

# Monthly Operating Report

September: 2020



So. Sangamon  
Water Commission  
October 19th, 2020

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 September 2020.

**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](http://www.sswc.us).

During the month of September 2020, the plant pumped 51.068 million gallons from the well field and 41.073 million gallons of finished water. This is 4.44 million gallons more than September of 2019.

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 1 emergency call-outs for the month. There were numerous customer inquiry for the month.

**Maintenance and Repair.** For the month of September 2020, there were 30 inspections, 3 preventative and 3 corrective maintenance activity completed.

**Budget.** Passed at May 18<sup>th</sup> 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 September 2020.

## **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 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 51.068 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)
<b>Max.</b>	8.2	17.3	1.58	.318	-	380	290	2.118
<b>Min.</b>	7.9	15.1	.54	.176	-	340	278	1.405
<b>Avg.</b>	8.0	16.0	.84	.242	-	353	282	1.702
<b>Total</b>	-	-	-	-	-	-	-	51.068

### 2.3 EFFLUENT CONCENTRATIONS

The facility filtered 45.982 MG during the month with a daily average of 1.533 MG and a min/max 1.241/ 1.905 MG.

Table 2.3 Finished Water Quality

	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
<b>Max.</b>	2.25	2.28	8.6		0.04	0.078	.93	270	320	1.88
<b>Min.</b>	1.46	1.49	8.3		0.01	0.001	0.53	100	270	1.43
<b>Avg.</b>	1.92	2.00	8.4		0.02	0.028	0.71	138	280	1.64
<b>MCL</b>	-	-	-	-	1.00	-	4.00	-	-	-
<b>SMCL</b>	-	-	-	-	0.30	0.050	2.00	-	-	-

## Finished Water Flow Comparison for FY 2019-20

Time Period	2019-2020	2018-2019	2017-2018
Oct 2019-Sept 2020	386,741,198	359,353,556	380,888,146
Increase for the same period last year	27.4 MG	- 21.5 MG	

FINISHED WATER PUMPING HISTORY						
	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15
Oct	30,769,238	30,353,482	33,506,605	34,374,820	34,783,455	28,803,052
Nov	30,877,400	30,464,000	28,617,333	30,478,309	27,217,293	28,426,579
Dec	29,703,954	31,930,000	28,808,037	32,525,530	27,788,637	28,656,869
Jan	30,073,516	28,823,375	30,556,824	30,449,215	28,510,121	30,346,721
Feb	28,797,693	28,625,431	25,617,914	27,373,232	26,095,228	26,336,077
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
	-----	-----	-----	-----	-----	-----
Totals	386,741,198	359,353,556	380,888,146	407,770,088	383,534,976	372,811,635
Avg	1.06 MGD	.985 MGD	1.04 MGD	1.1 MGD	1.05 MGD	1.0 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 <sup>2</sup> (mg/l)	pH (S.U.)	TSS (mg/l)
September 4th 2020	.18	.641	430	0.05	8.3	4.8
Minimum	.18	.641	430	0.05	8.3	4.8
Maximum	.18	.641	430	0.05	8.3	4.8
Average	.18	.641	430	0.05	8.3	4.8
<b>Monthly Avg Limit</b>	<b>2.000</b>	<b>1.000</b>				<b>15</b>
<b>Daily Limit</b>	<b>4.000</b>	<b>2.000</b>	<b>500</b>	<b>0.05</b>	<b>6.0-9.0</b>	<b>30</b>

The Chloride sample for the month, performed by the Springfield Metropolitan Sanitary District, was below 30,000 mg/l for the month of September 2020. 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 1 emergency call out for the month of September

### 3.4 CUSTOMER INQUIRIES

There were numerous customer inquiries.

#### OTHER WORK PERFORMED

Trouble shooting of new train

Trouble shooting of CIP skid and CIP procedure

Inspected distribution mains

Consulted with new customers.

Flushed raw water line

Created customer info database

Fixed air leak

Serviced and repaired air compressors

Inspected booster station



On September 2, SSWC personnel received a low air pressure alarm. Upon returning to the plant it was discovered that the bolts on the flange that feed air to the air scour system had loosened. This allowed the gasket to push out under pressure.



SCADAware has been onsite installing the program to operate the filter trains and assessing the plant to build a todo list for sswc. The licensing for our program is still in the process of being worked out.



Replacement transfer switch has arrived from UUSCO. We are awaiting installation.



Original transfer switch has been returned following inspection.

## **4. MAINTENANCE AND REPAIR**

### **4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE**

For the month of September 2020, there were 30 inspections, 12 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

Cleaned lagoon vegetation

Repaired flange in air control system

Restarted booster station

## **5. PROJECT MANAGEMENT & SUPPORT**

### **5.1 STAFFING & TRAINING**

- With the addition of a new 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 September 2020.

- Kevin Canham
- Stephen Bivin
- Katie Krall
- SCADAware
- Chris Usinger (Kirby Risk)



## 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)	\$14,120.14	?	\$28,633	\$32,751	\$171,795
Utilities	\$8,038.36		\$16,300	\$16,546	\$97,800
Chemicals	\$21,698.30		\$44,000	\$26,292	\$264,000
Maintenance & Repair	\$13,227.70		\$19,400.62	\$55,819	\$160,937
Chloride	\$12,979.73		\$26,320	\$19,720	\$157,920
Lab Supplies and Equipment	\$1,856.22		\$3,764	\$2,372	\$22,584
Office Supplies	\$213.04		\$432	\$155	\$2,592
Miscellaneous Expenses*	\$		\$	?	\$500
Other Operating Costs	\$	?	\$	\$6107	\$
Engineering Fees	\$2,465.75		\$5000	\$234	\$30,000
Office Equipment rental	\$65		\$130	\$217	\$780
Locates	\$372.82	0	\$756	\$1,415	\$4536
Truck	\$3,287.67	0	\$6,667	\$131	\$40,000
<b>Total</b>	<b>\$78,324.73</b>	<b>\$</b>	<b>\$125,108.94</b>	<b>\$161,759</b>	<b>\$953,444</b>

\*as of June 30<sup>th</sup> 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.

### **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**

MONTHLY IRON REMOVAL AND ION EXCHANGE SOFTENING REPORT

South Sangamon Water Commission - IL 1670080

September 2019

Pumping Totals																UF Filters								Softeners								
Chemicals Applied								Hours since previous backwash								Regeneration																
Time		Raw Well		UF Plant		HS Effluent		Lagoon		Permanganate		Sodium Bisulfite B/W		Ammonium Sulfate		Fluorosilicic Acid		Phosphate		Sodium Bisulfite Pond		Wash Water		Water Softened		hours since previous regeneration		Salt Washed Used				
Date/Filter	Run	Time	Hours	Well	Prod.	Filtered	Waste	Pumpage	mgal	Used	Amt	Calc	Used	Amt	Calc	Used	Amt	Calc	Used	Amt	Calc	Used	Gal.	Gal.	Gal.	Gal.	Irrigation at mid-day, indicate hours previous filters following	Irrigation at mid-day, indicate hours previous filters following	Ibs.	Gal.		
1	1	7:00	19.9	1372	1.784	0.020	1.536	0.120	20	0.24	0.00	233	0.32	0.00	372	3.13	0.00	34	0.49	20	0.50	22	8.81	0.66	0.66	0.115	1.784	30.0	2.30	3.0	2281	10850
2	2	7:00	15.26	1354	1.457	0.009	1.203	0.110	23	0.32	0.00	233	0.32	0.00	233	0.27	0.00	32	0.61	22	13.06	0.66	0.66	0.0391	1.455	50.0	3.20	3.20	9124	45700		
3	3	7:00	18.0	1.240	1.415	0.016	1.405	0.098	23	0.32	0.00	276	0.26	0.00	33	0.54	27	0.76	19	9.34	0.66	0.66	0.0388	1.415	34.0	3.20	3.20	9124	45700			
4	4	7:00	17.1	1.702	1.558	0.008	1.379	0.119	26	0.37	0.00	303	2.91	0.00	41	0.68	35	1.00	23	9.26	0.66	0.66	0.1000	1.558	44.0	3.30	3.30	9124	43400			
5	5	7:00	17.5	1.729	1.627	0.018	1.443	0.122	25	0.35	0.00	313	2.88	0.00	34	0.54	15	0.41	27	10.60	0.66	0.66	0.103	1.627	21.0	2.70	2.70	9124	43400			
6	6	7:00	19.3	1.904	1.696	0.020	1.518	0.121	21	0.26	0.00	330	2.92	0.00	36	0.54	15	0.38	27	10.67	0.66	0.66	0.107	1.696	23.0	2.80	2.80	6893	32550			
7	7	7:00	18.3	1.519	1.457	0.014	1.461	0.118	22	0.40	0.00	321	2.94	0.00	45	0.57	34	1.37	166	0.66	0.66	0.108	1.655	28.0	3.10	3.10	59124	45700				
8	8	7:00	18.6	1.770	1.680	0.010	1.490	0.122	18	0.24	0.00	202	1.80	0.00	30	0.46	15	0.40	28	10.97	0.66	0.66	0.108	1.680	54.0	2.80	2.80	6893	32550			
9	9	7:00	18.1	1.824	1.604	0.015	1.408	0.125	4	0.05	0.00	235	2.20	0.00	32	0.52	20	0.56	25	9.56	0.66	0.66	0.1111	1.604	33.0	3.10	3.10	6893	32550			
10	10	7:00	15.5	1.474	1.419	0.015	1.203	0.102	19	0.31	0.00	189	2.00	0.00	27	0.51	20	0.66	20	9.44	0.66	0.66	0.0922	1.419	43.0	3.60	3.60	4562	21700			
11	11	7:00	14.8	1.405	1.339	0.012	1.129	0.095	19	0.32	0.00	221	2.47	0.00	32	0.65	24	0.84	20	10.44	0.66	0.66	0.095	1.339	36.0	3.90	3.90	59124	32550			
12	12	7:00	15.0	1.380	1.348	0.008	1.238	0.089	20	0.47	0.00	297	2.08	0.00	42	0.77	34	1.37	166	0.66	0.66	0.0978	1.548	37.0	3.10	3.10	59124	32550				
13	13	7:00	15.1	1.519	1.416	0.013	1.211	0.103	18	0.28	0.00	179	1.89	0.00	26	0.49	37	1.21	16	7.42	0.66	0.66	0.0989	1.416	33.0	3.30	3.30	6893	32550			
14	14	7:00	15.6	1.572	1.266	0.011	1.250	0.093	14	0.21	0.00	238	2.82	0.00	24	0.44	43	1.36	19	9.84	0.66	0.66	0.0833	1.266	94.0	35.0	35.0	59124	21700			
15	15	7:00	15.4	1.524	1.466	0.012	1.234	0.107	19	0.30	0.00	279	2.81	0.00	30	0.55	59	1.89	25	11.17	0.66	0.66	0.0939	1.486	37.0	3.60	3.60	6893	32550			
16	16	7:00	15.4	1.542	1.298	0.012	1.229	0.102	22	0.34	0.00	243	2.81	0.00	31	0.57	9	0.29	26	12.18	0.66	0.66	0.0988	1.298	51.0	32.0	32.0	59124	32550			
17	17	7:00	17.0	1.886	1.437	0.016	1.344	0.105	23	0.33	0.00	270	2.82	0.00	44	0.53	29	13.20	0.66	0.66	0.0986	1.437	25.0	31.0	31.0	59124	32550					
18	18	7:00	16.3	1.622	1.561	0.017	1.303	0.086	18	0.27	0.00	298	2.81	0.00	23	0.40	21	0.33	30	13.37	0.66	0.66	0.0981	1.589	32.0	33.0	33.0	59124	32550			
19	19	7:00	17.3	1.592	1.357	0.008	1.364	0.089	24	0.34	0.00	255	2.82	0.00	32	0.53	15	0.44	21	11.37	0.66	0.66	0.0779	1.357	35.0	32.0	32.0	59124	21700			
20	20	7:00	16.0	1.526	1.537	0.013	1.244	0.095	25	0.37	0.00	269	2.82	0.00	35	0.64	16	0.51	22	11.11	0.66	0.66	0.0935	1.537	42.0	26.0	26.0	59124	32550			
21	21	7:00	17.6	1.710	1.445	0.021	1.444	0.090	22	0.31	0.00	271	2.81	0.00	38	0.60	21	0.58	34	18.16	0.66	0.66	0.095	1.445	63.0	28.0	28.0	59124	32550			
22	22	7:00	18.8	1.777	1.665	0.010	1.488	0.134	23	0.31	0.00	311	2.82	0.00	42	0.61	23	0.61	27	9.65	0.66	0.66	0.1115	1.665	116.0	61.0	61.0	59124	43400			
23	23	7:00	17.1	1.565	1.561	0.017	1.352	0.119	23	0.30	0.00	299	2.87	0.00	35	0.59	33	0.97	28	11.27	0.66	0.66	0.1000	1.561	28.0	32.0	32.0	59124	43400			
24	24	7:00	17.2	1.589	1.530	0.020	1.410	0.104	31	0.44	0.00	288	2.82	0.00	46	0.74	74	2.08	28	12.97	0.66	0.66	0.0934	1.530	42.0	25.0	25.0	59124	21700			
25	25	7:00	20.6	2.113	1.905	0.014	1.709	0.139	29	0.33	0.00	261	2.21	0.00	42	0.56	78	1.81	33	11.37	0.66	0.66	0.1200	1.505	42.0	26.0	26.0	59124	43400			
26	26	7:00	21.2	2.118	1.881	0.014	1.757	0.137	27	0.31	0.00	291	2.31	0.00	41	0.53	10	0.23	29	10.13	0.66	0.66	0.123	1.881	26.0	26.0	26.0	59124	32550			
27	27	7:00	19.4	1.827	1.765	0.016	1.513	0.123	30	0.37	0.00	299	2.54	0.00	42	0.62	15	0.38	36	14.00	0.66	0.66	0.109	1.765	29.0	30.0	30.0	59124	32550			
28	28	7:00	16.4	1.575	1.527	0.016	1.401	0.107	22	0.32	0.00	270	2.70	0.00	35	0.54	34	18.45	0.66	0.66	0.0937	1.527	75.0	32.0	32.0	59124	21700					
29	29	7:00	15.5	1.530	1.520	0.009	1.204	0.112	19	0.30	0.00	274	2.70	0.00	28	0.53	12	0.39	0	0.00	0.66	0.66	0.1022	1.520	40.0	40.0	40.0	59124	43400			
30	30	7:00	15.7	1.540	1.241	0.008	1.103	0.094	18	0.30	0.00	224	2.71	0.00	29	0.60	13	0.47	0	0.00	0.66	0.66	0.0880	1.241	43.0	32.0	32.0	59124	32550			
31	31	7:00	15.7	1.545	1.241	0.008	1.103	0.089	40	0.00	0.00	#D10 0 0 0	#D10 0 0 0	0	#D10 0 0 0	0	#D10 0 0 0	0	#D10 0 0 0	0	#D10 0 0 0	0	0.0000	21.0	25.0	25.0	59124	0				
Total			5177	51.068	45.982	0.412	41.073	3.02	666	#D10 0 0 0	0	#D10 0 0 0	826	#D10 0 0 0	0	#D10 0 0 0	776	#D10 0 0 0	57	#D10 0 0 0	722	685	699	45382	709	32.0	32.0	846300	253449899			
Ave.			17.3	17.02	1.553	1.539	0.110	2.22	1.522	#D10 0 0 0	274	#D10 0 0 0	342	#D10 0 0 0	253.9	#D10 0 0 0	282	#D10 0 0 0	1483	50.6	50.6	0.0000	10772020	32.0	32.0	32.0	3.3	84300				
Min			14.8	14.5	2.118	1.905	0.021	1.757	0.139	32.0	#D10 0 0 0	0	#D10 0 0 0	46	#D10 0 0 0	41	#D10 0 0 0	116.0	63.0	63.0	0.0000	10772020	6.0	6.0	6.0	9.124	43400					
Max			14.8	14.5	2.118	1.905	0.008	1.241	0.008	1.103	0.089	40	#D10 0 0 0	0	#D10 0 0 0	9	#D10 0 0 0	0	#D10 0 0 0	0	#D10 0 0 0	0	0.0000	21.0	25.0	25.0	0	0				

and accountable to the best of my knowledge.

Reported by: \_\_\_\_\_ Date: 10/7/2020

Sieve Assay for Bacterial Setae

THE JOURNAL OF CLIMATE

## South Sangamon Water Commission Report

September 2020 Monthly Operating

South Sangamon Water Commission - IL1670080  
September 2019

