

Appleton Water Treatment Plant Operations Synopsis October, November, December 2016

Summary

The table below presents selected water production and quality performance metrics for the current and previous reporting periods. All compliance parameters met or exceeded regulatory requirements. During the quarter, average water production and electrical energy demand decreased by about 13% consistent with winter water demand conditions.

WATER PLANT PARAMETERS	Previous (Q3 2016)			Current (Q4 2016)		
	July	August	September	October	November	December
Water Treated						
Finished (million gallons)	299.7	314.8	282.1	262.9	247.1	260.1
Finished (million gallons / day)	9.7	10.1	9.4	8.5	8.2	8.4
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	661.5	613.1	503.1	451.2	427.9	452.5
MWH / million gallons produced	2.21	1.95	1.78	1.72	1.73	1.74
Turbidity						
Lake (NTU)	13.4	18.3	15.6	21.3	24.4	19.5
Finished (NTU)	0.05	0.04	0.03	0.02	0.03	0.02
Finished (<0.15 NTU standard)	100%	100%	100%	100%	100%	100%
Water System Microbial Quality						
Total Coliform Samples	81	81	82	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Disinfectant Contact Time						
Minimum CT Ratio Provided	3.2	5.4	4.0	3.1	3.2	1.8
Hardness						
Lake Total / Calcium (mg/L)	187/98	173/87	177/86	181/91	189/99	198/107
Finished Total / Calcium (mg/L)	88/12	87/12	83/15	86/19	91/21	98/30
Finished Water Quality						
Total Chlorine (mg/L)	1.55	1.83	1.97	2.06	2.10	2.16
pH (SU) Min/Max	8.2/8.6	8.1/8.8	8.4/8.8	8.3/8.9	8.5/8.7	8.6/8.9
Water Temperature (Degrees F)	75.9	77.7	70.5	57.7	47.5	34.3
Fluoride (mg/L)	0.62	0.68	0.71	0.72	0.72	0.73
Orthophosphate (mg/L)	0.73	0.70	0.70	0.67	0.62	0.64

Laboratory

- In support of plant operations, staff conducted analyses according to method protocols for pH, turbidity, alkalinity, hardness, free/total chlorine, ammonia, phosphorus, and fluoride.
- In support of distribution operations, staff performed required 81 monthly Coliform bacteria analyses along with heterotrophic plate count (HPC) testing.
- Staff collected and processed raw and finished water samples to comply with LT2 and DBPR2 sampling requirements. Support was provided to consecutive customers with shipping of DBPR2 samples.

Safety

- WTF Safety programs were maintained by completing scheduled safety inspections. There were no significant incidents to report.
- The Lock-Out/Tag-Out program was reviewed for potential improvements.

Operations

- The South Recarbonation Basin was placed into service.
- Softeners #1 & #2, North Pre-Treatment Basin and the North Recarbonation Basin were removed from service for cleaning.
- The Lake Station intake was cleaned and inspected.

RUPIP

- All membrane equipment was idle during the quarter.
- Two UV Disinfection reactors were in continuous service during the quarter.

Softener Recoating Project

- The recoating work on #3 Softener was completed during the quarter.

Water Towers

- The Glendale Tower was placed into active service in October.
- The Matthias Tower was removed from service for minor maintenance and upgrades.
- The Oneida Tower was permanently removed from water service. The structure will remain as a base for cell carrier equipment. The companion SCADA site will remain active to provide real-time monitoring of system pressures at that location.

Staffing & Training

- All Water Treatment Facility vacancies have been filled.
- All staff have completed mandatory training for the year.