

**Appleton Water Treatment Plant
Operations Synopsis
April, May, and June 2020**

Performance Summary

The table below presents selected water production and quality performance metrics for the current and previous reporting periods.

Treated Water Quality. All compliance parameters met or exceeded regulatory requirements.

Water Production. Compared with Q1 of 2020 (quarter over quarter or Q/Q), average water production did not significantly change. Compared with Q2 of 2019 (year over year or Y/Y), average water production decreased by about 2.3%. Some significant portion of this quarterly decrease can be attributed to economic contraction from statewide pandemic countermeasures begun in the latter half of March 2020.

Raw Water Quality. Q/Q and Y/Y average raw water turbidity data were consistent with late spring and early summer lake conditions.

Energy Efficiency. In terms of applied electrical energy, Q/Q efficiency improved by approximately 6% likely due to improved water transmissivity. However, Y/Y efficiencies declined slightly by less than 2%.

WATER PLANT PARAMETERS	Previous (Q1 2020)			Current (Q2 2020)		
	January	February	March	April	May	June
Water Treated						
Finished (million gallons), total	266.3	249.9	257.0	236.6	271.2	271.2
Finished (million gallons / day), average	8.6	8.6	8.3	7.9	8.7	9.0
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	470.2	450.5	482.0	422.2	439.0	470.0
MWH / million gallons produced	1.77	1.80	1.88	1.78	1.62	1.73
Lake Turbidity (NTU), average	2.4	1.4	1.9	7.4	5.4	8.6
Water System Microbial Quality						
Total Coliform Samples	82	81	85	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Finished Water Quality						
Water Temperature (Degrees F)	33.8	33.8	36.1	43.2	55.6	71.5
Turbidity (NTU), average	0.02	0.02	0.02	0.02	0.02	0.02
%<0.15 NTU standard	100	100	100	100	100	100
pH (SU), average	9.0	8.9	8.9	8.9	8.8	8.8
Total Chlorine (mg/L)	2.01	2.0	1.95	1.98	1.98	1.94
Fluoride (mg/L)	0.72	0.68	0.70	0.68	0.75	0.73
Orthophosphate (mg/L)	0.88	0.85	0.75	0.73	0.84	0.84

Laboratory

- In support of plant operations, staff conducted analyses according to method protocols for pH, turbidity, alkalinity, hardness, free/total chlorine, ammonia, phosphorus, potassium permanganate, 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 Disinfection By-Products Rule (DBPR) sampling requirements. Provided support to consecutive customers with shipping of DBPR2 samples.
- Received WDNR approval for Lead & Copper Rule (LCR) sampling sites.

Safety

- Maintained WTF Safety programs by completing scheduled safety inspections, fire prevention inspections, and monthly meetings. No significant incidents to report.
- Implemented appropriate COVID-19 countermeasures as directed by city policy.

Operations

- Operated two UV Disinfection reactors continuously during the quarter.
- Awarded construction phase for the Lake Station mechanical/electrical rehabilitation.
- Completed asbestos removal at the Lake Station.
- Awarded maintenance and required upgrades project for the Ridgeway Tower.
- Awarded contract for Optimized Corrosion Control Treatment (OCCT) pipe loop testing apparatus and related plant sampling and supply water modifications.
- Resumed gradual Main Pressure Zone pressure increase as recommended by Water Distribution System Master Plan.
- Successfully completed confirming WPPI electrical generator capacity test.
- Participated in first workshop of compliance project for America's Water Infrastructure Act (AWIA).

Staffing & Training

- Adjusted staff schedules and work areas to limit group sizes and face-to-face contact among employees.