



Monthly Operating Report

February:2021

So. Sangamon
Water Commission
March 15th, 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 February 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 February 2021, the plant pumped 41.811 million gallons from the well field and 37.879 million gallons of finished water. This is 3.5 million gallons more than February 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 February 2021, there were 28 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 February 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 February. 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 41.811 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	14.8	3.08	.301	-	380	300	1.770
Min.	8.1	13.0	.30	.162	-	340	275	1.318
Avg.	8.2	14.0	.88	.248	-	358	286	1.493
Total	-	-	-	-	-	-	-	41.811

2.3 EFFLUENT CONCENTRATIONS

The facility filtered 37.879 MG during the month with a daily average of 1.353 MG and a min/max 1.146/ 2.880 MG.

Table 2.3 Finished Water Quality										
	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
Max.	2.05	2.11	8.7		0.03	0.067	.87	270	300	3.54
Min.	.98	1.01	8.3		0.01	0.00	0.32	98	270	1.46
Avg.	1.51	1.64	8.5		0.01	0.029	0.67	163	284	2.12
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
Mar 2020- Feb 2021	397,120,316	359,379,069	383,977,721
Increase for the same period last year		37.7 MG	- 24.6 MG

FINISHED WATER PUMPING HISTORY						
	20-21	19-20	18-19	17-18	16-17	15-16
Mar	30,339,298	31,237,000	28,217,699	30,068,363	27,851,811	28,729,919
Apr	31,542,650	28,418,249	27,110,578	29,625,797	29,292,618	29,270,184
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
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Totals	397,120,316	359,379,069	383,977,721	399,675,695	394,341,348	374,637,071
Avg	1.09 MGD	.984 MGD	1.05 MGD	1.10 MGD	1.08 MGD	1.03 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)
February 8 th , 2021	.28	.762	400	.03	8.5	4.8
Minimum	.28	.762	400	.03	8.5	4.8
Maximum	.28	.762	400	.03	8.5	4.8
Average	.28	.762	400			4.8
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 February 2021. The limit for chloride discharge to the sanitary district is 30,000 mg/L.

3. OPERATIONS

3.1 EVENTS IMPACTING OPERATIONS

There was 1 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 February

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

Repaired Train 1

Flushed air system



In February, early one morning we received an alarm for low chloride waste flow. Once we returned to SSWC it was found that the waste valve was not opening which caused a pressure surge which inturn caused the line to come apart and break.



This is the section of line that came apart and broke off in the Chloride waste discharge system.



On January 6th AAC arrived on site at SSWC to program for the New Berlin booster station. While adding the new program, AAC caused the Ultrafilter program to malfunction. This malfunction caused the LSPs to ramp up to max speed. This in turn caused a pressure surge that shut train 1 and 3 down. This pressure surge also caused leaks to appear in the trains. Here Kevin is removing a groove lock on train one in an attempt to stop the leak caused by the over pressurization.



In February SSWC had a pole fuse blow. After assessing possible causes the determination was made that possible tree limbs in the line could have caused the short that caused the power surge.

4. MAINTENANCE AND REPAIR

4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE

For the month of February 2021, there were 28 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

Replaced manifold on train #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 February 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 applied for.

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 - IL1670080
February 2021

Date			Physical and Chemical Tests											Finished						Post Filter								
			Raw			Pre UF Membrane				Post UF Membrane				Post IEX				Membrane Integrity										
Date	pH	Temp deg C	Total Alk	Total Fe	Total Mh	Turbidity	Total Soluble	Total Fe	Total Mh	Total NTU	Turbidity	Total Alk as CaCO3	Total Fe	Total Mh	Total TDS	Fluoride F	Phosphate mg/L	Free Ammonia mg/L	Monochloramine mg/L	Chlorine F	Chlorine T	Chlorine Distribution F	Chlorine Distribution T	Bank 1 Bank 2 Bank 3				
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	psi	psi	psi	
1	8:30	14.4	275	340	0.30	0.209	0.386	0.046	0.32	0.019	0.16	860	0.20	275	270	0.01	0.019	0.74	1.78	0.00	0.00	1.56	1.60	pass				
2	8:20	14.8	280	380	0.60	0.245	0.380	0.075	0.30	0.029	0.20	870	0.24	280	270	0.02	0.087	0.72	2.23	0.02	0.00	1.50	1.60	pass				
3	8:20	14.1	280	370	0.40	0.210	0.342	0.077	0.32	0.029	0.18	860	0.18	275	98	0.02	0.021	0.57	2.05	0.02	0.00	1.59	1.76	pass				
4	8:20	14.5	282	372	0.52	0.242	0.365	0.055	0.34	0.055	0.18	870	0.19	285	100	0.01	0.028	0.63	2.03	0.05	0.00	1.29	1.79	pass				
5	8:20	14.0	280	370	0.53	0.243	0.377	0.048	0.41	0.033	0.21	860	0.24	285	220	0.01	0.010	0.59	1.94	0.04	0.00	1.25	1.38	pass				
6	8:20	13.9	286	360	0.55	0.256	0.386	0.068	0.01	0.071	0.23	860	0.31	294	220	0.01	0.047	0.85	1.90	0.02	0.00	2.05	2.11	pass				
7	8:30	13.4	286	366	0.43	0.246	0.389	0.052	0.01	0.034	0.21	850	0.28	300	170	0.01	0.020	0.88	2.21	0.03	0.00	1.46	1.58	pass				
8	8:30	13.9	280	344	0.36	0.189	0.321	0.034	0.36	0.033	0.16	860	0.15	280	100	0.01	0.029	0.32	2.21	0.01	0.00	1.41	1.52	pass				
9	8:30	13.6	280	345	0.47	0.237	0.384	0.064	0.39	0.049	0.22	860	0.33	280	110	0.01	0.052	0.50	2.13	0.00	0.00	1.43	1.52	pass				
10	8:20	13.7	280	350	0.48	0.207	0.308	0.059	0.38	0.034	0.18	870	0.19	285	130	0.01	0.000	0.57	2.12	0.01	0.00	1.46	1.62	pass				
11	8:30	13.6	280	370	0.88	0.199	0.375	0.018	0.37	0.000	0.15	860	0.26	272	164	0.02	0.060	0.55	2.15	0.00	0.00	1.46	1.58	pass				
12	8:20	13.8	290	350	2.10	0.299	0.412	0.097	0.68	0.067	0.17	860	0.20	280	142	0.01	0.017	0.71	2.22	0.00	0.00	1.42	1.56	pass				
13	8:20	13.7	285	356	0.87	0.250	0.376	0.046	0.58	0.030	0.18	860	0.20	280	180	0.01	0.060	0.81	2.09	0.00	0.00	1.41	1.57	pass				
14	8:30	13.0	285	340	0.60	0.280	0.421	0.102	0.68	0.088	0.14	840	0.27	280	220	0.03	0.032	0.82	2.14	0.00	0.00	1.41	1.41	pass				
15	8:30	13.0	280	360	1.04	0.289	0.501	0.071	0.03	0.087	0.16	840	0.31	284	182	0.01	0.041	0.78	2.12	0.00	0.00	0.98	1.01	pass				
16	8:40	14.5	290	360	0.79	0.254	0.396	0.041	0.01	0.025	0.17	830	0.21	290	220	0.01	0.032	0.70	1.93	0.00	0.00	1.89	2.03	pass				
17	8:10	13.2	295	364	0.72	0.252	0.407	0.047	0.71	0.052	0.17	830	0.25	285	200	0.02	0.030	0.75	2.20	0.00	0.00	1.62	1.86	pass				
18	8:10	13.8	285	358	1.53	0.264	0.400	0.047	0.52	0.034	0.10	830	0.20	282	130	0.02	0.010	0.78	2.06	0.00	0.00	1.39	1.59	pass				
19	8:10	14.0	288	362	0.86	0.259	0.426	0.051	0.01	0.057	0.19	830	0.30	290	142	0.02	0.038	0.60	2.07	0.00	0.00	1.50	1.80	pass				
20	8:20	14.3	300	364	0.66	0.242	0.397	0.033	0.54	0.036	0.14	830	0.34	292	160	0.02	0.016	0.51	1.46	0.00	0.00	1.70	1.86	pass				
21	8:10	14.1	294	364	0.40	0.254	0.389	0.055	0.01	0.045	0.24	840	0.25	300	160	0.02	0.013	0.75	2.12	0.00	0.00	1.50	1.66	pass				
22	8:20	14.8	290	352	0.75	0.266	0.414	0.054	0.57	0.041	0.15	840	0.20	280	140	0.01	0.018	0.87	2.11	0.01	0.00	1.51	1.63	pass				
23	8:20	14.6	290	347	0.66	0.264	0.417	0.054	0.75	0.026	0.11	840	0.20	285	172	0.01	0.023	0.73	2.00	0.00	0.00	1.52	1.56	pass				
24	8:20	14.5	300	376	1.77	0.279	0.412	0.041	0.71	0.023	0.13	850	0.28	285	160	0.01	0.021	0.33	3.54	0.02	0.00	1.65	1.78	pass				
25	8:20	14.5	290	356	3.08	0.301	0.418	0.052	0.64	0.026	0.13	850	0.18	270	110	0.01	0.009	0.84	2.15	0.01	0.00	1.68	1.82	pass				
26	8:20	14.7	295	360	0.85	0.256	0.416	0.045	0.82	0.048	0.15	850	0.20	280	120	0.01	0.033	0.85	2.29	0.00	0.00	1.60	1.62	pass				
27	8:20	14.8	282	345	1.28	0.288	0.429	0.042	0.78	0.041	0.11	850	0.24	276	160	0.01	0.032	0.84	2.07	0.00	0.00	1.66	1.70	pass				
28																												
29																												
30																												
31																												
Ave.	8:22	14.0	286	358	0.88	0.248	#DIV/0!	0.386	0.059	0.40	0.046	0.20	850	0.24	284	163	0.01	0.029	0.67	2.12	0.01	0.00	1.51	1.64	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Max	8:40	14.8	300	380	3.08	0.301	0.00	0.00	0.501	0.779	0.82	0.16	870	0.34	300	270	0.03	0.087	0.87	3.54	0.05	0.00	2.05	2.11	0.00	0.00	0.00	0.00
Min	8:10	13.0	275	340	0.30	0.162	0.00	0.00	0.167	0.016	0.00	0.10	830	0.15	270	98	0.01	0.000	0.32	1.46	0.00	0.00	0.98	1.01	0.00	0.00	0.00	0.00

