

**Appleton Water Treatment Plant
Operations Synopsis
October, November, December 2022**

Performance Summary

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

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

Water Production. Compared with Q4 of 2021 (Y/Y) average production decreased by about 1%.

Raw Water Quality. Average Q/Q lake turbidity increased nearly 25% from Q3 2022. Y/Y levels also increased by less than 1% from Q4 2021.

Energy Efficiency. Applied electrical energy efficiency Y/Y increased by over 11% from Q4 2021.

WATER PLANT PARAMETERS	Previous (Q3 2022)			Current (Q4 2022)		
	July	August	September	October	November	December
Water Treated						
Finished (million gallons), total	308.5	305.1	269.1	264.5	246.5	262.3
Finished (million gallons / day), average	9.9	9.8	9.0	8.5	8.2	8.5
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	527.8	522.8	461.1	443.9	424.7	457.9
MWH / million gallons produced	1.7	1.7	1.7	1.7	1.7	1.7
Lake Turbidity (NTU), average	10.19	12.71	10.54	8.17	18.76	14.81
Water System Microbial Quality						
Total Coliform Samples	81	81	81	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Finished Water Quality						
Water Temperature (Degrees F)	75.5	75.1	68.9	53.5	43.16	33.51
Turbidity (NTU), average	0.06	0.06	0.04	0.05	0.05	0.05
%<0.15 NTU standard	100	100	100	100	100	100
pH (SU), average	8.4	8.5	8.6	8.7	8.8	8.8
Total Chlorine (mg/L)	1.79	1.80	1.87	1.77	1.85	1.89
Fluoride (mg/L)	0.70	0.73	0.73	0.70	0.69	0.69
Orthophosphate (mg/L)	0.63	0.70	0.67	0.69	0.61	0.65

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.
- Quarterly disinfection by-product rule monitoring with wholesale water customers (DBPR-2) was completed.

Safety

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

Operations

- Operated two UV Disinfection reactors continuously during the quarter.
- Maintained Main Pressure Zone pressure increases as recommended by Water Distribution System Master Plan.
- Nature's Way transmission line repaired.
- Electrical testing successfully completed at Water Plant.
- Handrail installed on top of Matthias Tower. Matthias Tower disinfected per AWWA guidelines and put back in service.
- Faith Technologies worked on fire alarm system upgrade.
- #1 and #2 Sodium Hypochlorite tanks successfully relined and returned to service.
- Air compressor replacement project ongoing.
- 2nd Raw water line piping project started.

Staffing & Training

- Staffing levels temporarily reduced by reassignment of one Water Plant Operator.
- Maintained normal staff schedules and work assignments.