

**Appleton Water Treatment Plant
Operations Synopsis
January, February, and March 2023**

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 Q1 of 2022 (Y/Y) average production decreased by nearly 6%.

Raw Water Quality. Average Q/Q lake turbidity decreased nearly 91% from Q4 2022. Y/Y levels also decreased by just less than 41% from Q1 2022.

Energy Efficiency. Applied electrical energy efficiency Y/Y increased by almost 5% from Q1 2022.

WATER PLANT PARAMETERS	Previous (Q4 2022)			Current (Q1 2023)		
	October	November	December	January	February	March
Water Treated						
Finished (million gallons), total	264.5	246.5	262.3	260.8	235.8	257.6
Finished (million gallons / day), average	8.5	8.2	8.5	8.4	8.4	8.3
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	443.9	424.7	457.9	453.4	410.9	451.3
MWH / million gallons produced	1.7	1.7	1.7	1.7	1.7	1.8
Lake Turbidity (NTU), average	8.17	18.76	14.81	1.53	1.15	1.16
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)	53.5	43.16	33.51	33.8	35.15	37.29
Turbidity (NTU), average	0.05	0.05	0.05	0.04	0.05	0.05
%<0.15 NTU standard	100	100	100	100	100	100
pH (SU), average	8.7	8.8	8.8	8.8	8.8	8.8
Total Chlorine (mg/L)	1.77	1.85	1.89	2.07	2.19	2.19
Fluoride (mg/L)	0.70	0.69	0.69	0.69	0.73	0.71
Orthophosphate (mg/L)	0.69	0.61	0.65	0.62	0.63	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 Water Treatment Facility Safety programs by completing scheduled safety inspections, fire prevention inspections, and monthly meetings. No significant incidents to report.

Operations

- Operated two UV Disinfection Reactors continuously during the quarter.
- Maintained Main Pressure Zone pressure increases as recommended by Water Distribution System Master Plan.
- North Pretreatment Basin and North Softener Inlet channel out of service for cleaning and inspection.
- Harrison sanitary meter calibration successfully completed at Water Plant.
- #2 Softener out of service for cleaning and inspection.
- Faith Technologies worked on fire alarm system upgrade.
- #1 Sodium Hypochlorite Tank successfully repaired and returned to service.
- Air compressor replacement project ongoing.
- 2nd Raw water line piping project started.

Staffing & Training

- Staffing levels temporarily reduced by resignation of one Water Plant Operator.
- Maintained operations schedules with overtime and deferred maintenance work assignments.