Monthly Operating Report

JULY: 2019

So. Sangamon

Water Commission

July 19th, 2019

SSWC

9199 Buckhart Rd Ochester IL 62563

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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 June 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 July 2019, the plant pumped 33.102 million gallons from the well field and 25.505 million gallons of finished water. This is 15.673 million gallons less than July 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 1 emergency call-outs for the month. There were 0 customer inquiries for the month.

Maintenance and Repair. For the month of July 2019, there were 31 inspections, 12 preventative and 3 corrective maintenance activity completed.

Budget. Passed at May 20th meeting.

Capital Planning. 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 July 2019.

1.3 SAFETY AUDIT

No safety audits to date.

1.4 MISCELLANEOUS SAFETY

No usable Fall Arrestors 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 April. 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   33.102 MGs. The influent parameters were all within the normal range.

The influent flow and loadings are summarized below in Table 2.2

	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Well Flow Gals (mgd).
Table 2.2 Influent Concentrations and Flow								
Max.	7.50	19.6	3.40	.284	-	375	310	1.809
Min.	6.60	15.8	.27	.136	-	330	270	0
Avg.	7.12	17.4	1.14	.220	-	344	278	1.068
Total	-	-	-	-	-	-	-	33.102

2.3 EFFLUENT CONCENTRATIONS

The facility filtered 30.677 MG during the month with a daily average of .990 MG and a min/max 0/ 1.618 MG.

	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
Table 2.3 Finished Water Quality										
Max.	1.8	1.9	8.0		0.05	0.05	1.63	220	310	2.13
Min.	.44	.59	6.9		0.01	0.008	0.17	100	260	.38
Avg.	1.3	1.47	7.5		0.02	0.022	0.88	117	277	1.48
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
July-June	370,030,379	390,601,733	394,052,642
Increase for the same period last year		-20.571 MG	

FINISHED WATER PUMPING HISTORY					
	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
Aug	35,176,238	38,760,634	35,401,490	38,109,133	33,748,543	42,999,243
Sept	34,754,000	39,896,986	36,325,215	36,546,171	29,763,075	37,597,085
Oct	30,353,482	33,506,605	34,374,820	34,783,455	28,803,052	33,916,594
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
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Totals	370,030,379	390,601,733	394,052,642	384,208,554	367,219,468	413,507,362
Avg	1.01 MGD	1.07 MGD	1.08 MGD	1.05 MGD	1.01 MGD	1.13 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)
July 24th 2019	.39	..480	400	.03	6.92	4
Minimum	.39	.480	400	.03	6.92	4
Maximum	.39	.480	400	.03	6.92	4
Average	.39	.480	400	.03	6.92	4
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 July 2019, performed by the Springfield Metropolitan Sanitary District, was below 30,000 mg/l for the month of July 2019. The limit for chloride discharge to the sanitary district is 30,000 mg/L.

3. OPERATIONS

3.1 EVENTS IMPACTING OPERATIONS

On July 6th a transducer shorted out taking down the Westech system, causing our water pressure to drop, which in turn forced us to issue a boilorder

On July 24th the installation of the Toray filter train began. This caused our capacity to decrease by 1/3.

On July 26th Loellke arrived on site to begin removal of the last butterfly valve in the raw water line. To do so we had to shut down the plant for an extended period. Which also lead to drawing BacT sample before all wells could be utilized. Meaning the plant was at half raw water capacity.

On July 29th Westech Ind. Arrived for commissioning of the new Toray filter train. This programming forced us to take the entire system offline for a period of time

3.2 EMERGENCY & SERVICE CALLS

Service Calls:

- There were 1 emergency call outs for the month.

3.3 EMERGENCY CALL-OUTS

There was 1 emergency call-out for the month requiring operational personnel at the plant after normal business hours

3.4 CUSTOMER INQUIRIE

OTHER WORK PERFORMED

Installed Toray filter train
Replaced ultra filter cartridges on trains 2 and 3
Staff at SSWC jetted the sewer line

July 24th- 26th, new rack for Toray filters was installed.

July 23rd , Scott from Hach serviced our Chlorine analyzers

Operator Kevin Canham installing the filter cartridges from filter train #1 onto filter train # 3

Assitant Operator Katie Krall removing an old filter cartridge from train # 3

Contractor Loellke removing over flow concrete from the thrust block on the raw water line to gain access to the butterfly valve for removal

4. MAINTENANCE AND REPAIR

4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE

For the month of July 2019, there were 31 inspections, 12 preventative and 3 corrective maintenance activity completed.

4.2 CORRECTIVE REPAIR

On July 7th Joe lee came out and "repaired" the transducers on the Lagoon effluent and the detention tank. The control panels on each transducer was damaged due to power surges. Mr. lee removed the control boxes and installed surge suppressors due to the fact that the surges also damaged nodes on the PLC card. We are currently using the floats for level control instead of the transducer.

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 July 2019.

- Kevin Canham

- Stephen Bivin

- Paul Hedstrom(AAC)

- Joe Lee (electrician)

- Katie Krall

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	?	$40,942	$39,396	$163,768
Utilities	$8,306.30	$2919.72	$24,450	$23,514	$97,800
Chemicals	$22,421	$9560.68	$66,000	$44,606	$264,000
Maintenance & Repair	$13,668.62	$11280.91	$41,005.86		$160,937*
Chloride	$13,160	$11385.00	$39,480	$36,5603	$157,920
Lab Supplies and Equipment	$1,918.09	$723.01	$5646	$3404	$22,584
Office Supplies	$220.14	$37.51	$648	$321	$2,592
Miscellaneous Expenses*	$41	$127.37	$123	?	$500
Other Operating Costs	$1398	?	$4194	$3908	$16,776
Engineering Fees	$2,500	$1,239.30	**$7500**	**$5950**	$30,000
Office Equipment rental	$65	$63.62	$195	$325	$780
Locates	$378	$0	$1134	`$378	$4536
Truck	$3,333	0	$10,000	$35,560	$40,000
Total	**$81,318.21**	**$37337.12**	**$199189**	**$193922**	**$962193**

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 August.

Chlormine conversion project is underway. Tentative completion date of mid July.

New Berlin Meter relocation project is commencing.

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.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES

South Sangamon Water Commission - IL1670080
July 2019

Physical and Chemical Tests

Raw / Pre UF Membrane / Post UF Membrane / Post IEX

Date	Raw pH	Raw Temp deg.C	Raw Total Alk mg/L	Raw Total Hard mg/L	Raw Total Fe mg/L	Raw Total Mn mg/L	PreUF Turbidity NTU	PreUF Total Fe mg/L	PreUF Total Mn mg/L	PreUF Soluble Mn mg/L	PostUF Total Fe mg/L	PostUF Total Mn mg/L	PostUF Turbidity NTU	IEX Cl 1	IEX Cl 2	IEX Cl 3	IEX Cl 4
1	7.50	17.4	290	375	0.89	0.231			0.388	0.022		0.049	0.36				
2	7.50	17.9	270	340	0.89	0.229			0.384	0.029		0.031	0.46				
3	7.50	18.0	270	350	1.05	0.238			0.286	0.180		0.160	0.30				
4	7.50	17.4	270	340	0.92	0.228			0.273	0.147		0.142	0.26				
5	7.40	18.6	270	330	1.24	0.216			0.270	0.151		0.137	0.25				
6	7.50	16.5	310	340	1.15	0.204			0.272	0.089		0.084	0.29				
7	7.50	18.3	270	340	0.93	0.198			0.167	0.088		0.106	0.51				
8	7.40	18.6	280	340	0.27	0.205			0.159	0.102		0.099	0.30				
9	7.50	19.6	270	340	0.52	0.220			0.113	0.074		0.148	0.46				
10	7.40	19.6	270	350	0.49	0.210			0.133	0.091		0.063	0.32				
11	7.50	17.4	270	350	0.97	0.222			0.358	0.075		0.064	0.35				
12	7.50	16.8	270	350	0.93	0.215			0.320	0.036		0.034	0.28				
13	7.50	17.0	270	340	2.83	0.284			0.379	0.055		0.053	0.28				
14	7.50	17.6	270	340	2.71	0.276			0.364	0.074		0.040	0.29				
15	7.50	16.2	270	350	3.40	0.254			0.381	0.030		0.048	0.26				
16	7.50	16.2	280	350	0.85	0.226			0.385	0.020		0.015	0.55				
17	6.80	16.6	280	350	0.69	0.213			0.340	0.040		0.053	0.36				
18	6.70	17.0	290	340	0.69	0.201			0.368	0.033		0.026	0.43				
19	6.70	17.2	280	340	1.16	0.210			0.365	0.019		0.040	0.31				
20	6.60	17.4	304	346	0.65	0.210			0.355	0.022		0.020	0.29				
21	6.60	16.6	300	340	0.64	0.224			0.371	0.028		0.023	0.51				
22	6.60	17.7	280	340	0.69	0.225			0.385	0.038		0.050	0.41				
23	6.60	16.0	270	340	0.79	0.224			0.375	0.041		0.042	0.39				
24	6.70	15.8	270	340	0.73	0.205			0.374	0.050		0.050	0.43				
25	6.70	16.0	290	340	1.96	0.234			0.365	0.034		0.050	0.43				
26	6.60	16.0	280	340	0.93	0.224			0.366	0.034		0.034	0.42				
27	0L	0L	0L	0L	0L	0L			0.220	0.029		0.056	0.37				
28	0L	0L	0L	0L	0L	0L			0.235	0.016		0.036	0.42				
29	6.70	18.4	270	340	1.01	0.252			0.114	0.030		0.033	0.43				
30	6.70	18.9	270	330	0.77	0.180			0.172	0.032		0.052	0.52				
31	6.70	17.9	280	340	2.41	0.136			0.085	0.048		0.039	0.37				
Ave.	7.12	17.4	278	344	1.14	0.220	#DIV/0!	0.00	0.294	0.057	#DIV/0!	0.061	0.38	####	####	####	####
Max	7.50	19.6	310	375	3.40	0.284	0.00	0.00	0.388	0.180	0.00	0.160	0.55	0	0	0	0
Min	6.60	15.8	270	330	0.27	0.136	0.00	0.00	0.085	0.016	0.00	0.015	0.25	0	0	0	0

Finished / Post Filter (Membrane Integrity)

Date	Fin pH	Fin Turbidity NTU	Fin Total Alk mg/L	Fin Total Hard mg/L	Fin Total Fe mg/L	Fin Total Mn mg/L	Fin Fluoride F mg/L	Fin Ortho Phosphate mg/L	Free Ammonia mg/L	Mono-Chloramine mg/L	Chlorine F mg/L	Chlorine T mg/L	Dist F mg/l	Dist T mg/L	Bank 1 psi	Bank 2 psi	Bank 3 psi
1	7.90	0.17	290	160	0.02	0.013	0.77	1.82			1.60	1.63					
2	7.90	0.25	270	110	0.02	0.012	1.26	1.91			1.51	1.78					
3	7.90	0.27	270	100	0.02	0.041	0.97	2.13			1.76	1.79					
4	7.90	0.29	270	100	0.02	0.045	1.63	1.78			1.51	1.89					
5	7.80	0.25	270	100	0.01	0.035	0.84	1.88			1.33	1.75					
6	7.90	0.34	310	100	0.02	0.023	1.18	2.02			1.43	1.74					
7	7.90	0.33	270	100	0.01	0.050	1.29	1.52			1.38	1.49					
8	8.00	0.55	270	100	0.01	0.021	0.58	1.47			1.01	1.05					
9	7.90	0.46	280	100	0.01	0.046	0.17	0.38			0.94	1.12					
10	7.90	0.36	280	110	0.02	0.030	0.55	0.79			1.37	1.00					
11	7.80	0.35	260	110	0.02	0.020	1.02	1.68			1.64	1.58					
12	7.90	0.52	280	110	0.02	0.017	1.15	1.84			1.38	1.76					
13	7.90	0.39	270	220	0.02	0.025	1.04	2.05			1.31	1.53					
14	7.80	0.30	270	160	0.02	0.031	1.10	1.67			1.40	1.71					
15	7.90	0.24	270	160	0.05	0.026	1.07	1.70			1.63	1.47					
16	7.50	0.31	280	110	0.01	0.016	1.00	1.54			1.34	1.73					
17	7.10	0.33	280	120	0.01	0.017	0.59	0.79			1.44	1.45					
18	7.10	0.34	280	120	0.01	0.012	0.90	1.68			1.53	1.76					
19	7.00	0.41	282	112	0.02	0.014	0.72	1.58			1.53	1.70					
20	7.00	0.36	300	116	0.02	0.010	0.69	1.60			1.54	1.60					
21	7.00	0.32	292	102	0.01	0.012	0.69	1.66			1.48	1.64			pass	pass	pass
22	7.10	0.29	280	110	0.01	0.012	0.79	1.61			1.56	1.64					
23	7.10	0.43	280	100	0.04	0.015	0.89	1.47			1.56	1.68					
24	7.10	0.34	270	100	0.01	0.016	0.95	1.75			1.40	1.60					
25	6.90	0.36	280	120	0.02	0.011	1.50	1.79			1.33	1.57					
26	7.10	0.45	270	110	0.03	0.015	0.95	1.88			1.16	1.41					
27	7.20	0.44	270	110	0.01	0.015	0.70	0.63			1.02	1.37					
28	7.10	0.43	280	110	0.02	0.011	0.70	0.51			0.78	1.08					
29	7.10	0.36	280	120	0.02	0.011	0.40	0.73			0.59	0.87			pass	pass	pass
30	7.10	0.36	280	120	0.02	0.028	0.56	0.59			0.44	0.65					
31				120	0.01	0.021	0.59	1.57				0.59					
Ave.	7.51	0.35	277	117	0.02	0.022	0.88	1.48	#DIV/0!	#DIV/0!	1.32	1.47	#DIV/0!	0.00	#DIV/0!	#DIV/0!	#DIV/0!
Max	8.00	0.55	310	220	0.05	0.050	1.63	2.13	0.00	0.00	1.76	1.89	0.00	0.00	0.00	0.00	0.00
Min	6.90	0.17	260	100	0.01	0.008	0.17	0.38	0.00	0.00	0.44	0.59	0.00	0.00	0.00	0.00	0.00

Lagoon Effluent Tests — Monthly

Date	pH	Temp °C	T Chlor mg/L	Fe mg/L	Mn mg/L	Chloride mg/L	TSS mg/L
7/24/2019	6.92	21.5	0.03	0.48	0.39		

Distribution Stability Tests

Date	pH	Temp °C	TDS mg/L	Alkalinity mg/L as CaCO3	Calcium mg/L as CaCO3	Chloride mg/L	Sulfate mg/L	Remarks:
7/24/2019	7.06	17.5						
Date								
Date								

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES

MONTHLY IRON REMOVAL AND ION EXCHANGE SOFTENING REPORT

South Sangamon Water Commission - IL 1670080
July 2019

Pumping Totals / Chemicals Applied

Date	Time Meter Read	Raw Well Prod (Mgal)	UF Filtered (Mgal)	Plant Water (Mgal)	HS Pumpage (Mgal)	Lagoon Effluent Pumpage (Mgal)	Hours Filter Ran	Na Permanganate Amt Used lbs	Na Permanganate Calc mg/l as NaMnO4	Na Bisulfite BW Amt lbs	Na Bisulfite BW Calc mg/l	Na Hypochlorite Amt Used lbs	Na Hypochlorite Calc mg/l as Cl	Ammonium Sulfate Amt lbs	Ammonium Sulfate Calc mg/l as NH3	Fluorosilicic Acid Amt lbs	Fluorosilicic Acid Calc mg/l as F	Phosphate Amt lbs	Phosphate Calc mg/l as PO4	Na Bisulfite Pond Amt lbs	Na Bisulfite Pond Calc mg/l
1	7:00	1.676	1.504	0.012	1.319		21.2	34	0.49	0	0.00	234	2.33	0	0.00	42	0.73	25	0.75	27	#DIV/0!
2	7:00	1.686	1.504	0.012	1.313		21.1	34	0.48	0	0.00	250	2.49	0	0.00	44	0.76	32	0.96	29	#DIV/0!
3	7:00	1.726	1.547	0.016	1.318		21.7	10	0.14	0	0.00	258	2.50	0	0.00	46	0.80	47	1.41	24	#DIV/0!
4	7:00	1.684	1.487	0.005	1.308		21.1	13	0.19	0	0.00	253	2.55	0	0.00	44	0.77	60	1.82	26	#DIV/0!
5	7:00	1.576	1.497	0.012	1.198		19.4	12	0.18	0	0.00	207	2.07	0	0.00	38	0.72	46	1.52	27	#DIV/0!
6	7:00	1.528	1.370	0.015	1.170		19.3	16	0.25	0	0.00	209	2.29	0	0.00	37	0.72	19	0.64	17	#DIV/0!
7	7:00	0.876	1.283	0.001	0.653		0.3	6	0.16	0	0.00	73	0.85	0	0.00	13	0.45	11	0.67	14	#DIV/0!
8	7:00	0.022	0.237	0.000	0.022		0.4	0	0.00	0	0.00	4	0.25	0	0.00	0	0.00	1	0.00	0	#DIV/0!
9	7:00	0.064	0.042	0.000	0.023		1.3	0	0.00	0	0.00	16	5.71	0	0.00	0	0.00	0	1.72	4	#DIV/0!
10	7:00	0.039	0.070	0.000	0.017		0.8	0	0.00	0	0.00	5	1.07	0	0.00	0	0.00	0	0.00	5	#DIV/0!
11	7:00	0.474	0.000	0.004	0.404		6.5	11	0.56	0	#DIV/0!	134	#DIV/0!	0	#DIV/0!	19	1.07	14	1.37	8	#DIV/0!
12	7:00	1.283	1.014	0.008	1.108		21.6	26	0.49	0	0.00	236	3.49	0	0.00	46	0.95	46	1.64	17	#DIV/0!
13	7:00	1.809	1.443	0.013	1.375		21.7	37	0.49	0	0.00	319	3.31	0	0.00	54	0.89	15	0.43	27	#DIV/0!
14	7:00	1.743	1.618	0.011	1.400		21.6	29	0.40	0	0.00	229	2.12	0	0.00	43	0.70	27	0.65	26	#DIV/0!
15	7:00	1.714	1.550	0.003	1.237		21.5	31	0.43	0	0.00	240	2.32	0	0.00	39	0.72	27	0.86	43	#DIV/0!
16	7:00	1.737	1.552	0.010	1.389		21.3	32	0.44	0	0.00	262	2.53	0	0.00	47	0.77	41	1.17	32	#DIV/0!
17	7:00	1.447	1.618	0.011	1.010		17.2	19	0.31	0	0.00	139	1.29	0	0.00	22	0.50	26	1.02	0	#DIV/0!
18	7:00	1.324	0.887	0.011	1.012		15.5	26	0.47	0	0.00	208	3.51	0	0.00	36	0.81	48	1.88	0	#DIV/0!
19	7:00	1.069	1.112	0.004	0.821		13.8	23	0.52	0	0.00	178	2.40	0	0.00	31	0.86	43	2.07	0	#DIV/0!
20	7:00	1.469	1.209	0.011	1.134		18.1	29	0.47	0	0.00	211	2.62	0	0.00	39	0.78	39	0.59	6	#DIV/0!
21	7:00	1.384	1.232	0.011	1.113		17.5	29	0.50	0	0.00	221	2.69	0	0.00	38	0.78	23	0.82	0	#DIV/0!
22	7:00	1.508	1.393	0.004	1.112		18.2	26	0.41	0	0.00	206	2.22	0	0.00	37	0.76	27	0.96	0	#DIV/0!
23	7:00	1.392	1.291	0.011	1.074		16.3	29	0.50	0	0.00	213	2.47	0	0.00	35	0.74	32	1.18	2	#DIV/0!
24	7:00	1.329	1.216	0.011	1.047		16.0	18	0.32	0	0.00	226	2.79	0	0.00	39	0.85	46	1.74	16	#DIV/0!
25	7:00	0.951	1.204	0.003	0.702		13.9	17	0.43	0	0.00	123	1.53	0	0.00	23	0.75	34	1.92	0	#DIV/0!
26	7:00	1.107	0.822	0.010	0.876		18.6	25	0.54	0	0.00	176	3.21	0	0.00	30	0.78	7	0.09	6	#DIV/0!
27	7:00	0.373	0.856	0.003	0.274		6.8	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.14	0	#DIV/0!
28	7:00	0.000	0.037	0.000	0.022		0.8	0	#DIV/0!	0	#DIV/0!	5	2.03	0	#DIV/0!	0	0.00	0	0.00	0	#DIV/0!
29	7:00	0.094	0.034	0.000	0.020		1.6	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	3	#DIV/0!
30	7:00	0.000	0.026	0.000	0.017		0.4	0	#DIV/0!	0	#DIV/0!	1	0.58	0	#DIV/0!	0	0.00	3	0.00	0	#DIV/0!
31	7:00	0.018	0.022	0.000	0.017		0.4	0	0.00	0	0.00	7	4.77	0	0.00	0	0.00	0	0.00	9	#DIV/0!
Total		33.102	30.677	0.214	25.505	0.000	415.9	532	#DIV/0!	0	#DIV/0!	4843	#DIV/0!	0	#DIV/0!	842	17.65	706	28.02	366	#DIV/0!
Ave.		1.068	0.990	0.007	0.823	#DIV/0!	13.4	17.2	#DIV/0!	0	#DIV/0!	156	#DIV/0!	0	#DIV/0!	27.2	0.57	22.8	0.90	12.2	#DIV/0!
Max		1.809	1.618	0.016	1.400	0.000	21.7	37.0	#DIV/0!	0	#DIV/0!	319	#DIV/0!	0	#DIV/0!	54	1.07	60	2.07	43	#DIV/0!
Min		0.000	0.000	0.000	0.017	0.000	0.3	0.0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	0.00	0	0.00	0	#DIV/0!

UF Filters / Softeners / Regeneration

Date	UF Hrs since backwash Bank 1	Bank 2	Bank 3	Wash Water Gal (Mgal)	Water Softened Gal (Mgal)	Water Bypassed Gal (Mgal)	Softener 1	Softener 2	Softener 3	Softener 4	Salt Used lbs	Washed Water Gal
1	0.66	0.66	0.66	0.166	0.983	0.521	66.0	34.0	32.0	28.0	9124	41400
2	0.66	0.66	0.66	0.165	0.983	0.521	30.0	41.0	30.0	30.0	9124	41400
3	0.66	0.66	0.66	0.144	1.011	0.536	25.0				2281	10350
4	0.66	0.66	0.66	0.177	0.972	0.515		37.0	35.0	29.0	6843	31050
5	0.66	0.66	0.66	0.161	0.978	0.519	43.0		33.0	31.0	6843	31050
6	0.66	0.66	0.66	0.152	0.895	0.475	41.0				2281	10350
7	0.66	0.66	0.66	0.146	0.839	0.444					0	0
8	0.66	0.66	0.66	0.013	0.158	0.079					0	0
9	0.66	0.66	0.66	0.005	0.028	0.015					0	0
10	0.66	0.66	0.66	0.007	0.046	0.024					0	0
11	0.66	0.66	0.66	0.000	0.000	0.000	145.0		124.0	142.0	6843	31050
12	0.66	0.66	0.66	0.112	0.663	0.351		148.0	34.0	30.0	6843	31050
13	0.66	0.66	0.66	0.138	0.943	0.500		36.0	29.0	28.0	6843	31050
14	0.66	0.66	0.66	0.146	1.057	0.561			29.0	29.0	2281	10350
15	0.66	0.66	0.66	0.169	1.013	0.537	90.0	44.0			6843	31050
16	0.66	0.66	0.66	0.165	1.014	0.538	26.0		29.0	27.0	6843	31050
17	0.66	0.66	0.66	0.179	1.058	0.560		47.0	37.0	41.0	6843	31050
18	0.66	0.66	0.66	0.085	0.569	0.318	52.0				2281	10350
19	0.66	0.66	0.66	0.119	0.727	0.385		54.0	41.0	40.0	6843	31050
20	0.66	0.66	0.66	0.132	0.790	0.419	45.0		33.0	32.0	6843	31050
21	0.66	0.66	0.66	0.139	0.805	0.427		46.0	29.0		2281	10350
22	0.66	0.66	0.66	0.145	0.910	0.483	44.0		36.0	38.0	6843	31050
23	0.66	0.66	0.66	0.143	0.844	0.447	30.0	49.0	34.0		6843	31050
24	0.66	0.66	0.66	0.140	0.824	0.392				39.0	2281	10350
25	0.66	0.66	0.66	0.117	0.787	0.417	45.0		44.0		4562	20700
26	0.66	0.66	0.66	0.071	0.537	0.285			44.0		2281	10350
27	0.66	0.66	0.66	0.074	0.559	0.297					0	0
28	0.66	0.66	0.66	0.002	0.024	0.013					0	0
29	0.66	0.66	0.66	0.001	0.022	0.012					0	0
30	0.66	0.66	0.66	0.002	0.017	0.009					0	0
31	0.66	0.66	0.66	0.002	0.014	0.008					0	0
Total	0.66	0.66	0.66	3.217	20.070	10.607	641	577	600	608	120893	548550
Ave.	0.66	0.66	0.66	0.104	0.647	0.342	53.4	52.5	40.0	40.5	3899.77	17695.2
Max	0.66	0.66	0.66	0.179	1.058	0.561	145.0	148.0	124.0	142.0	9,124	41,400
Min	#DIV/0!			0.000	0.000	0.000	25.0	34.0	29.0	27.0	0	0

Softeners: Each day indicate total number of hours since previous regeneration. If regeneration at mid-day, indicate hours previous/hours following.

Chemical Solutions

#	Solution	Feed Point
1	20% Sodium Permanganate	Pre-aerator
2	40% Bisulfite Solution	Membrane Backwash
3	12.5% Sodium Hypochlorite Solution	Post Softener
4	20% Ammonium Sulfate Solution	Post Softener
5	19% Fluorosilicic Acid Solution	Post Cleanwell
6	33% Phosphate Solution	Post Cleanwell

CHLORINATION
Type of Chlorine Used: Sodium Hypochlorite 12.5%
Chlorine Analyzers Used: Hach CL17 (2) & 5500sc

FLUORIDATION
Type of Fluoride Used: Hydrofluosilicic Acid 19% F
Fluoride Analyzer Used: Hach 2200, SPADNS method

I certify that the information in this report is complete and accurate to the best of my knowledge.
Reported by: _____
Date: _____
Illinois Operator Certification ID: _____
Date Bacterials Sent: _____