

# ***Poughkeepsies' Water Treatment Facility***

## **MEMORANDUM**

January 3, 2020

**To:** Joint Water Board

**From:** Randy J. Alstadt, P.E.  
Water Plant Administrator

**Subject:** **December 2019 Status Report**

### **Water Quality/Production Issues**

The December average daily raw water flow was 10.36 MGD compared to 10.88 MGD in October 2019 and 10.54 MGD in November 2018. Water quality averaged 0.03 NTU which is identical to November 2019. The drinking water maximum contaminant level is 0.30 NTU.

### **Plant Update**

Plant operation was challenging. Raw water turbidity was less than November allowing us to better maintain the solids handling process. The solids thickener was at 9.0 feet of solids at the end of December which was 2.5 feet greater than end of November. Centrifuge average operating rate was 15.0gpm compared to 22.7 gpm in November 2019.

Our ozone system worked well in November.

Filters ran well. Average filter runs have returned to prior upgrade. Filter runs in December were 17,330 gal/ft<sup>2</sup> compared to November 2019 which was 13,911 gallons/ft<sup>2</sup>.

Low Lift Pump #1 was removed from service December 5<sup>th</sup> for repairs. The pump was repaired and reinstalled December 23<sup>rd</sup>. We continue to be concerned over the frequency of Low Lift Pump failures. The manufacturer is currently conducting an engineering review of the pump design to determine if there is a design problem

Maintenance is continuing change out the sodium hypochlorite pumps.

**Treatment Process Comparison November 2019 vs. December 2019**

Parameter	November-19			December-19		
	Average	Maximum	Minimum	Average	Maximum	Minimum
Raw Flow, MGD	10.88	12.82	8.28	10.36	14.68	6.88
Raw Turbidity, NTU	98	241	18	51	127	19
Effluent Turbidity, NTU	0.03	0.10	0.02	0.03	0.07	0.02

**Sludge Process Comparison November 2019 vs. December 2019**

Parameter	Nov-19	Dec-19	Change	
			Quantity	Percent
Residual Solids, gallons	1,451,683	1,270,868	(180,815)	-12%
Backwash, gallons	2,055,000	1,755,000	(300,000)	-15%
Thickener, gallons	840,044	610,259	(229,785)	-27%
Plate Settler, gallons	38,516	51,862	13,346	35%
Centrifuge #1 gallons	412,685	338,170	(74,515)	-18%
Centrifuge #2 gallons	505,025	338,759	(166,266)	-33%
Centrifuge Total	917,710	676,929	(240,781)	-26%
Centrifuge #1 gpm	22.9	NA	NA	NA
Centrifuge #2 gpm	22.4	15.0	(7.4)	-33%
Solids Hauled, tons	552.08	375.68	(176.4)	-32%
Feed Solids Concentration	7.5	5.5	(2.1)	-27%
Centrifuge #1 Cake percent	32.4	30.1	(2.4)	-7%
Centrifuge #2 Cake percent	31.1	30.1	(0.9)	-3%

**UV Replacement**

Design and construction management services were awarded to Tighe&Bond. Kick off meeting was held.

**Upgrade**

Trailer manufacturing is continuing. Construction has been delayed further. Our first trailer has not been received.

PLCs are now complete. Installation documents are complete, however, we have not received approval by State Health. Project is expected to be completed in early 2020.

**Staffing**

Our new Water Treatment Operator Trainee started January 2, 2020. Water Treatment Operator Trainee. We also have an operator off on medical leave until early January 6th. As a result we are experiencing increased overtime and challenges in staffing our sludge plant.