

**City of Port Washington
Wastewater Utility
2019 Annual Report**

Operations Performance Summary

The Wastewater Utility recorded a total annual influent plant flow of 605,420,000 gallons (+20.8 %) * in 2019. The average daily plant flow was 1.66 million gallons versus 1.37 million in 2018. There were five bypassing events during 2019. The first two occurred on July 18, with power outages affecting both locations. 250,000 gallons were bypassed at the WWTP and 145,000 were bypassed at lift station 1 for the same reason. The next 2 bypass events occurred on October 1. The WWTP had a bypass of 250,000 gallons when one of the screw pumps failed and all screw pumps were needed. The other bypass occurred on east Jackson Street, where 3 manholes overflowed 50,000 gallons when the sewer was overwhelmed in that area. The last bypass event of 2019 occurred at the WWTP, when a tree took out both sources of power along the bike path. 250,000 gallons were bypassed into Lake Michigan. Personnel look forward to a new back up generator in early 2021.

Total rainfall in 2019 was 45.6 inches (+2.4 %).

The plant Influent Biochemical Oxygen Demand (BOD) loading was 906,524 pounds (+1.5%) for a daily average of 2,483 pounds, or 180 mg/l. The treatment plant reduced the BOD in the effluent to 63,512 pounds (+30.3 %) for the year and a daily average of 174 lbs, or 13 mg/l.

The plant Influent Suspended Solids (TSS) loading was 823,841 pounds (+8.1%), for a daily average of 2257 pounds, or 163 mg/l. The treatment plant reduced the yearly effluent TSS to 31,995 pounds (+41.9 %), with a daily average of 88 pounds or 6.3 mg/l.

The plant influent phosphorus loading for the year was 21,722(-1.0 %) pounds for a daily average of 59.5 pounds or 4.3 mg/l. The treatment plant reduced the yearly effluent phosphorus to 2555 pounds (+9.9 %), with a daily average of 7 pounds or 0.51 mg/l. Phosphorus removal was achieved with 69,638 pounds (-2.7 %) 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>2018 discharges</u>	<u>% Removal</u>
BOD - 30 mg/l	63,512 lbs.	93.0 %
TSS - 30 mg/l	31,995 lbs.	96.1 %
Phosphorus - 0.9 mg/l	2,555 lbs.	88.2 %

In 2019 the plant produced a total of 237 metric tons (+10.2 %) of anaerobic sludge.

The Sewage Utility Rate did not increase in 2019 and planned increases were in effect for 2020.

**CITY OF
PORT WASHINGTON**

**DEPARTMENT OF
PUBLIC WORKS**

WASTEWATER UTILITY

Dan E. Buehler
Wastewater Supt.
450 North Lake Street
P. O. Box 307
Port Washington, WI
53074-0307

Phone: (262) 284-5051

Fax: (262) 284-5798

Email:
dbuehler@ci.port-washington.wi.us

**Port Washington City Hall
100 West Grand Avenue
P.O. Box 307
Port Washington, WI
53074-0307**

WWTP Capital purchases for 2019

- East Aeration Tank Air Valves - \$2490
- UV Gait Repair/ rebuild \$2405
- SCADA Work – Gas Meter Project \$7755
- Breaker Replacement- Blower #3 \$1185
- TWAS Pump Rebuild \$2596
- TWAS Pump Rebuild #2 \$6723
- Radar- Scum Wet Well \$1886
- L.S.1 Check Overflow valve replacement \$11,293
- Boiler Room Sludge valve Rebuilds \$6383
- Gas Detection Work \$7984
- Rebuild RAS pump 1 and 4 - \$14,905
- Flow Meter Lift 1 \$5019
- Ravine Street Sewer Line Rebuild \$7420
- Controls/ Panel Upgrade – L.S. 3 \$21,766
- Breaker Replacement Blower #1 - \$1185
- Replace Blower #4 Drive - \$18,910
- L.S. 1 Check Valve Replacements Dry Well - \$5835
- L.S. 1 Level Transducer Replacement - \$2059
- Rebuilt 3 dry well pumps at Lift 1 - \$30,310
- Rebuild connections and valves on Jetter truck - \$7,334
- Replace door L.S. 6 - \$1760
- Replace Circuit Breaker L.S. 6 - \$2429
- Laptop – WWTP - \$1379
- Replace North Door/ Frame Headworks Bld. - \$2366
- Replace 2 Booster Pumps- Plant Boiler - \$5590
- Replace 6 inch plug valve Sludge Room \$1539

Total WWTP /Lift Station Capital Related Costs - \$180,506

SANITARY Sewer Capital Purchases for 2019

- Sewer Camera Work - \$5127
- Sewer Rehab. Work Mineral Springs Road - \$40,000
- Miscellaneous Work – 2019 Street Projects - \$19,784

Revenue and Expense Summary

2019 Waste Hauler revenue for septage, holding tank, grease trap, landfill leachate, and other surcharged wastewaters totaled \$371,577 (-5.6%).

Additional information on revenues and expenses vs. the 2019 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 2019 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 August 15 with a August 30 submittal deadline.

SANITARY SEWER MAINTENANCE SUMMARY

Basic Sanitary Sewer Street Dept. Utility Repairs and Maintenance

- Lateral Repair East Jackson Street - \$2420.
- Benjamin and Thomas Intersection - Replaced top 1 foot of sanitary manhole and installed new casting.
- 231 North Garfield Replaced top 2 feet of manhole and installed new casting
- 201 Webster – Replaced top 1 foot of manhole
- Jaque Lane – Replaced top 1 foot of manhole, replaced top 2 rings.
- Ravine Street – Reinforced exposed Sanitary sewer with sheets of steel and supported with concrete.
- Jackson and Harborview – Reset casting, added fill to repair sinkhole, bulkhead repair for old 18 inch sewer line.

* (%) Indicates % increase or decrease from 2018