



Monthly Operating Report

October: 2019

So. Sangamon
Water Commission
November 18th, 2019

SSWC

9199 Buckhart Rd Ochester IL 62563

TABLE OF CONTENTS

SECTION	PAGE NO.
Executive Summary.....	ES-1
1. SAFETY	1-1
1.1 Safety Training	1-1
1.2 Lost time Accidents	1-1
1.3 Safety Audit	1-1
1.4 Miscellaneous Safety.....	1-1
2. COMPLIANCE, FLOWS AND LOADINGS	2-2
2.1 Compliance	2-2
2.2 Influent flows and loadings	2-2
2.3 Effluent Concentrations	2-2
2.4 Lagoon Discharge Concentrations	2-4
3. OPERATIONS.....	3-1
3.1 Events impacting operations	3-1
3.2 Emergency & Service calls.....	3-1
3.3 Emergency Call-outs	3-1
3.4 Customer Inquiries	3-1
4. MAINTENANCE AND REPAIR.....	4-4
4.1 Preventative and predictive maintenance.....	4-4
4.2 Corrective repairs	4-4
5. PROJECT MANAGEMENT & SUPPORT.....	5-1
5.1 Staffing & Training.....	5-1
5.2 Corporate Support.....	5-1
5.3 Budget.....	5-3
6. CAPITAL PLANNING	6-1
6.1 Approved CIP Projects Current status.....	6-1
6.2 Draft Capital Improvement Plan	6-1

LIST OF TABLES

TABLE	PAGE NO.
Table 2.2 Influent Concentrations and Flow.....	2-2
Table 2.3 Finished Water Quality.....	2-2
Table 2.4 Weekly Grab Sample Analysis Results.....	2-4
Table 4.1 Budget Table.....	5-3

EXECUTIVE SUMMARY

Safety. Safety is the number one priority at South Sangamon. We have instituted a monthly safety meeting for operations staff at the plant,. There were no lost time accidents in the month of October 2019.

Compliance. The finished water quality was within regulatory limits and all reporting and sampling requirements were met for the month. A copy of the Operations Report submitted to the Illinois Environmental Protection Agency is available at www.sswc.us.

During the month of October 2019, the plant pumped 39.786 million gallons from the well field and 32.124 million gallons of finished water. This is 1.771 million gallons more than October of 2018.

The SSWC plant has been placed on Critical Review status. Systems on Critical Review will be evaluated for sufficient capacity before issuance of water main extension permits.

Operations. There were 0 emergency call-outs for the month. There were 2 customer inquiries for the month.

Maintenance and Repair. For the month of October 2019, there were 31 inspections, 9 preventative and 3 corrective maintenance activity completed.

Budget. Passed at May 20th meeting.

Capital Planning. Pigging Project

Chloramines Project

Toray filter Project

New Berlin Meter relocation.

1. SAFETY

1.1 SAFETY TRAINING

At South Sangamon we strive to provide a safe working environment for all employees. This is accomplished with daily safety meetings and open communication.

1.2 LOST TIME ACCIDENTS

There were 0 lost time accidents in the month of September 2019.

1.3 SAFETY AUDIT

No safety audits to date.

1.4 MISCELLANEOUS SAFETY

No usable Fall Arrestors for aerator on premises

2. COMPLIANCE, FLOWS AND LOADINGS

2.1 COMPLIANCE

The finished water quality was within regulatory limits and all Bacteriological testing was completed for the month of September. A copy of the Operations Report to the Illinois Environmental Protection Agency (IEPA) is available on the SSWC website.

2.2 INFLUENT FLOWS AND LOADINGS

The total gallons pumped from the well field were 39.786 MGs. The influent parameters were all within the normal range.

The influent flow and loadings are summarized below in Table 2.2

Table 2.2 Influent Concentrations and Flow								
	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Well Flow Gals (mgd).
Max.	7.70	18.2	1.88	.236	-	370	294	1.810
Min.	7.40	14.5	.37	.183	-	340	270	.170
Avg.	7.54	15.8	.83	.208	-	349	281	1.283
Total	-	-	-	-	-	-	-	39.786

2.3 EFFLUENT CONCENTRATIONS

The facility filtered 36.719 MG during the month with a daily average of 1.184 MG and a min/max ..152/ 1.635 MG.

Table 2.3 Finished Water Quality										
	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
Max.	2.0	2.23	7.98		0.13	0.022	1.25	130	292	1.92
Min.	.67	.88	7.90		0.01	0.002	0.55	90	270	.97
Avg.	1.4	1.60	8.10		0.03	0.010	0.83	106	281	1.70
MCL	-	-	-	-	1.00	-	4.00	-	-	-
SMCL	-	-	-	-	0.30	0.050	2.00	-	-	-

Finished Water Flow Comparison for FY 2018

Time Period	2018-2019	2017-2018	2016-2017
Nov-Oct 2019	359,769,312	377,735,023	406,901,873
Increase for the same period last year		-17.966 MG	

FINISHED WATER PUMPING HISTORY						
	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Nov	30,464,000	28,617,333	30,478,309	27,217,293	28,426,579	31,615,459
Dec	31,930,000	28,808,037	32,525,530	27,788,637	28,656,869	32,697,551
Jan	28,823,375	30,556,824	30,449,215	28,510,121	30,346,721	32,499,427
Feb	28,625,431	25,617,914	27,373,232	26,095,228	26,336,077	28,745,378
March	31,237,000	28,217,699	30,068,363	27,851,811	28,729,919	31,217,486
April	28,418,249	27,110,578	29,625,797	29,292,618	29,270,184	31,690,073
May	33,045,927	33,304,196	32,120,873	33,349,391	33,371,016	31,157,411
June	33,460,303	34,040,000	39,931,402	41,541,321	31,092,539	38,462,951
July	23,742,374	41,178,722	42,164,927	35,378,396	33,123,375	38,674,894
Aug	25,018,633	35,176,238	38,760,634	35,401,490	38,109,133	33,748,543
Sept	34,234,782	34,754,000	39,896,986	36,325,215	36,546,171	29,763,075
Oct	30,769,238	30,353,482	33,506,605	34,374,820	34,783,455	28,803,052
	-----	-----	-----	-----	-----	-----
Totals	359,769,312	377,735,023	406,901,873	383,126,341	378,792,038	389,075,300
Avg	.986 MGD	1.03 MGD	1.12 MGD	1.05 MGD	1.04 MGD	1.07 MGD

2.4 LAGOON DISCHARGE CONCENTRATIONS

The results for the NPDES lagoon discharge permit are summarized below.

Table 2.4 Weekly Grab Sample Analysis Results

Lagoon Effluent Results						
Date	Fe (mg/l)	Mn (mg/l)	Chloride (mg/l)	Cl ² (mg/l)	pH (S.U.)	TSS (mg/l)
November 7, 2019	.18	.142	300	.03	8.1	<4.0
Minimum	.18	.142	300	.03	8.1	<4.0
Maximum	.18	.142	300	.03	8.1	<4.0
Average	.18	.142	300	.03	8.1	<4.0
Monthly Avg Limit	2.000	1.000				15
Daily Limit	4.000	2.000	500	0.05	6.0-9.0	30

The Chloride sample for the month of October 2019, performed by the Springfield Metropolitan Sanitary District, was below 30,000 mg/l for the month of October 2019. The limit for chloride discharge to the sanitary district is 30,000 mg/L.

k

3. OPERATIONS

3.1 EVENTS IMPACTING OPERATIONS

There were no incidents impacting plant operations for the month of October.

3.2 EMERGENCY & SERVICE CALLS

Service Calls:

- There were 0 emergency call outs for the month.

3.3 EMERGENCY CALL-OUTS

There was 0 emergency call-out for the month requiring operational personnel at the plant after normal business hours

3.4 CUSTOMER INQUIRIE

OTHER WORK PERFORMED

Learned correct operating procedures for the new filter train
Trouble shooting of new train



The 20" Pig arrived from Inline Services

4. MAINTENANCE AND REPAIR

4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE

For the month of October 2019, there were 31 inspections, 3 preventative and 3 corrective maintenance activity completed.

4.2 CORRECTIVE REPAIR

Pulling and cleaning pre filters on all 3 filter trains on weekly
CIP train 1,2 and 3

5. PROJECT MANAGEMENT & SUPPORT

5.1 STAFFING & TRAINING

- With the addition of a new staff member training has been continuous and ongoing.

5.2 OPERATIONAL SUPPORT

The following individuals, either on-site or remotely, provided assistance in operation and/or maintenance of the plant during the month of October 2019.

- Kevin Canham
- Stephen Bivin
- Dave Wilson (Westech)
- Katie Krall
- Keslee Carson

5.3 BUDGET

Table 5.3 Operating Budget

Table 5.3 Budget Table

Budget Category	Month Budget	Month Actual	YTD Budget	YTD Actual	Annual Budget
Labor (D.L. + OH)	\$13,909.06	?	\$68,237	\$70,128	\$163,768
Utilities	\$8,306.30		\$40,750	\$36,019	\$97,800
Chemicals	\$22,421		\$110,000	\$74,593	\$264,000
Maintenance & Repair	\$13,668.62		\$67,056	\$56,429	\$160,937*
Chloride	\$13,160		\$65,800	\$58,080	\$157,920
Lab Supplies and Equipment	\$1,918.09		\$9,410	\$5,987	\$22,584
Office Supplies	\$220.14		\$1,080	\$627	\$2,592
Miscellaneous Expenses*	\$41		\$123	?	\$500
Other Operating Costs	\$1,398	?	\$6,990	\$6,107	\$16,776
Engineering Fees	\$2,500		\$7,500	\$5,950	\$30,000
Office Equipment rental	\$65		\$542	\$325	\$780
Locates	\$378	0	\$1,890	\$2,758	\$4,536
Truck	\$3,333	0	\$33,333	\$35,560	\$40,000
Total	\$81,318.21	\$37,337.12	\$377,488	\$349,805	\$962,193

*as of September 30 2019

6. CAPITAL PLANNING

6.1 APPROVED CIP PROJECTS CURRENT STATUS

Toray filter project ; Installation of the filter train began on July 29th and carried on into October although currently installed and running diagnostics and fine tuning is still ongoing.

Chlormine conversion project- all construction is complete. SCADA programming needs fine tuning Hach will commence startup of Monochloramine analyzer in December

New Berlin Meter master meter relocation project is commencing. Awaiting new engineering report and finalized relocation plan.

6.2 DRAFT CAPITAL IMPROVEMENT PLAN

The CIP is a planning document that includes all projects anticipated to exceed \$5,000 in cost over the next five years. The CIP is an ongoing process and will be refined from time to time as projects are completed and new issues are identified.

South Sangamon Water Commission - L1670080
October 2019

Date		Physical and Chemical Tests										Membrane Integrity																									
		Raw					Pre UF Membrane					Post UF Membrane					Post IEX					Finished					Post Filter										
		pH	Temp deg. C	Total Alk. mg/L	Total Hard. mg/L	Total Fe mg/L	Turbidity	Total Soluble Fe mg/L	Total Mh mg/L	Total Mn mg/L	Total Turbidity	Total Chloride mg/L	1	2	3	4	Total Turbidity	Total Fe mg/L	Total Mn mg/L	Total Hard. mg/L	Total Alk. as CaCO3 mg/L	Total Turbidity	Total Hard. mg/L	Total Fe mg/L	Total Mn mg/L	Total Fluoride mg/L	Total Phosphate mg/L	Total Free Ammonia mg/L	Total Chloramine mg/L	Total Chlorine mg/L	F	T	Distribution	Bank 1	Bank 2	Bank 3	
1	7.50	17.1	280	350	0.90	0.214				0.033	0.030				0.033	0.38				7.90	0.32	280	100	0.04	0.013	0.87	1.68			1.34	1.56						
2	7.60	18.2	280	350	1.05	0.236			0.062	0.42					0.062	0.42				7.90	0.33	284	100	0.03	0.011	0.85	1.52			1.40	1.50						
3	7.50	17.4	280	340	0.87	0.207			0.035	0.37					0.035	0.37				8.00	0.33	280	100	0.01	0.009	0.97	1.70			1.34	1.47						
4	7.50	16.0	280	350	0.80	0.206			0.028	0.36					0.028	0.36				7.90	0.30	280	100	0.01	0.011	0.63	1.73			1.33	1.45						
5	7.70	16.1	290	352	1.88	0.225			0.048	0.20					0.048	0.20				7.90	0.40	282	110	0.02	0.017	0.66	1.92			1.34	1.42						
6	7.50	16.0	294	352	0.66	0.200			0.036	0.25					0.036	0.25				8.10	0.28	284	110	0.02	0.014	0.81	1.70			1.55	1.57						
7	7.50	15.6	290	350	0.55	0.201			0.024	0.18					0.024	0.18				7.90	0.34	285	105	0.04	0.011	0.86	1.80			1.25	1.34						
8	7.50	15.6	290	350	0.61	0.201			0.034	0.26					0.034	0.26				8.00	0.36	285	110	0.05	0.015	0.88	1.58			1.06	1.24						
9	7.50	16.0	280	340	0.56	0.203			0.020	0.22					0.020	0.22				8.00	0.27	270	100	0.01	0.009	0.83	1.73			1.32	1.46						
10	7.50	15.9	280	340	0.50	0.220			0.029	0.26					0.029	0.26				8.00	0.23	280	105	0.03	0.022	0.82	1.68			1.14	1.41						
11	7.60	16.7	280	350	0.63	0.195			0.031	0.28					0.031	0.28				7.90	0.28	280	100	0.02	0.006	0.80	1.72			1.67	1.85						
12	7.50	15.0	275	342	0.53	0.207			0.034	0.28					0.034	0.28				8.00	0.29	275	100	0.01	0.019	0.90	1.68			1.81	1.90						
13	7.50	15.9	280	340	0.37	0.183			0.026	0.30					0.026	0.30				8.00	0.32	280	110	0.01	0.007	0.55	0.97			1.86	1.86						
14	7.50	16.0	280	370	1.11	0.210			0.042	0.28					0.042	0.28				8.00	0.24	280	110	0.01	0.008	0.79	1.57			1.82	1.95						
15	7.60	15.4	280	370	0.82	0.211			0.046	0.28					0.046	0.28				8.00	0.25	280	120	0.04	0.017	0.91	1.78			1.90	2.00						
16	7.60	14.9	280	340	0.65	0.192			0.028	0.28					0.028	0.28				8.00	0.27	280	110	0.01	0.006	0.84	1.75			1.92	2.05						
17	7.60	14.9	280	345	0.66	0.215			0.029	0.25					0.029	0.25				8.00	0.32	270	100	0.06	0.009	0.79	1.67			2.03	2.15						
18	7.50	16.0	280	350	1.07	0.212			0.043	0.12					0.043	0.12				8.00	0.28	280	110	0.03	0.004	1.25	1.57			1.91	2.13						
19	7.50	15.7	276	342	0.51	0.195			0.035	0.27					0.035	0.27				8.00	0.38	292	110	0.01	0.007	0.94	1.53			1.91	2.23						
20	7.50	15.9	280	350	0.57	0.196			0.030	0.40					0.030	0.40				8.00	0.35	288	100	0.02	0.002	0.73	1.87			1.26	1.41						
21	7.60	15.8	280	340	0.95	0.207			0.049	0.25					0.049	0.25				7.90	0.25	280	100	0.02	0.008	0.64	1.78			1.07	1.20						
22	7.50	17.2	270	350	0.79	0.192			0.010	0.37					0.010	0.37				8.00	0.29	280	110	0.02	0.003	1.06	1.72			1.36	1.52						
23	7.50	15.9	280	340	0.73	0.194			0.023	0.28					0.023	0.28				8.00	0.37	290	100	0.02	0.010	1.24	1.64			1.25	1.43						
24	7.40	16.0	274	350	1.51	0.205			0.030	0.31					0.030	0.31				7.90	0.33	284	104	0.01	0.017	0.78	1.65			1.29	1.39						
25	7.60	15.5	280	350	0.83	0.214			0.039	0.26					0.039	0.26				7.90	0.25	285	110	0.01	0.003	0.86	1.80			0.93	1.01						
26	7.60	15.3	280	350	1.18	0.219			0.034	0.38					0.034	0.38				7.90	0.33	280	120	0.01	0.008	0.91	1.91			0.67	0.88						
27	7.60	15.0	280	345	1.01	0.213			0.027	0.22					0.027	0.22				8.10	0.25	282	121	0.01	0.005	0.63	1.87			1.60	1.70						
28	7.50	15.6	280	352	0.78	0.223			0.034	0.32					0.034	0.32				8.00	0.28	280	130	0.02	0.016	0.81	1.70			1.50	1.54						
29	7.60	15.3	285	358	1.00	0.220			0.032	0.29					0.032	0.29				8.00	0.27	285	102	0.06	0.009	0.80	1.74			1.37	1.55						
30	7.60	14.7	274	350	0.66	0.199			0.033	0.32					0.033	0.32				8.10	0.29	274	100	0.01	0.010	0.91	1.81			1.31	1.83						
31	7.60	14.5	280	350	0.75	0.223			0.035	0.37					0.035	0.37				8.00	0.28	280	90	0.13	0.014	0.89	1.73			1.21	1.47						
Ave	7.54	15.8	281	349	0.83	0.208			#DW01	0.032	0.35	#####	#####	#####	#DW01	0.032	0.35	#####	#####	7.98	0.30	281	106	0.03	0.010	0.83	1.70	#DW01	#DW01	#DW01	#DW01	#DW01	#DW01	#DW01	#DW01	#DW01	
Max	7.70	18.2	294	370	1.88	0.236			0.081	0.67	0	0	0	0	0.081	0.67	0	0	0	8.10	0.40	292	130	0.13	0.022	1.25	1.92	0.00	0.00	2.03	2.23	0.00	0.00	0.00	0.00	0.00	
Min	7.40	14.5	270	340	0.37	0.183			0.010	0.26	0	0	0	0	0.010	0.26	0	0	0	7.90	0.23	270	90	0.01	0.002	0.55	0.97	0.00	0.00	0.67	0.88	0.00	0.00	0.00	0.00	0.00	
Lagoon Effluent Tests		pH	Temp °C	T Chlor	Mh	Fe	Chloride	TSS	Distribution Stability Tests										Every Two Weeks					Remarks:													
Monthly									pH	Temp °C	Alkalinity mg/L	Calcium mg/L	Chloride mg/L	Sulfate mg/L	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
Date		11/7/2019	8.1	15.1	0.03	0.142	0.18	300<4.0							7.8	16.7	468	280	36	63																	

Pumping Totals										Chemicals Applied										UF Filters										Softeners									
Time	Date	Meter Read	Raw Well (Mgal)	UF Filtered (Mgal)	Plant (Mgal)	HS Pumpage (Mgal)	Lagoon Effluent (Mgal)	Sodium Permanganate		Sodium Bisulfite BW		Sodium Hypochlorite		Ammonium Sulfate		Fluorosilicic Acid		Phosphate		Sodium Bisulfite Pond		Hours since previous backwash			Wash Gal.	Water Softened (Mgal)	Water Bypassed (Mgal)	Each day indicate total number of hours since previous regeneration.	Regeneration										
								Am ¹ Used lbs.	Calc mg/l as NaMnO ₄	Am ¹ Used lbs.	Calc mg/l as NaHSO ₃	Am ¹ Used lbs.	Calc mg/l as Cl ₂	Am ¹ Used lbs.	Calc mg/l as NH ₃	Am ¹ Used lbs.	Calc mg/l as F	Am ¹ Used lbs.	Calc mg/l as PO ₄	Bank #	1	2	3	4					Salt Used lbs.	Washed Gal.									
1	7:00	16.9	1,417	1,283	0,008	0,133		61	1,02	0	0	216	2,52	0	0	0	29	0.98	52	1,82	20	#D/M/O	0.66	0.66	0.66	0.66	0.444	27.0	38.0	34.0	6843	31050							
2	7:00	16.3	1,365	1,236	0,014	1,127		24	0.42	0	0	229	2,78	0	0	0	31	0.63	28	0.98	18	#D/M/O	0.66	0.66	0.66	0.66	0.428	22.0	36.0	33.0	6843	31050							
3	7:00	16.6	1,413	1,292	0,012	1,107		18	0.31	0	0	176	2,06	0	0	0	22	0.45	26	0.93	19	#D/M/O	0.66	0.66	0.66	0.66	0.438	40.0	35.0	45.0	4562	20700							
4	7:00	16.1	1,377	1,255	0,008	1,039		28	0.45	0	0	251	3,00	0	0	0	33	0.72	49	1.87	14	#D/M/O	0.66	0.66	0.66	0.66	0.820	42.0	35.0	38.0	6843	31050							
5	7:00	15.9	1,421	1,289	0,013	1,118		19	0.32	0	0	170	2,01	0	0	0	24	0.49	0	0.00	25	#D/M/O	0.66	0.66	0.66	0.66	0.829	44.0	37.0	33.0	6843	31050							
6	7:00	14.9	1,267	1,159	0,010	1,077		21	0.40	0	0	207	2,68	0	0	0	27	0.61	11	0.43	19	#D/M/O	0.66	0.66	0.66	0.66	0.796	47.0	43.0	33.0	6843	31050							
7	7:00	17.8	1,420	1,406	0,014	1,227		25	0.42	0	0	223	2,68	0	0	0	31	0.98	14	0.45	14	#D/M/O	0.66	0.66	0.66	0.66	0.919	49.0	34.0	39.0	6843	31050							
8	7:00	17.5	1,300	1,289	0,011	1,165		22	0.42	0	0	192	2,23	0	0	0	29	0.57	13	0.44	22	#D/M/O	0.66	0.66	0.66	0.66	0.842	44.0	36.0	22.0	2281	10350							
9	7:00	15.8	1,197	1,209	0,006	1,012		21	0.42	0	0	204	2,53	0	0	0	26	0.59	13	0.51	22	#D/M/O	0.66	0.66	0.66	0.66	0.879	41.0	42.0	35.0	36.0	9124	41400						
10	7:00	16.2	1,288	1,271	0,017	1,104		21	0.40	0	0	205	2,06	0	0	0	27	0.56	17	0.61	26	#D/M/O	0.66	0.66	0.66	0.66	0.831	44.0	29.0	34.0	4562	20700							
11	7:00	14.2	1,136	1,116	0,009	0,985		19	0.40	0	0	204	2,74	0	0	0	23	0.53	21	0.64	22	#D/M/O	0.66	0.66	0.66	0.66	0.822	47.0	39.0	44.0	6843	31050							
12	7:00	13.6	1,094	1,089	0,013	0,937		20	0.44	0	0	207	3,70	0	0	0	27	0.66	22	0.93	50	#D/M/O	0.66	0.66	0.66	0.66	0.852	47.0	38.0	43.0	2281	10350							
13	7:00	13.8	1,108	1,102	0,005	0,975		19	0.41	0	0	239	3,25	0	0	0	22	0.51	28	1.14	77	#D/M/O	0.66	0.66	0.66	0.66	0.811	47.0	33.0	33.0	43.0	0	0						
14	7:00	22.3	1,770	1,522	0,004	0,013		12	1.69	0	0	36	3,55	0	0	0	4	7.29	6	18.99	51	#D/M/O	0.66	0.66	0.66	0.66	0.746	49.0	33.0	37.0	6843	31050							
15	7:00	14.4	1,280	1,141	0,015	1,065		22	0.41	0	0	265	3,74	0	0	0	26	0.59	1	0.04	34	#D/M/O	0.66	0.66	0.66	0.66	0.746	49.0	33.0	37.0	6843	31050							
16	7:00	14.7	1,271	1,139	0,012	1,007		21	0.40	0	0	289	3,80	0	0	0	25	0.57	8	0.31	45	#D/M/O	0.66	0.66	0.66	0.66	0.774	49.0	39.0	37.0	6843	31050							
17	7:00	17.4	1,544	1,387	0,013	1,219		28	0.43	0	0	365	3,94	0	0	0	33	0.82	13	0.42	20	#D/M/O	0.66	0.66	0.66	0.66	0.879	49.0	35.0	33.0	9124	41400							
18	7:00	19.9	1,810	1,635	0,014	1,457		30	0.40	0	0	403	3,69	0	0	0	37	0.98	16	0.43	52	#D/M/O	0.66	0.66	0.66	0.66	1.010	57.0	28.0	27.0	9124	41400							
19	7:00	19.5	1,788	1,614	0,017	1,395		22	0.29	0	0	255	2,37	0	0	0	25	0.41	16	0.45	22	#D/M/O	0.66	0.66	0.66	0.66	0.892	55.0	33.0	33.0	2281	10350							
20	7:00	14.0	1,292	1,166	0,004	1,084		21	0.37	0	0	186	2,52	0	0	0	25	0.55	19	0.73	17	#D/M/O	0.66	0.66	0.66	0.66	0.772	47.0	40.0	42.0	9124	41400							
21	7:00	16.3	1,473	1,345	0,017	1,239		27	0.44	0	0	226	2,52	0	0	0	33	0.81	37	1.18	26	#D/M/O	0.66	0.66	0.66	0.66	0.879	49.0	36.0	45.0	4562	20700							
22	7:00	14.5	1,299	1,163	0,009	0,982		18	0.33	0	0	156	2,01	0	0	0	22	0.51	0	0.00	22	#D/M/O	0.66	0.66	0.66	0.66	0.771	47.0	39.0	40.0	4562	20700							
23	7:00	14.5	1,398	1,207	0,008	1,120		21	0.38	0	0	188	2,33	0	0	0	25	0.51	7	0.25	50	#D/M/O	0.66	0.66	0.66	0.66	0.789	49.0	46.0	36.0	6843	31050							
24	7:00	13.2	1,208	1,089	0,012	0,965		19	0.38	0	0	169	2,33	0	0	0	24	0.57	9	0.37	31	#D/M/O	0.66	0.66	0.66	0.66	0.808	47.0	43.0	43.0	2281	10350							
25	7:00	12.3	1,165	1,070	0,005	0,915		16	0.31	0	0	157	2,20	0	0	0	25	0.82	9	0.39	17	#D/M/O	0.66	0.66	0.66	0.66	0.658	69.0	52.0	51.0	65.0	8843	31050						
26	7:00	12.3	1,136	1,024	0,004	0,911		16	0.34	0	0	122	1,78	0	0	0	20	0.50	10	0.43	15	#D/M/O	0.66	0.66	0.66	0.66	0.657	66.0	67.0	65.0	6843	31050							
27	7:00	13.7	1,243	1,103	0,012	1,009		27	0.52	0	0	238	3,23	0	0	0	32	0.72	15	0.59	26	#D/M/O	0.66	0.66	0.66	0.66	0.774	49.0	39.0	33.0	2281	10350							
28	7:00	14.0	1,286	1,162	0,004	1,012		16	0.30	0	0	154	1,99	0	0	0	19	0.45	12	0.47	18	#D/M/O	0.66	0.66	0.66	0.66	0.853	49.0	44.0	35.0	6843	31050							
29	7:00	13.8	1,234	1,095	0,010	1,029		20	0.40	0	0	184	2,62	0	0	0	24	0.48	17	0.71	22	#D/M/O	0.66	0.66	0.66	0.66	0.865	47.0	45.0	44.0	4562	20700							
30	7:00	13.6	1,234	1,095	0,010	1,029		19	0.37	0	0	184	2,11	0	0	0	23	0.51	20	0.77	20	#D/M/O	0.66	0.66	0.66	0.66	0.879	51.0	46.0	45.0	4562	20700							
31	7:00	14.3	1,250	1,143	0,006	0,918		20	0.38	0	0	168	2,22	0	0	0	24	0.59	40	1.72	21	#D/M/O	0.66	0.66	0.66	0.66	0.747	49.0	42.0	38.0	4562	20700							
Total		459.6	38,789	36,719	0,318	32,124	0,000	688	13,97	0	0	6513	82,08	0	0	0	797	24.21	546	39.20	885	#D/M/O	0.66	0.66	0.66	0.66	24.026	12,885	708	728	742	16974	76500						
Ave.		14.8	1,283	1,184	0,010	1,086	#D/M/O	22.2	0.45	0	0	210	2.67	0	0	0	25.7	17.7	1.26	27.9	#D/M/O	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	39.1	544.97	24706.5			
Max		19.3	1,810	1,635	0,017	1,457	0,000	60.0	1.69	0	0	403	3.94	0	0	0	37	0.79	52	1.89	77	#D/M/O	0.66	0.66	0.66	0.66	1.010	1.070	55.0	68.0	65.0	9124	41,400						
Min		2.2	0.170	0.152	0.004	0.013	0.000	12.0	0.29	0	0	36	1.79	0	0	0	4	0.41	0	0.00	14	#D/M/O	0.66	0.66	0.66	0.66	0.010	0.899	0.052	21.0	28.0	27.0	0	0	0				

CHLORINATION		FLUORIDATION	
1	20% Sodium Permanganate	Pre-aerator	Identify that the information in this report is complete and accurate to the best of my knowledge.
2	40% Bisulfite Solution	Membrane Backwash	Illinois Operator Certification ID:
3	12.5% Sodium Hypochlorite Solution	Post Softener	Reported by:
4	20% Ammonium Sulfate Solution	Post Softener	Date:
5	19% Fluorosilicic Acid Solution	Post Cleanwell	Date Backwash Start:
6	33% Phosphate Solution	Post Cleanwell	
7	40% Bisulfite Solution	Lagoon Effluent	