



Monthly Operating Report

April:2021

So. Sangamon
Water Commission
May 25th, 2021

SSWC

9199 Buckhart Rd Rochester 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 April 2021.

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 April 2021, the plant pumped 45.594 million gallons from the well field and 39.720 million gallons of finished water. This is 6.7 million gallons more than April of 2020.

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. The Critical Review is currently under review.

Operations. There was 0 emergency call-outs for the month. There were numerous customer inquiry for the month.

Maintenance and Repair. For the month of April 2021, there were 30 inspections, 3 preventative and 3 corrective maintenance activity completed.

Budget. Passed at May 18th 2020 meeting.

Capital Planning.

BOP CPU replacement

Chloramines Project

New Berlin Meter relocation.

Chatham emergency interconnect

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 April 2021.

1.3 SAFETY AUDIT

No safety audits to date.

1.4 MISCELLANEOUS SAFETY

No notable safety issues

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 45.594 MG. 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.	8.4	16.8	2.56	.254	-	385	300	1.771
Min.	7.3	13.8	.47	.212	-	346	278	1.261
Avg.	7.97	14.8	.99	.232	-	365	289	1.520
Total	-	-	-	-	-	-	-	45.594

2.3 EFFLUENT CONCENTRATIONS

The facility filtered 39.720 MG during the month with a daily average of 1.324 MG and a min/max 1.076/ 1.547 MG.

Table 2.3 Finished Water Quality										
	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
Max.	2.40	2.78	8.7		0.09	0.028	.98	220	300	2.42
Min.	1.37	1.55	7.5		0.0	0.003	0.66	96	256	1.78
Avg.	1.74	1.86	8.3		0.02	0.015	0.78	146	282	2.13
MCL	-	-	-	-	1.00	-	4.00	-	-	-
SMCL	-	-	-	-	0.30	0.050	2.00	-	-	-

Finished Water Flow Comparison for FY 2020 -21

Time Period	2020-2021	2019-2020	2018-2019
May2020- Apr 2021	402,085,823	361,605,768	388,304,693
Increase for the same period last year		40.5 MG	- 26.7 MG

FINISHED WATER PUMPING HISTORY						
	20-21	19-20	18-19	17-18	16-17	15-16
May	34,673,848	33,045,927	33,304,196	32,120,873	33,349,391	33,371,016
June	17,414,377	33,460,303	34,040,000	39,931,402	41,541,321	31,092,539
July	44,237,066	23,742,374	41,178,722	42,164,927	35,378,396	33,123,375
Aug	39,638,063	25,018,633	35,176,238	38,760,634	35,401,490	38,109,133
Sept	38,674,095	34,234,782	34,754,000	39,896,986	36,325,215	36,546,171
Oct	34,597,739	30,769,238	30,353,482	33,506,605	34,374,820	34,783,455
Nov	32,325,040	30,877,400	30,464,000	28,617,333	30,478,309	27,217,293
Dec	31,582,311	29,703,954	31,930,000	28,808,037	32,525,530	27,788,637
Jan	31,456,987	30,073,516	28,823,375	30,556,824	30,449,215	28,510,121
Feb	30,638,842	28,797,693	28,625,431	25,617,914	27,373,232	26,095,228
Mar	33,633,244	30,339,298	31,237,000	28,217,699	30,068,363	27,851,811
Apr	33,214,211	31,542,650	28,418,249	27,110,578	29,625,797	29,292,618
	-----	-----	-----	-----	-----	-----
Totals	402,085,823	361,605,768	388,304,693	395,309,812	396,891,079	373,781,397
Avg	1.10 MGD	.991 MGD	1.06 MGD	1.08 MGD	1.08 MGD	1.02 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)
April 5th, 2021						
Minimum	.14	.237	480	.03	8.7	4
Maximum	.14	.237	480	.03	8.7	4
Average	.14	.237	480			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, performed by the Springfield Metropolitan Sanitary District, was below 30,000 mg/l for the month of April 2021. The limit for chloride discharge to the sanitary district is 30,000 mg/L.

3. OPERATIONS

3.1 EVENTS IMPACTING OPERATIONS

There was 0 incident that impacted the operation of the plant.

3.2 EMERGENCY & SERVICE CALLS

Service Calls:

- There was 0 emergency call out for the month.

3.3 EMERGENCY CALL-OUTS

There was 0 emergency call out for the month of April

3.4 CUSTOMER INQUIRIE

There were numerous customer inquiries.

OTHER WORK PERFORMED

Trouble shooting all trains

Trouble shooting of CIP skid and CIP procedure

Inspected distribution mains

Added to customer info database

Inspected booster station

Flushed air system

Trouble shooting of Ion exchange system

Replaced ion exchange valve actuator



The original Ammonium Sulfate feed point was installed before the clearwell. The EPA recommends free chlorine contact time before injecting ammonia.



New Ammonium Sulfate feed point after the clearwell.

4. MAINTENANCE AND REPAIR

4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE

For the month of April 2021, there were 30 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 basis

CIP train 1,2 and 3

Worked with SCADAware in learning our system.

Purged air control system

5. PROJECT MANAGEMENT & SUPPORT

5.1 STAFFING & TRAINING

- Staff member training has been continuous and ongoing.
- Operator and Asst. Operator have been studying for EPA licensing test.

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 April 2021.

- Kevin Canham
- Stephen Bivin
- Katie Krall
- Kevin Garman (SCADAware)
- Dan (SCADAware)

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)	\$14,590.81	?	\$81,431	\$71,581	\$171,795
Utilities	\$8,30630		\$40,750	\$40,586	\$97,800
Chemicals	\$22,421.92		\$110,000	\$76,944	\$264,000
Maintenance & Repair	\$13,668.62		\$67,146	\$94,528	\$160,937
Chloride	\$12,979.73		\$65,800	\$61,400	\$157,920
Lab Supplies and Equipment	\$1,856.22		\$9,410	\$6,131	\$22,584
Office Supplies	\$213.04		\$1,080	\$264	\$2,592
Miscellaneous Expenses*	\$		\$?	\$500
Other Operating Costs	\$?	\$	\$6107	\$
Engineering Fees	\$2,547.95		\$12,500	\$5,430	\$30,000
Office Equipment rental	\$65		\$325	\$596	\$780
Locates	\$378.00	0	\$1,890	\$3,730	\$4536
Truck	\$3,287.67	0	\$6,667	\$131	\$40,000
Total	\$80,315.26	\$	\$396,999	\$367,428	\$953,444

*as of September 21th 2020

6. CAPITAL PLANNING

6.1 APPROVED CIP PROJECTS CURRENT STATUS

New Berlin Meter master meter relocation project is commencing. Engineering and relocation plans have been finalized. Awaiting ground breaking.

Pigging project construction complete. Awaiting first pigging before completely releasing contractor.

BOP CPU replace is in the planning phase

Benton and Assoc has initiated the planning phase of the Chatham Emergency interconnect. Construction permit has been approved and received . Construction has been postponed.

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.

Pumping Totals										Chemicals Applied										UF Filters										Softeners									
Time	Raw	Well	UF	Plant	HS	Legion	Sodium Permanganate	Sodium Bisulfite BW	Sodium Hypochlorite	Ammonium Sulfate	Fluorosilicic Acid	Phosphate	Sodium Bisulfite Pond	Hours since previous backwash	Wash Water	Water Softened	Water Degassed	Regeneration	Regeneration	Regeneration	Regeneration																		
Read	Filter	Prod.	Filtered	Water	Pumpage	Pumpage	lbs.	mg/l	lbs.	mg/l	as F	lbs.	mg/l	as PO4	Gal.	Gal.	Gal.	Gal.	Gal.	Gal.	Gal.																		
				(Mgal)	(Mgal)	(Mgal)	as NaMnO4	as lbs.	as Cl	as NH3	as F	as PO4	Am	Bank#	(Mgal)	(Mgal)	(Mgal)	(Mgal)	(Mgal)	(Mgal)	(Mgal)																		
														1	2	3	4	1	2	3	4																		
1	7:00	16.8	1.261	1.076	0.010	1.037	0.080	25	0.48	0	0.00	28	0.62	18	0.69	0	0.00	0.66	0.66	0.66	0.66																		
2	7:00	18.8	1.546	1.354	0.009	1.104	0.090	27	0.42	0	0.00	31	0.64	38	1.36	0	0.00	0.66	0.66	0.66	0.66																		
3	7:00	19.8	1.612	1.382	0.013	1.256	0.108	16	0.24	0	0.00	30	0.54	78	2.48	14	6.23	0.86	0.86	0.86	0.86																		
4	7:00	17.9	1.368	1.307	0.008	1.130	0.105	25	0.44	0	0.00	30	0.60	77	2.70	16	7.28	0.66	0.66	0.66	0.66																		
5	7:00	20.5	1.697	1.372	0.031	1.226	0.110	29	0.41	0	0.00	29	0.54	77	2.49	22	9.86	0.66	0.66	0.66	0.66																		
6	7:00	19.8	1.580	1.348	0.014	1.223	0.109	30	0.46	0	0.00	35	0.65	8	0.26	15	6.63	0.66	0.66	0.66	0.66																		
7	7:00	21.1	1.746	1.507	0.009	1.369	0.109	31	0.43	0	0.00	35	0.58	11	0.32	24	10.52	0.66	0.66	0.66	0.66																		
8	7:00	21.0	1.771	1.547	0.017	1.347	0.119	28	0.38	0	0.00	29	0.49	12	0.35	17	6.93	0.66	0.66	0.66	0.66																		
9	7:00	17.7	1.596	1.326	0.018	1.156	0.092	25	0.40	0	0.00	29	0.57	11	0.38	19	9.93	0.66	0.66	0.66	0.66																		
10	7:00	17.4	1.420	1.254	0.014	1.121	0.084	29	0.49	0	0.00	32	0.65	15	0.53	19	10.88	0.66	0.66	0.66	0.66																		
11	7:00	17.3	1.430	1.251	0.008	1.099	0.085	29	0.48	0	0.00	32	0.66	17	0.61	15	8.51	0.66	0.66	0.66	0.66																		
12	7:00	17.4	1.382	1.251	0.009	1.102	0.094	22	0.38	0	0.00	26	0.54	15	0.54	12	6.11	0.66	0.66	0.66	0.66																		
13	7:00	21.0	1.716	1.471	0.022	1.347	0.105	24	0.34	0	0.00	31	0.52	24	0.71	19	8.71	0.66	0.66	0.66	0.66																		
14	7:00	19.2	1.532	1.342	0.013	1.205	0.084	28	0.44	0	0.00	31	0.62	10	0.35	17	9.73	0.66	0.66	0.66	0.66																		
15	7:00	19.7	1.500	1.333	0.011	1.135	0.097	28	0.45	0	0.00	31	0.62	10	0.35	17	8.39	0.66	0.66	0.66	0.66																		
16	7:00	21.1	1.752	1.492	0.018	1.358	0.104	24	0.33	0	0.00	28	0.47	10	0.29	18	8.27	0.66	0.66	0.66	0.66																		
17	7:00	17.4	1.394	1.233	0.015	1.117	0.068	25	0.43	0	0.00	28	0.57	10	0.35	16	11.32	0.66	0.66	0.66	0.66																		
18	7:00	17.8	1.449	1.274	0.004	1.078	0.082	25	0.41	0	0.00	28	0.59	13	0.48	17	9.30	0.66	0.66	0.66	0.66																		
19	7:00	18.1	1.478	1.279	0.018	1.138	0.086	30	0.48	0	0.00	34	0.68	16	0.58	17	9.44	0.66	0.66	0.66	0.66																		
20	7:00	21.1	1.722	1.510	0.016	1.366	0.090	24	0.33	0	0.00	26	0.43	23	0.67	16	8.55	0.66	0.66	0.66	0.66																		
21	7:00	17.1	1.405	1.228	0.008	1.047	0.083	23	0.39	0	0.00	27	0.59	10	0.38	14	8.05	0.66	0.66	0.66	0.66																		
22	7:00	16.7	1.343	1.143	0.010	1.053	0.082	24	0.43	0	0.00	27	0.58	32	1.20	20	11.76	0.66	0.66	0.66	0.66																		
23	7:00	16.6	1.407	1.234	0.013	1.081	0.083	24	0.41	0	0.00	28	0.59	71	2.60	16	9.29	0.66	0.66	0.66	0.66																		
24	7:00	17.8	1.475	1.284	0.010	1.132	0.076	26	0.42	0	0.00	30	0.60	22	0.77	17	10.79	0.66	0.66	0.66	0.66																		
25	7:00	17.2	1.376	1.248	0.010	1.061	0.066	27	0.47	0	0.00	32	0.69	9	0.34	15	10.90	0.66	0.66	0.66	0.66																		
26	7:00	17.7	1.408	1.248	0.003	1.103	0.085	23	0.39	0	0.00	27	0.56	10	0.38	19	10.70	0.66	0.66	0.66	0.66																		
27	7:00	21.1	1.710	1.452	0.017	1.353	0.087	24	0.34	0	0.00	29	0.49	12	0.35	17	9.42	0.66	0.66	0.66	0.66																		
28	7:00	18.4	1.485	1.307	0.016	1.141	0.086	26	0.42	0	0.00	30	0.60	13	0.45	14	7.77	0.66	0.66	0.66	0.66																		
29	7:00	18.8	1.501	1.308	0.009	1.143	0.087	25	0.40	0	0.00	31	0.62	17	0.59	15	10.77	0.66	0.66	0.66	0.66																		
30	7:00	19.7	1.622	1.359	0.005	1.261	0.087	26	0.38	0	0.00	28	0.51	17	0.53	17	9.33	0.66	0.66	0.66	0.66																		
31																																							
Total		561.8	45.584	38.720	0.374	35.289	2.703	772	#DIV/0!	#DIV/0!	6347	#DIV/0!	745	#DIV/0!	474	#DIV/0!	2372	25.981	13.759	616	739																		
Ave.		18.7	1.520	1.324	0.012	1.176	0.090	25.7	#DIV/0!	#DIV/0!	212	#DIV/0!	24.8	#DIV/0!	15.8	#DIV/0!	0.66	0.66	0.66	0.66	0.66																		
Max		21.1	1.771	1.547	0.031	1.369	0.119	31.0	#DIV/0!	#DIV/0!	328	#DIV/0!	78	#DIV/0!	24	#DIV/0!	0	0.05	1.011	0.536	101.0																		
Min		16.6	1.261	1.076	0.001	1.037	0.066	16.0	#DIV/0!	#DIV/0!	178	#DIV/0!	8	#DIV/0!	0	#DIV/0!	0	0.062	0.703	0.000	21.0																		

1	20% Sodium Permanganate	Pre-aerator	CHLORINATION
2	40% Bisulfite Solution	Membrane Backwash	FLUORINATION
3	12.5% Sodium Hypochlorite Solution	Post Softener	Type of Fluoride Used
4	20% Ammonium Sulfate Solution	Post Cleanwell	Hydrofluosilicic Acid 19% F
5	19% Fluorosilicic Acid Solution	Post Cleanwell	Fluoride Analyser Used: Hach CL17 (2) S 5500sc
6	33% Phosphate Solution	Post Cleanwell	Sodium Hypochlorite 12.5 %
7	40% Bisulfite Solution	Legion Effluent	Chlorine Analyser Used: Hach CL17 (2) S 5500sc

Identify the information in this report is complete and accurate to the best of my knowledge.
 Reported by: Illinois Operator Certification IL 253419999
 Date: 5/6/2021
 Date Backwash Set: 4/27/2021

