



# Monthly Operating Report

April:2024

So. Sangamon  
Water Commission  
May 20<sup>th</sup>, 2024

## 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 2024.

**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 April 2024, the plant pumped 39.339 million gallons from the well field and 32.082 million gallons of finished water. This is 7.1 million gallons less than April 2023.

The SSWC plant has been removed from Critical Review status.

**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 April 2024, there were 30 inspections, 3 preventative and multiple corrective maintenance activity completed. There was 2 repair activities performed .

**Budget.** Passed at April 17<sup>th</sup> 2023 meeting.

**Capital Planning.**

Chatham emergency interconnect

Onsite fuel storage tanks

Detention Tank

Well#11

## **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 2024.

### **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 39.339 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.	7.3	14.8	5.86	.696	-	380	320	1.821
Min.	6.8	13.0	.46	.156	-	320	300	.330
Avg.	6.99	13.6	1.40	.238	-	363	305	1.311
Total	-	-	-	-	-	-	-	39.339

### 2.3 EFFLUENT CONCENTRATIONS

The facility filtered 35.773 MG during the month with a daily average of 1.192 MG and a min/max .931/ 1.424 MG.

Table 2.3 Finished Water Quality										
	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
Max.	0.14	3.94	7.8		0.02	0.058	.91	140	320	1.99
Min.	0.05	3.10	7.3		0.01	0.004	0.40	100	290	.76
Avg.	0.09	3.49	7.5		0.01	0.028	0.70	110	303	1.71
MCL	-	-	-	-	1.00	-	4.00	-	-	-
SMCL	-	-	-	-	0.30	0.050	2.00	-	-	-

## Finished Water Flow Comparison for FY 2023-24

Time Period	23-24	22-23	21-22
May 2023- April 2024	406,598,196	424,556,785	419,606,220
Increase for the same period last year		-17.96 MG	4.95MG

FINISHED WATER PUMPING HISTORY						
	2023-24	2022-23	2021-22	2020-21	2019-20	2018-19
May	43,484,155	37,459,417	35,932,776	34,673,848	33,045,927	33,304,196
June	22,455,176	38,496,145	37,616,256	17,414,377	33,460,303	34,040,000
July	41,565,811	38,861,790	39,001,640	44,237,066	23,742,374	41,178,722
Aug	39,770,720	36,977,913	39,953,900	39,638,063	25,018,633	35,176,238
Sept	38,677,420	32,355,302	38,935,839	38,674,095	34,234,782	34,754,000
Oct	32,733,224	29,576,287	34,918,955	34,597,739	30,769,238	30,353,482
Nov	30,061,570	35,563,717	31,181,005	32,325,040	30,877,400	30,464,000
Dec	31,818,986	30,450,255	31,391,459	31,582,311	29,703,954	31,930,000
Jan	33,807,516	37,721,005	32,322,270	31,456,987	30,073,516	28,823,375
Feb	29,777,768	33,481,076	32,451,653	30,638,842	28,797,693	28,625,431
Mar	31,222,925	36,781,261	33,909,417	33,633,244	30,339,298	31,237,000
Apr	31,707,537	36,832,617	31,991,050	33,214,211	31,542,650	28,418,249
	-----	-----	-----	-----	-----	-----
Totals	406,598,196	424,556,785	419,606,220	402,085,823	361,605,768	388,304,693
Avg	1.11 MGD	1.16 MGD	1.15 MGD	1.10 MGD	.988 MGD	1.06 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)
April 2nd, 2024						
Minimum	.12	.117	245.6	.02	7.6	<4
Maximum	.12	.117	245.6	.02	7.6	<4
Average	.12	.117	245.6	.02	7.6	<4
<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 April 2024. The limit for chloride discharge to the sanitary district is 30,000 mg/L.

### **3. OPERATIONS**

#### **3.1 EVENTS IMPACTING OPERATIONS**

**There were over 50 incident that impacted the operation of the plant.**

Ion exchange alarm

Westech filters comm loss

Power surge

Power Sag

Power Outages

Ion Exchange Brine Pump

Well Comm loss

Train #2 Failure

#### **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.

#### **3.4 CUSTOMER INQUIRIE**

There were numerous customer inquiries.

#### **OTHER WORK PERFORMED**

Inspected distribution mains

Inspected booster station

Customer service

Air Compressor Mounting Platform

SCADA programming

Mower Maintenance

New scada computers

Well Cleanings

Well Transducer installation

Well #3 excavating

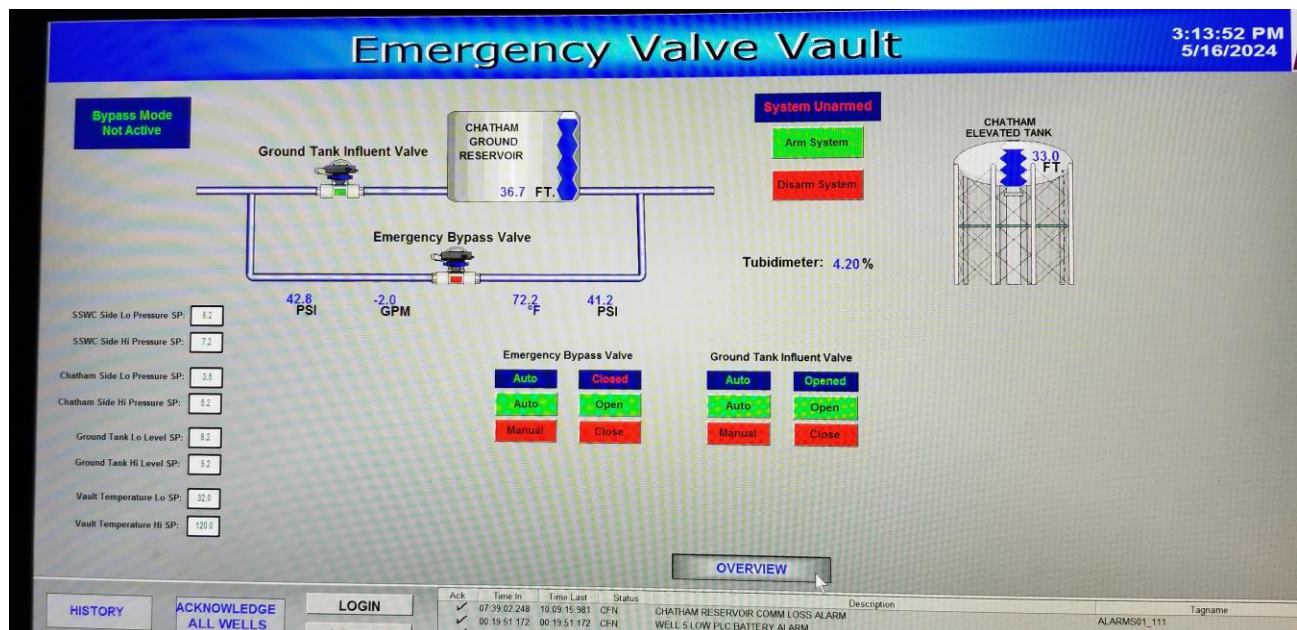
Train #2 Repair



Chatham/SSWC interconnect valve has been installed.



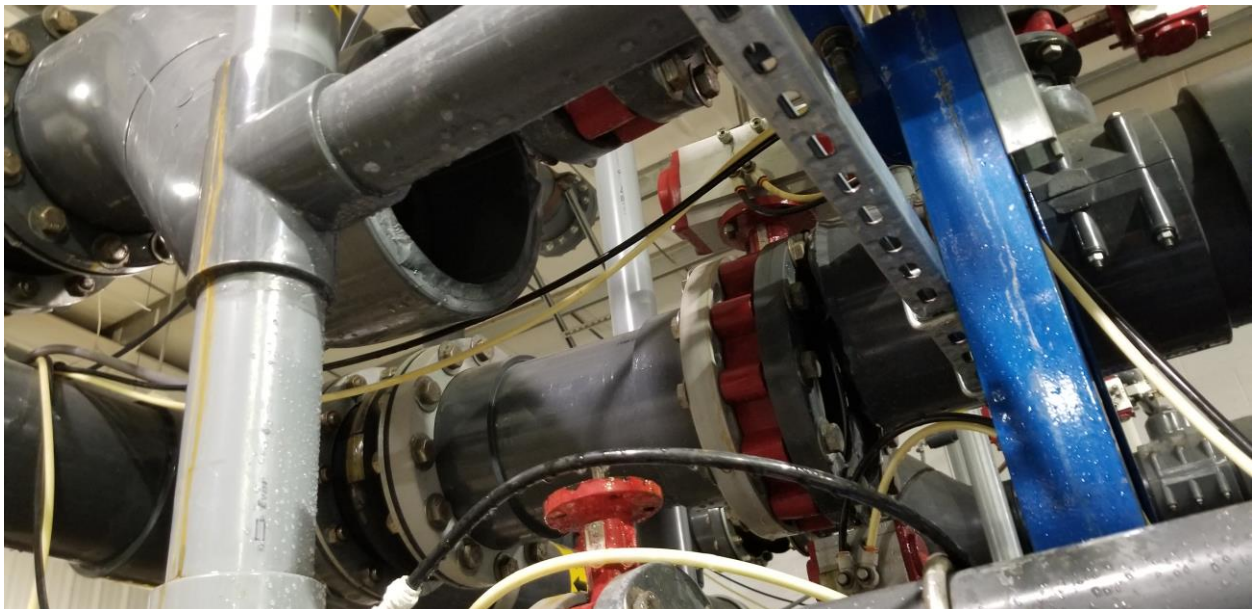
Interconnect turbidimeter has been installed and is operational



SCADAware has installed the emergency interconnect control screen on SSWCs SCADA. Pre-startup meeting is forthcoming. The emergency interconnect should be online within a month.



Train #2 had a catastrophic failure in 2 areas.





The train #2 failure occurred on both the inlet and outlet side .



Noticed an intermittent drop in flow from the well field. Attempted to see if there is a bad check valve.



## **4. MAINTENANCE AND REPAIR**

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

For the month of April 2024, there were 30 inspections, 3 preventative and multiple corrective maintenance activities completed.

### **4.2 CORRECTIVE REPAIR AND MAINTENANCE**

Pulling and cleaning pre filters on all 3 filter trains on weekly basis

CIP train 1,2 and 3

Purged air control system

Air Compressor service

Raw water line flushing

Detention tank flush

Flushing Air Lines

Maintenance of New Berlin Booster Station

Meter Transmitter Replacement

Air compressor Maintenance

Pneumatic Tank Maintenance

Well #1 Repair

Train #2 Repair



## **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 March 2024.

- Kevin Canham
- Stephen Bivin
- Katie Krall
- Dan (SCADAware)
- Joe Lee Electric
- Kevin Garmin (SCADAware)



### 5.3 BUDGET

Table 5.3 Operating Budget

**Table 5.3 Budget Table**

Budget Table was removed: see clerks report

## **6. CAPITAL PLANNING**

### **6.1 APPROVED CIP PROJECTS CURRENT STATUS**

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

The Chatham /South Sangamon emergency interconnect construction is mostly complete. The valve has arrived and has been installed. SSWC has been coordinating with SCADAware the installation and programming of the interconnect controls.

Meter Project progressing, All meter bases and registers are on site. 31 cell meters have been installed.

Meco Engineering has provided us with initial plans for well #11. Well #11 construction permit has been approved and has been received at the plant. Flood Plain Permit has been received and is posted. MECO Engineering has been on site and sample wells have been drilled.

### **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.

1. Onsite fuel storage tanks have arrived on site and pumps have been installed-completed
2. BOP CPU upgrade has been completed
3. Second raw water detention tank
4. SSWC/Chatham interconnect
5. Well #11

South Sangamon Water Commission - IL1670080  
April 2024

		Physical and Chemical Tests										Membrane Integrity																					
		Raw					Pre UF Membrane					Post UF Membrane					Post EX					Finished					Post Filter						
Date	pH	Temp deg C	Alk. mg/L	Total Hard. mg/L	Fe mg/L	Total Turbidity	Total Fe mg/L	Total In mg/L	Soluble In mg/L	Total Turbidity	Total Fe mg/L	Total In mg/L	Total Turbidity	Total Alk. mg/L	Total Hard. mg/L	Fe mg/L	Total In mg/L	Total Fluoride mg/L	Ortho Phosphate mg/L	Free Ammonia mg/L	Monochloramine mg/L	F mg/L	T mg/L	Chlorine mg/L	F mg/L	T mg/L	Bank 1 Bank 2 Bank 3	psi	psi	psi	psi		
1	7.20	13.0	320	360	0.46	0.162	0.263	0.088	0.088	0.01	0.073	0.14	7.80	0.28	320	110	0.01	0.042	0.78	1.71	0.20	3.40	0.08	3.50									
2	6.80	14.2	310	360	1.08	0.191	0.639	0.083	0.083	0.02	0.088	0.20	7.80	0.28	300	120	0.02	0.049	0.72	1.64	0.02	3.40	0.13	3.72									
3	7.30	13.1	300	365	1.40	0.245	0.375	0.104	0.104	0.01	0.098	0.15	7.80	0.37	300	100	0.01	0.047	0.78	1.88	0.01	3.70	0.09	3.10									
4	6.90	13.1	300	360	1.11	0.186	0.512	0.053	0.053	0.02	0.047	0.17	7.40	0.32	300	120	0.01	0.004	0.65	1.99	0.02	3.42	0.08	3.49									
5	6.90	13.1	300	360	1.29	0.253	0.468	0.084	0.084	0.01	0.095	0.24	7.50	0.28	300	110	0.01	0.042	0.69	1.65	0.03	3.49	0.08	3.52									
6	7.00	13.1	300	365	1.01	0.268	0.394	0.069	0.069	0.01	0.084	0.25	7.50	0.28	300	110	0.01	0.040	0.76	1.79	0.02	3.55	0.08	3.68									
7	7.10	13.0	318	362	1.26	0.248	0.419	0.055	0.055	0.01	0.041	0.02	7.50	0.29	312	110	0.01	0.029	0.66	1.81	0.02	3.49	0.07	3.51									
8	7.10	13.1	308	356	0.93	0.181	0.245	0.066	0.066	0.02	0.050	0.22	7.30	0.22	290	105	0.01	0.010	0.79	1.97	0.03	3.44	0.06	3.17									
9	7.00	13.0	314	362	0.89	0.174	0.210	0.058	0.058	0.01	0.071	0.24	7.30	0.24	300	102	0.01	0.014	0.77	1.74	0.02	3.71	0.05	3.41									
10	6.90	14.4	300	360	0.66	0.623	0.678	0.048	0.048	0.01	0.046	0.36	7.30	0.24	300	140	0.02	0.010	0.71	1.82	0.02	3.67	0.08	3.84									
11	6.90	13.7	300	360	1.66	0.217	0.274	0.105	0.105	0.02	0.073	0.30	7.50	0.26	300	100	0.01	0.039	0.42	1.74	0.03	3.41	0.06	3.58									
12	6.90	13.5	300	360	1.03	0.156	0.241	0.051	0.051	0.02	0.035	0.32	7.50	0.24	300	100	0.01	0.006	0.89	1.98	0.03	3.29	0.09	3.26									
13	7.00	13.0	312	360	1.14	0.294	0.244	0.071	0.071	0.01	0.054	0.23	7.30	0.02	305	100	0.01	0.011	0.49	1.77	0.02	3.45	0.06	3.44									
14	7.00	13.1	302	375	1.31	0.217	0.266	0.089	0.089	0.01	0.077	0.25	7.40	0.02	308	110	0.01	0.033	0.51	1.68	0.03	3.44	0.05	3.51									
15	6.80	14.8	300	360	0.68	0.719	0.314	0.083	0.083	0.05	0.149	0.36	7.50	0.28	300	120	0.02	0.058	0.40	0.76	0.01	3.13	0.14	3.44									
16	7.00	14.3	300	365	2.53	0.253	0.242	0.045	0.045	0.01	0.030	0.32	7.50	0.30	300	100	0.01	0.014	0.91	1.72	0.05	3.60	0.14	3.56									
17	7.00	14.4	300	370	1.01	0.199	0.276	0.078	0.078	0.01	0.082	0.34	7.50	0.27	300	100	0.02	0.048	0.71	1.74	0.01	3.23	0.09	3.38									
18	7.00	13.9	310	360	0.77	0.173	0.347	0.062	0.062	0.01	0.022	0.34	7.50	0.30	310	120	0.01	0.005	0.83	1.71	0.01	3.71	0.10	3.80									
19	7.00	13.7	300	370	0.70	0.180	0.298	0.050	0.050	0.01	0.090	0.36	7.50	0.33	300	100	0.01	0.015	0.76	1.75	0.01	3.30	0.10	3.46									
20	7.00	13.7	310	370	0.65	0.166	0.273	0.058	0.058	0.01	0.062	0.34	7.50	0.33	310	110	0.01	0.027	0.80	1.68	0.01	3.55	0.10	3.62									
21	7.00	13.7	310	320	0.53	0.193	0.234	0.044	0.044	0.01	0.056	0.32	7.40	0.30	300	100	0.01	0.022	0.77	1.81	0.01	3.23	0.09	3.40									
22	7.00	13.7	310	360	0.85	0.166	0.594	0.085	0.085	0.02	0.095	0.36	7.60	0.32	300	120	0.01	0.053	0.75	1.78	0.01	4.02	0.10	3.14									
23	7.10	13.6	300	360	0.57	0.387	0.265	0.053	0.053	0.01	0.072	0.42	7.60	0.34	300	110	0.01	0.026	0.61	1.59	0.03	3.93	0.10	3.94									
24	6.80	14.0	300	365	0.96	0.168	0.335	0.097	0.097	0.02	0.103	0.40	7.40	0.38	310	100	0.02	0.042	0.68	1.73	0.01	3.75	0.09	3.68									
25	7.10	13.8	300	360	3.22	0.231	0.249	0.053	0.053	0.01	0.077	0.44	7.60	0.36	300	100	0.01	0.038	0.73	1.59	0.01	2.94	0.08	3.22									
26	6.80	13.4	310	360	0.64	0.159	0.244	0.051	0.051	0.02	0.069	0.44	7.60	0.36	310	100	0.01	0.023	0.67	1.66	0.01	3.92	0.09	3.56									
27	7.00	13.4	320	370	0.77	0.208	0.300	0.044	0.044	0.01	0.091	0.35	7.50	0.31	308	104	0.01	0.033	0.70	1.61	0.03	3.66	0.05	3.38									
28	7.10	13.5	300	365	0.86	0.166	0.274	0.041	0.041	0.01	0.098	0.46	7.50	0.21	310	108	0.01	0.015	0.74	1.61	0.01	3.71	0.08	3.44									
29	7.00	14.0	300	360	0.99	0.182	0.550	0.063	0.063	0.03	0.039	0.42	7.50	0.38	300	120	0.02	0.041	0.80	1.70	0.01	3.63	0.08	3.50									
30	7.00	14.2	300	350	0.98	0.162	0.276	0.073	0.073	0.01	0.052	0.40	7.50	0.34	290	140	0.02	0.010	0.62	1.62	0.01	3.16	0.10	3.32									
31																																	
Ave.	6.99	13.6	305	363	1.40	0.238	0.410	0.067	0.067	0.01	0.072	0.31	7.50	0.28	303	110	0.01	0.028	0.70	1.71	0.02	3.51	0.09	3.49									
Max	7.30	14.8	320	380	5.86	0.885	0.00	0.00	0.678	0.105	0.05	0.149	0.46	0	0	0	0	0.058	0.91	1.99	0.20	4.02	0.14	3.94									
Min	6.80	13.0	300	320	0.46	0.156	0.00	0.00	0.210	0.041	0.01	0.022	0.02	0	0	0	0	0.004	0.40	0.76	0.01	2.94	0.05	3.10									
Lagoon Effluent Tests		pH	Temp °C	T Chlor mg/L	Fe mg/L	Chloride mg/L	TSS mg/L	Distribution Stability Tests					pH	Temp °C	TDS mg/L as CaCO3	Calcium mg/L	Chloride mg/L	Sulfate mg/L	Remarks														
Monthly		Date		Temp °C		T Chlor mg/L		Fe mg/L		Chloride mg/L		TSS mg/L		pH		Temp °C		TDS mg/L as CaCO3		Calcium mg/L		Chloride mg/L		Sulfate mg/L									
Date		4/2/2024		7.6		16.6		0.02		0.117		0.12		245.6		4																	



