

October 2023

OPERATIONS' DEPARTMENT MONTHLY REPORT

PUMPAGE	HIGH LIFT		LOW LIFT		2023 VS 2022
	2022	2023	2022	2023	HL
Total in MG	380.032	379.021	392.783	390.202	-0.27%
Daily Average (MG)	12.259	12.241	12.670	12.587	
Max. Day (MG)	14.413	15.188	14.747	15.326	2023 VS 2021
					HL
Gal/KwH	1,190	1,161	5,162	4,851	-3.37%
ELECTRICAL COSTS					
A. Pumping:	2022		2023		
	KwH	\$	KwH	\$	
High Lift	316,191	\$24,423.03	321,013	\$28,721.55	
Low Lift	75,571	\$5,837.21	80,116	\$7,168.14	
Wash Pump 1	1,400	\$108.14	2,100	\$187.89	
Georgia St. Bstr.	55,200	\$5,425.08	56,400	\$6,028.61	
Wilgus Ave. Bstr.	2,900	\$391.58	3,200	\$470.73	
EE Pit / Bstr.	5,073	\$652.93	5,415	\$763.73	
Erie Ave. Bstr.	13,600	\$2,115.79	13,600	\$2,388.76	
Sub Total	469,935	\$38,953.76	481,844	\$45,729.41	\$/KwH 14.5%
B. Treat./Fiscal/Misc.	2022		2023		
	KwH	\$	KwH	\$	
Office & Maint. Bldg.	6,422	\$828.31	8,392	\$1,174.32	
Filter Plant / Pump Station / 2nd Service	59,438	\$5,003.12	55,971	\$5,795.22	
Sub Total	65,860	\$5,831.43	64,363	\$6,969.54	\$/KwH 22.3%
C. Distribution:	2022		2023		
	KwH	\$	KwH	\$	
Taylor Hill Tank	913	\$133.30	360	\$68.96	
Kohler Meter Pit	0	\$0.00	0	\$0.00	
EE Tower	1,033	\$148.63	1,129	\$176.94	
Washington (PRV) Pit	179	\$41.67	205	\$49.72	
Sub Total	2,125	\$323.60	1,694	\$295.62	\$/KwH 15.3%
Total Electrical Costs	537,920	\$45,108.79	547,901	\$52,994.57	
Electrical Cost / MG		\$118.70		\$139.65	
NATURAL GAS COSTS					
	2022		2023		
	CCF Used	Cost	CCF Used	Cost	
Production Facility	777	\$574.05	1,220	\$568.00	
South Basin	890	\$723.40	471	\$343.73	
Georgia St. Bstr.	25	\$42.04	25	\$28.03	
Erie Ave. Bstr.	75	\$84.87			
Wilgus Ave. Bstr.	0	\$17.33	1	\$16.15	
Office & Maint. Bldg.	492	\$361.31	417	\$247.46	
Total Natural Gas Costs	2,259	\$1,803.00	2,134	\$1,203.37	\$/CCF -29.3%
Natural Gas Cost / MG		\$4.74		\$3.17	
CHEMICAL COSTS					
	2022		2023		
	Lbs. Used	Cost	Lbs. Used	Cost	
Alum	55,679	\$10,105.74	53,981	\$10,877.17	11.0%
Carbon	0	\$0.00	0	\$0.00	#DIV/0!
Chlorine	7,462	\$11,043.76	8,007	\$16,254.21	37.2%
Fluoride	1,879	\$2,611.81	1,549	\$3,131.30	45.4%
KMnO4	152	\$555.02	254	\$927.10	0.0%
Cationic Polymer	0	\$0.00	0	\$0.00	#DIV/0!
Liquid Phosphate	4,428	\$6,987.38	4,609	\$14,098.93	93.9%
Total Chemical Costs		\$31,303.71		\$45,288.72	44.7%
Chemical Cost / MG		\$82.37		\$119.34	
Grand Total		\$78,215.50	\$99,486.66		27.20%
Total Cost / MG		\$205.81	\$262.16		27.38%

YTD HL 2023 vs 2022	-1.12%	YTD HL HIGH DAY PUMPAGE	15.876	June 21, 2023
YTD HL 2023 vs 2021	-1.39%	YTD HL LOW DAY PUMPAGE	9.294	January 1, 2023

NOTE:

	YTD HL Ave Day
2023	12.460
2022	12.531
2021	12.641

COMPARATIVE SUMMARY OF PLANT OPERATIONS

October 2022

vs

October 2023

Pumping Record

High Lift

Low Lift

	2022	2023	Diff.		2022	2023	Diff.
Tot. Water in MG	380.032	379.021	-0.27%	Tot. Water in MG	392.783	390.202	-0.66%
Daily Average	12.259	12.241	-0.15%	Daily Average	12.670	12.587	-0.66%
Maximum Day	14.413	15.188	5.38%	Maximum Day	14.747	15.326	3.93%
Minimum Day	10.188	10.030	-1.55%	Minimum Day	10.753	9.978	-7.21%
By Natural Gas	3.922	6.825	74.02%	By Natural Gas	2.704	1.567	-42.05%
Power in KWH	316,191	321,013	1.53%	Power in KWH	75,571	80,116	6.01%
Gals. per KWH	1,190	1,161	-2.45%	Gals. per KWH	5,162	4,851	-6.03%
Power \$ / KWH	\$0.07724	\$0.08947	15.84%	Power \$ / KWH	----	----	----
Power \$ / MG	\$64.27	\$75.69	\$11.42	Power \$ / MG	\$14.86	\$18.37	\$3.51
Tot. Power \$/MG	\$119.06	\$140.04	\$20.98	Tot. Power \$/MG	----	----	----

Treatment Chem.

Lbs. Used

Cost

	2022	2023	Diff.		2022	2023	Diff.
Total Lbs.				Total Cost			
Alum	55,679	53,981	-3.05%	Alum	\$10,105.74	\$10,877.17	\$771.43
Carbon			#DIV/0!	Carbon	\$0.00	\$0.00	\$0.00
Chlorine	7,462	8,007	7.30%	Chlorine	\$11,043.76	\$16,254.21	\$5,210.45
KMnO4	152	254	67.11%	KMnO4	\$555.02	\$927.10	\$372.08
Polymer	0	0	#DIV/0!	Polymer	\$0.00	\$0.00	\$0.00
Liquid Phosphate	4,428	4,609	4.09%	Liquid Phosphate	\$6,987.38	\$14,098.93	\$7,111.55
Lb/ MG:				Cost / MG:			
Alum	141.8	138.3	-2.41%	Alum	\$25.73	\$27.88	\$2.15
Carbon	0.0	0.0	#DIV/0!	Carbon	#DIV/0!	#DIV/0!	#DIV/0!
Chlorine	19.0	20.5	8.01%	Chlorine	\$28.12	\$41.66	\$13.54
KMnO4	0.4	0.7	68.21%	KMnO4	\$1.41	\$2.38	\$0.96
Liquid Phosphate	11.3	11.8	4.78%	Liquid Phosphate	\$17.79	\$36.13	\$18.34

Fluoride:	2022	2023		Fluoride:	2022	2023	
Total Lbs.	1,879	1,549	-17.56%	Cost	\$2,611.81	\$3,131.30	\$519.49
mg/l applied as F	0.72	0.72		Cost/MG	\$6.88	\$8.26	\$1.38
Av. Res. Plt. Tap	0.70	0.70					

Water Quality:

Raw

TAP

	2022	2023			2022	2023
Turbidity	6.00	4.70		Turbidity	0.040	0.031
pH	8.26	8.29		pH	7.62	7.63
Alkalinity	109.7	109.4		Alkalinity	100.9	100.9
MF (E-Coli)	2.4	6.5		Plate Count	0.00	0.00
Temperature	50.2	54.8		Colilert	0	0
Wash-H2O % /LL	2.26	2.35		Temp.	53.2	58.6
Av. Flt. Run/hrs	92.0	95.4		Cl Res.	0.88	0.87
Av. ROF / MG	1.45	1.43				

Natural Gas:

	2022	2023		2022	2023	Diff.
Nat. Gas Heating	307	561	Plant & South Basin	\$1,213.18	\$385.54	(\$827.64)
Nat. Gas Pumping	614	1,130		\$585.99	\$526.19	(\$59.80)

583

	CCF	Cost	Natural Gas Cost	Natural Gas CCF
#3 Gas Pump	130.2	\$60.62	\$911.73	1,691
#4 Gas Pump	756.0	\$351.97		
#7 Gas Pump	110.0	\$51.21		
Electric Generator	134.0	\$62.39		
Pumping totals	1130.2	\$526.19		

October 2023

% Run

65.8%
3.31%
0.6%
0.0%
99.3%
1.6%

Elapsed Time:

	11/1/2023	10/1/2023	
No. 6 Pump	75,343.0	74,853.2	489.8
Wash Pump Meter	5,877.95	5,853.36	24.59
No. 7 Pump	845.0	840.6	4.4
No. 8 Pump	59,540.3	59,540.3	0.0
No. 9 Pump	31,997.0	31,258.0	739.0
Wash Pump 2	167	155	12
No. 1 Prime Pump	1,054.9	1,054.2	0.7
No. 2 Prime Pump	1,136.4	1,134.9	1.5

Kw/Hr run

85.4
60.3
#DIV/0!
72.6
122.0
536.8
238.2
293.5
#DIV/0!
478.1

Wattour Meters:

Wash Pump 1	1320.1	1317.1	2,100
No. 9 Pump	6249.78	6205.22	44,556
No. 8 Pump	6837.1	6837.1	0
No. 6 Pump	2637.2	2510.2	35,560
Wash Pump 2	17.564	16.344	1,464
No. 1 Pump	10029.33	9951.322	78,008
No. 2 Pump	4950.058	4937.507	12,551
No. 3 Pump	1010.626	936.983	73,643
No. 4 Pump			0
No. 5 Pump	12,756.010	12,599.199	156,811

Garage (MWatt/Hrs.)	1,108.50	1,105.82	2,680
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Power Co. (Step #3)	42,717	42,333	460,800
Left Meter - OUTSIDE			

Volume Used:

Nat. Gas (Correct)	46,182,796	46,091,569	114,672
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Elapsed Time:

Emer. Generator	1,130.6	1,123.9	6.7
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Elapsed Time:

No. 1 Pump	18,598.5	18,453.1	145.3
No. 2 Pump	21,115.00	21,062.31	52.69
No. 3 Elec. Pump	3,459.3	3,208.4	250.9
No. 3 Nat. Gas Pump	599.3	595.1	4.2
No. 4 Elec. Pump	0.00	0.00	0.0
No. 4 Nat. Gas Pump	126.2	109.4	16.8
No. 5. Pump	26,672.350	26,344.340	328.010
UV Building Generator	156.1	154.5	1.6

% Run

19.5%
7.1%
33.7%
0.6%
0.0%
2.3%
44.1%
0.2%

11/1/2023	10/1/2023
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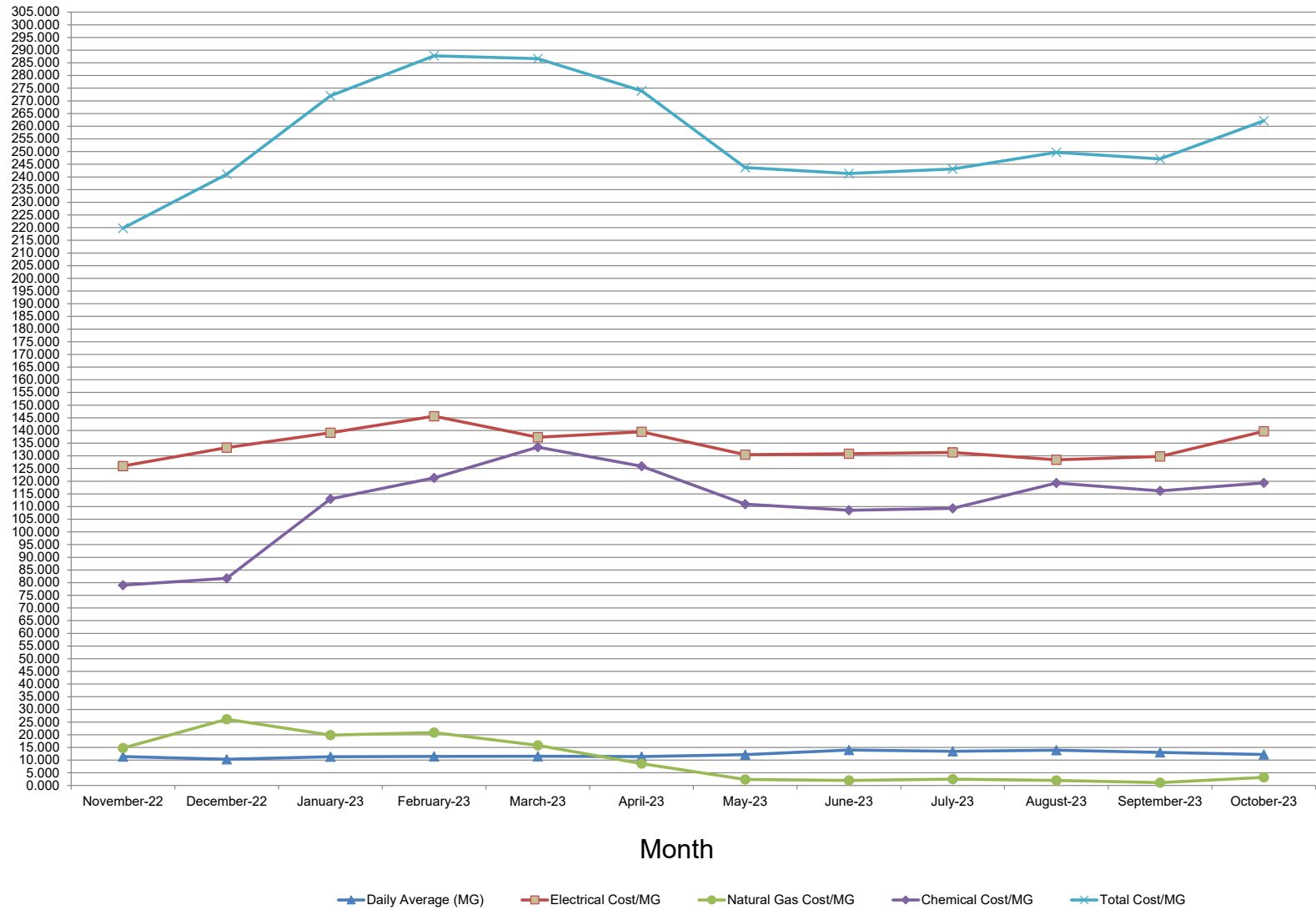
SLUDGE No. 1 Hour Meter	0.0	0.0	0
SYSTEM No. 2 Mag Meter	10,202,400	9,860,890	341,510
Recycle Meter (Reset to zero each month)			341,510

Power Cost	\$0.0894716	Bill >>>>	\$42,302.17
	0.40268125	KWH >>>	472,800
Init. Chg.	\$41,228.51		
	\$	KWH	
Kohler Pit			
Horizon	\$149.36	888	
Taylor	\$68.96	360	
ALT. 72 Park	\$644.29	1,600	
Geo. Ave.	\$6,028.61	56,400	
Wilgus Ave.	\$470.73	3,200	
EE Pit	\$763.73	5,415	
EE Tower	\$176.94	1,129	
Washington	\$49.72	205	
Office	\$1,174.32	8,392	
Erie Ave.	\$2,388.76	13,600	
Total	\$53,143.93	551,989	
			Low L. KWH 80,116
			L.L. Cost \$ \$7,168.14
			High L. KWH 321,013
			H.L. Cost \$ \$28,721.55
			Total Cost \$35,889.69
			Plant Costs \$5,795.22

SUMMARY

	HIGH LIFT		LOW LIFT	
	2022	2023	2022	2023
Tot. Pump	380.032	379.483	392.783	390.202
Daily Ave.	12.259	12.241	12.670	12.587
Max. Day	14.413	15.188	14.747	15.326
Min. Day	10.188	10.030	10.753	9.978
By Nat. Gas	3.922	6.825	2.704	1.567
Power KWH	316,191	321,013	75,571	80,116
Gals/KWH	1190	1161	5162	4851
Cost/KWH	\$0.07724	\$0.08947	*****	*****
Cost/MG	\$64.27	\$75.69	\$14.86	\$18.37
Tot. Cost/MG	\$119.06	\$140.04	*****	*****

Plant Operations: Expense Report



October 2023: Sheboygan Water Utility Plant Operations Summary

