,200

Total WWTP /Lift Station Capital Related Costs - \$124,689

### **SANITARY Sewer Capital Purchases for 2020**

- GIS – GPS instrument purchase \$4064
- Smart Covers Sewer Monitoring \$18,445
- PTS – Street Work \$203,337
- Michaels Lining project \$10,300

### **Revenue and Expense Summary**

2020 Waste Hauler revenue for septage, holding tank, grease trap, landfill leachate, and other surcharged wastewaters totaled \$411,034 (+10.6%).

Additional information on revenues and expenses vs. the 2020 WWTP budget plan can be found in the final Revenue and Expense Report summary.

The Compliance Maintenance Annual Report (CMAR) which shows in greater detail the operational performance of the Wastewater Utility for 2020 will be forwarded to the DNR Plymouth Service Center, upon approval from the Board of Public Works and the City Council. The CMAR is available on June 15 with a June 30 submittal deadline.

### **SANITARY SEWER MAINTENANCE SUMMARY**

#### **Basic Sanitary Sewer Street Dept. Utility Repairs and Maintenance**

- Maple and Larabee Intersection – Replaced top 5 feet of manhole, top two rings, and installed new casting.
- Simplicity Lot (Grass) - Installed new Casting
- 322 Spring Street – Installed new Casting.

\* (%) Indicates % increase or decrease from 2019

