

2020
NORTH SHORE WATER COMMISSION
ANNUAL REPORT

400 West Bender Road
Glendale, Wisconsin

Whitefish Bay - Glendale - Fox Point

NORTH SHORE WATER COMMISSION

January 20, 2021

2020 Pumpage Report

Whitefish Bay - Glendale - Fox Point, WI

All values are in units of million gallon (MG) unless noted otherwise.

ALL METERING	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Total
Whitefish Bay	30.401	25.945	27.705	27.594	30.480	34.209	39.913	43.785	32.652	30.369	27.296	28.743	379.092
Glendale	42.747	44.571	45.447	41.488	47.041	54.686	58.853	63.654	50.742	48.324	43.232	44.221	585.006
Fox Point	14.652	13.816	14.537	13.738	17.919	20.973	24.275	27.383	18.956	16.833	15.785	17.088	215.955
Mequon	6.201	5.735	5.885	6.674	7.213	7.864	8.527	8.812	7.267	6.841	6.271	6.742	84.032
Member Pumpage	87.800	84.332	87.689	82.820	95.440	109.868	123.041	134.822	102.350	95.526	86.313	90.052	1,180.053
Total Pumpage	94.001	90.067	93.574	89.494	102.653	117.732	131.568	143.634	109.617	102.367	92.584	96.794	1,264.085

ALLOCATION % (MEMBERS)	Jan	Feb	Mar	Apr	Apr	June	Jul	Aug	Sep	Oct	Nov	Dec	Cumulative
Whitefish Bay	34.63%	30.77%	31.59%	33.32%	31.94%	31.14%	32.44%	32.48%	31.90%	31.79%	31.62%	31.92%	32.13%
Glendale	48.69%	52.85%	51.83%	50.09%	49.29%	49.77%	47.83%	47.21%	49.58%	50.59%	50.09%	49.11%	49.57%
Fox Point	16.69%	16.38%	16.58%	16.59%	18.78%	19.09%	19.73%	20.31%	18.52%	17.62%	18.29%	18.98%	18.30%

ALLOCATION % (ALL)	Jan	Feb	Mar	Apr	Apr	June	Jul	Aug	Sep	Oct	Nov	Dec	Cumulative
Whitefish Bay	32.34%	28.81%	29.61%	30.83%	29.69%	29.06%	30.34%	30.48%	29.79%	29.67%	29.48%	29.70%	29.99%
Glendale	45.48%	49.49%	48.57%	46.36%	45.83%	46.45%	44.73%	44.32%	46.29%	47.21%	46.69%	45.69%	46.28%
Fox Point	15.59%	15.34%	15.53%	15.35%	17.46%	17.81%	18.45%	19.06%	17.29%	16.44%	17.05%	17.65%	17.08%
Mequon	6.60%	6.37%	6.29%	7.46%	7.03%	6.68%	6.48%	6.14%	6.63%	6.68%	6.77%	6.97%	6.65%

STATISTICS	Max Day	Ave Day	Min Day
Whitefish Bay	2.187	1.036	0.389
Glendale	2.693	1.598	1.058
Fox Point	1.390	0.588	0.091
Mequon	0.400	0.231	0.154
Combined	6.451	3.454	2.254

NORTH SHORE WATER COMMISSION

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2020 Summary of Operations

Whitefish Bay - Glendale - Fox Point

VARIABLE COSTS	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	AVE
Chemicals (\$/MG)	\$56.69	\$59.29	\$56.76	\$55.64	\$57.99	\$58.47	\$61.65	\$60.56	\$63.81	\$68.50	\$61.29	\$64.03	\$60.39
Energy (KWH per MG)	2,075	1,994	1,945	1,952	1,909	1,713	1,795	1,791	1,904	1,899	1,922	1,941	1,903
Energy (\$/MG)	\$188.99	\$184.91	\$178.71	\$183.18	\$169.78	\$153.77	\$157.38	\$158.07	\$176.04	\$172.47	\$183.26	\$179.49	\$173.84
Energy (\$/KWH)	\$0.0911	\$0.0927	\$0.0919	\$0.0938	\$0.0889	\$0.0898	\$0.0877	\$0.0883	\$0.0925	\$0.0908	\$0.0953	\$0.0925	\$0.0914
PHYSICAL CHARACTERISTICS	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	AVE
Average Pressure (PSI)	82.4	82.4	82.3	82.5	81.9	82.0	82.4	82.3	82.2	83.1	82.0	81.9	82.3
Average Water Temp (F)	34.8	33.8	36.3	41.3	44.9	48.1	52.6	54.8	53.5	45.4	44.1	38.2	44.0
WATER QUALITY	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	AVE
Ave. Raw Turbidity (NTU)	20.8	18.8	10.8	7.2	12.1	1.3	1.7	3.2	4.0	1.7	1.7	17.3	8.4
Ave. Filter Effluent Turbidity (NTU)	0.08	0.08	0.07	0.06	0.06	0.06	0.07	0.06	0.07	0.05	0.05	0.06	0.06
Ave. Raw MPN Index (Total Coliform)	31.5	7.5	2.0	1.3	45.4	4.0	78.3	245.6	242.5	19.6	5.6	23.8	58.9
Ave. Raw pH	8.26	8.22	8.23	8.26	8.07	8.12	8.22	8.18	8.07	8.05	8.08	8.03	8.15
Ave. Tap pH	7.95	7.93	7.93	7.90	7.73	7.82	7.90	7.84	7.81	7.83	7.82	7.65	7.84
Ave. Tap Hardness (mg/L)	139	136	136	136	141	141	141	142	141	139	142	141	140
Ave. Tap Alkalinity (mg/L)	112	111	112	113	112	111	111	111	113	114	114	111	112
Ave. Tap Fluoride Res. (mg/L)	0.74	0.74	0.75	0.75	0.74	0.74	0.76	0.74	0.77	0.77	0.75	0.77	0.75
Ave. Tap Recative Phosphate Res. (mg/L)	0.62	0.70	1.03	1.05	1.07	1.04	1.06	1.05	1.09	1.07	1.12	1.02	0.99
Ave. Tap Total Chlorine Res. (mg/L)	2.88	2.90	2.63	2.63	2.72	2.70	2.83	2.76	2.78	2.76	2.66	2.84	2.76
CHEMICALS APPLIED (PPM)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	AVE
Sodium Hypochlorite (active lbs)	3.566	3.552	3.009	3.003	3.176	3.233	3.381	3.377	3.689	3.332	3.301	3.325	3.329
Aqua Ammonia (active lbs)	0.736	0.756	0.704	0.707	0.730	0.744	0.774	0.755	0.757	0.760	0.695	0.733	0.738
Fluoride (active lbs)	0.618	0.598	0.580	0.586	0.568	0.653	0.657	0.692	0.695	0.614	0.615	0.629	0.625
Alum (scale lbs)	18.824	19.300	14.320	11.832	14.959	7.956	8.561	9.141	9.869	6.782	7.385	18.157	12.257
Phosphates (active lbs)	0.665	0.812	1.117	1.099	1.083	1.171	1.204	1.167	1.121	1.077	1.030	1.033	1.048
Polymer - Coagulant Aid (scale lbs)	0.940	0.961	1.016	0.917	0.943	1.152	1.318	1.182	1.396	1.137	1.065	1.258	1.107
Polymer - Mussel Control (scale lbs)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.138	0.591	0.000	0.144
CHEMICALS APPLIED (LBS)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Sodium Hypochlorite (active lbs)	2,799	2,671	2,351	2,244	2,722	3,179	3,715	4,050	3,377	2,848	2,552	2,687	35,195
Aqua Ammonia (active lbs)	577	568	550	529	626	731	851	905	693	650	537	592	7,809
Fluoride (active lbs)	485	450	453	438	487	642	722	829	636	525	475	508	6,650
Alum (scale lbs)	14,775	14,515	11,189	8,842	12,822	7,821	9,405	10,963	9,033	5,797	5,709	14,675	125,546
Phosphates (active lbs)	522	611	873	821	928	1,151	1,323	1,399	1,026	920	796	835	11,205
Polymer - Coagulant Aid (scale lbs)	738	723	794	685	808	1,132	1,448	1,418	1,278	972	823	1,017	11,836
Polymer - Mussel Control (scale lbs)	0	0	0	0	0	0	0	0	0	973	457	0	1,430

CHEMICAL COST (\$/MG)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	AVE
Sodium Hypochlorite	19.15	19.20	16.31	16.28	17.22	17.53	18.33	18.30	20.00	18.06	17.89	18.02	\$18.02
Aqua Ammonia	8.76	9.30	8.67	8.70	8.98	9.15	9.53	9.29	9.32	9.35	8.55	9.01	\$9.05
Fluoride	4.38	4.24	4.11	4.15	4.24	4.87	4.91	5.16	5.19	4.58	4.59	4.69	\$4.59
Alum	10.62	10.93	8.14	7.19	9.09	4.84	5.20	5.56	6.00	4.12	4.49	11.04	\$7.27
Phosphates	7.73	9.44	13.00	12.78	12.59	13.62	14.00	13.57	13.04	12.52	11.98	12.02	\$12.19
Polymer - Coagulant Aid	6.05	6.18	6.53	6.53	6.93	8.46	9.69	8.69	10.26	8.36	7.82	9.25	\$7.89
Polymer - Mussel Control	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.50	5.97	0.00	\$1.46
Total	\$56.69	\$59.29	\$56.76	\$55.64	\$59.04	\$58.47	\$61.66	\$60.56	\$63.81	\$68.50	\$61.29	\$64.03	