Monthly Operating Report

October:2020

So. Sangamon Water Commission

November 16th, 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 October 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**.

During the month of October 2020, the plant pumped 46.038 million gallons from the well field and 37.111 million gallons of finished water. This is 4.98 million gallons more than October 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 0 emergency call-outs for the month. There were numerous customer inquiry for the month.

Maintenance and Repair. For the month of October 2020, there were 31 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 October 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 October. 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 46.038 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.	8.1	17.0	6.14	.500	-	370	345	2.082
Min.	7.8	14.6	.47	.102	-	336	270	1.199
Avg.	8.0	15.5	1.09	.242	-	351	288	1.485
Total	-	-	-	-	-	-	-	46.038

2.3 EFFLUENT CONCENTRATIONS

The facility filtered 41.51 MG during the month with a daily average of 1.339 MG and a min/max 1.103/ 1.875 MG.

Table 2.3 Finished Water Quality

	Free CL2	Total CL2	pH	Temp	Iron	Manganese	Fluoride	Hardness	Alkalinity	Phosphate
Max.	2.02	2.17	8.5		0.03	0.035	1.10	200	320	1.75
Min.	1.59	1.60	8.3		0.01	0.002	0.53	92	270	1.36
Avg.	1.86	1.97	8.4		0.02	0.020	0.70	121	280	1.61
MCL	-	-	-	-	1.00	-	4.00	-	-	-
SMCL	-	-	-	-	0.30	0.050	2.00	-	-	-

Finished Water Flow Comparison for FY 2019-20

Time Period	2019-2020	2018-2019	2017-2018
Nov 2019-Oct 2020	390,569,699	359,769,312	377,735,023
Increase for the same period last year		30.8 MG	- 17.9 MG

FINISHED WATER PUMPING HISTORY						
	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15
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
Oct	34,597,739	30,769,238	30,353,482	33,506,605	34,374,820	34,783,455
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Totals	390,569,699	359,769,312	377,735,023	406,901,873	383,126,341	378,792,038
Avg	1.07 MGD	.986 MGD	1.04 MGD	1.12 MGD	1.05 MGD	1.04 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)**
October 6th 2020	.29	.189	330	0.04	8.5	<4
Minimum	.29	.189	330	0.04	8.5	<4
Maximum	.29	.189	330	0.04	8.5	<4
Average	.29	.189	330	0.04	8.5	<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 October 2020. 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 October

3.4 CUSTOMER INQUIRIE

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

During the month of October SSWC personel have worked closely with the SCADAware technicians to assess the plant. In doing so we are attempting to pinpoint plant deficiencies and implement a plan to address them.

Above is the newly programmed HMI to replace the HMI that failed.

Operator Kevin Canham draining the condensate from the 2 operation air compressors. The compressors provide air to the valve system allowing them to operate. The tanks are drained on a daily basis.

In the month of October operation at SSWC ordered a new read out for the cl2 scale. It is unclear if this readout still functions. Plant staff are going to relocate this control module to a place that is less likely to become fouled by chemical like what happened to this unit.

SSWC staff also ordered replacement load cells for the scale platform as well. Both of these purchases will be installed during the month of November.

4. MAINTENANCE AND REPAIR

4.1 PREVENTATIVE AND PREDICTIVE MAINTENANCE

For the month of October 2020, there were 31 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

Worked with SCADAware in learning our 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 October 2020.

- Kevin Canham
- Stephen Bivin
- Katie Krall
- Scott Dappen (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.

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

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY — MONTHLY IRON REMOVAL AND ION EXCHANGE SOFTENING REPORT

DIVISION OF PUBLIC WATER SUPPLIES

South Sangamon Water Commission - IL 1670080

October 2020

		Pumping Totals						Chemicals Applied														UF Filters				Softeners							
			Raw				Lagoon	Sodium Permanganate		Sodium Bisulfite BW		Sodium Hypochlorite		Ammonium Sulfate		Fluorosilicic Acid		Phosphate		Sodium Bisulfite Pond		Hours since previous backwash			Wash	Water	Water	Each day indicate total number of				Regeneration	
	Time	Hours	Well	UF	Plant	HS	Effluent	Am't		Am't		Am't		Am't		Am't		Am't		Am't					Water	Softened	Bypassed	hours since previous regeneration.				Salt	Washed
Date	Meter	Filter	Prod.	Filtered	Water	Pumpage	Pumpage	Used	Calc	Used	Calc	Used	Calc	Used	Calc	Used	Calc	Used	Calc	Used	Calc				Gal.	Gal.	Gal	If regeneration at mid-day, indicate				Used	Water
	Read	Ran	(Mgal)	(Mgal)	(Mgal)	(Mgal)	(Mgal)	lbs.	mg/l as NaMnO4	lbs.	mg/l	lbs.	mg/l as Cl	lbs.	mg/l as NH3	lbs.	mg/l as F	lbs.	mg/l as PO4	lbs.	mg/l	Bank # 1	Bank # 2	Bank # 3	(Mgal)	(Mgal)	(Mgal)	hours previous/hours following. 1	2	3	4	lbs.	Gal.
1	7:00	16.7	1.561	1.375	0.017	1.278	0.084	22	0.34	0	0.00	258	2.81	0	0.00	33	0.59	6	0.19	0	0.00	0.66	0.66	0.66	0.079	0.899	0.476			39.0	33.0	4562	21700
2	7:00	14.9	1.447	1.356	0.012	1.170	0.100	20	0.33	0	0.00	255	2.82	0	0.00	28	0.55	26	0.88	0	0.00	0.66	0.66	0.66	0.086	0.886	0.470	49.0	40.0	37.0		6843	32550
3	7:00	15.8	1.475	1.341	0.015	1.190	0.088	21	0.34	0	0.00	252	2.82	0	0.00	29	0.56	21	0.70	8	4.37	0.66	0.66	0.66	0.083	0.876	0.465				31.0	2281	10850
4	7:00	14.5	1.472	1.376	0.005	1.196	0.101	15	0.24	0	0.00	258	2.81	0	0.00	27	0.51	33	1.09	25	11.83	0.66	0.66	0.66	0.087	0.899	0.477		41.0	41.0	36.0	6843	32550
5	7:00	16.5	1.657	1.239	0.017	1.233	0.095	24	0.35	0	0.00	234	2.83	0	0.00	34	0.63	63	2.02	23	11.57	0.66	0.66	0.66	0.081	0.810	0.429	72.0	31.0		28.0	6843	32550
6	7:00	15.5	1.421	1.431	0.017	1.222	0.102	21	0.35	0	0.00	181	1.90	0	0.00	31	0.58	60	1.94	28	13.12	0.66	0.66	0.66	0.088	0.935	0.496	28.0	32.0	34.0		6843	32550
7	7:00	16.7	1.630	1.389	0.011	1.284	0.104	23	0.34	0	0.00	229	2.47	0	0.00	33	0.59	12	0.37	26	12.04	0.66	0.66	0.66	0.094	0.908	0.481			38.0	33.0	4562	21700
8	7:00	17.6	1.777	1.498	0.009	1.393	0.118	21	0.28	0	0.00	228	2.28	0	0.00	31	0.51	10	0.28	23	9.34	0.66	0.66	0.66	0.099	0.979	0.519	41.0	36.0	30.0	32.0	9124	43400
9	7:00	16.7	1.602	1.461	0.018	1.330	0.106	29	0.43	0	0.00	307	3.15	0	0.00	44	0.75	14	0.42	36	16.26	0.66	0.66	0.66	0.087	0.955	0.506	25.0	26.0	25.0	26.0	9124	43400
10	7:00	20.6	2.082	1.875	0.017	1.586	0.126	28	0.32	0	0.00	268	2.14	0	0.00	39	0.56	15	0.37	34	12.96	0.66	0.66	0.66	0.121	1.225	0.650		30.0			2281	10850
11	7:00	15.7	1.544	1.497	0.005	1.261	0.105	22	0.34	0	0.00	234	2.34	0	0.00	34	0.61	16	0.50	24	11.01	0.66	0.66	0.66	0.095	0.978	0.519			38.0	37.0	4562	21700
12	7:00	17.0	1.603	1.360	0.008	1.375	0.098	18	0.27	0	0.00	255	2.81	0	0.00	25	0.41	13	0.37	17	8.29	0.66	0.66	0.66	0.084	0.889	0.471	77.0	40.0		34.0	6843	32550
13	7:00	14.7	1.309	1.459	0.016	1.071	0.102	21	0.38	0	0.00	274	2.81	0	0.00	32	0.68	19	0.70	24	11.33	0.66	0.66	0.66	0.092	0.954	0.505		32.0	35.0		4562	21700
14	7:00	18.8	1.788	1.346	0.005	1.708	0.101	20	0.27	0	0.00	254	2.83	0	0.00	29	0.39	20	0.46	24	11.36	0.66	0.66	0.66	0.087	0.880	0.466	41.0		35.0	34.0	6843	32550
15	7:00	15.4	1.624	1.525	0.014	1.222	0.107	22	0.32	0	0.00	286	2.81	0	0.00	33	0.62	38	1.23	24	10.72	0.66	0.66	0.66	0.093	0.997	0.528		36.0	34.0	33.0	6843	32550
16	7:00	17.6	1.564	1.382	0.014	1.343	0.107	20	0.31	0	0.00	250	2.71	0	0.00	31	0.53	56	1.65	21	9.38	0.66	0.66	0.66	0.093	0.903	0.479	53.0	33.0		32.0	6843	32550
17	7:00	15.8	1.492	1.375	0.016	1.210	0.083	17	0.27	0	0.00	249	2.71	0	0.00	29	0.55	13	0.43	30	17.38	0.66	0.66	0.66	0.078	0.899	0.476			40.0		2281	10850
18	7:00	14.5	1.398	1.280	0.004	1.120	0.088	20	0.34	0	0.00	231	2.70	0	0.00	30	0.61	10	0.35	20	10.85	0.66	0.66	0.66	0.074	0.837	0.443	42.0	40.0		40.0	6843	32550
19	7:00	15.7	1.622	1.287	0.016	1.247	0.089	22	0.33	0	0.00	233	2.71	0	0.00	33	0.60	15	0.48	21	11.37	0.66	0.66	0.66	0.079	0.841	0.446		35.0	37.0		4562	21700
20	7:00	15.3	1.314	1.344	0.011	1.071	0.100	18	0.33	0	0.00	178	1.99	0	0.00	27	0.57	16	0.59	24	11.47	0.66	0.66	0.66	0.086	0.878	0.466	52.0		39.0	40.0	6843	32550
21	7:00	15.3	1.427	1.168	0.013	1.072	0.085	20	0.34	0	0.00	164	2.10	0	0.00	26	0.55	25	0.92	28	15.88	0.66	0.66	0.66	0.075	0.763	0.405		44.0		38.0	4562	21700
22	7:00	13.9	1.228	1.211	0.008	0.999	0.083	18	0.35	0	0.00	162	2.01	0	0.00	25	0.57	43	1.70	18	10.45	0.66	0.66	0.66	0.073	0.792	0.419	45.0		43.0		4562	21700
23	7:00	14.2	1.323	1.379	0.009	1.108	0.099	18	0.33	0	0.00	179	1.95	0	0.00	27	0.56	52	1.86	28	13.62	0.66	0.66	0.66	0.089	0.901	0.478		38.0		40.0	4562	21700
24	7:00	14.0	1.414	1.294	0.009	1.036	0.094	22	0.37	0	0.00	192	2.22	0	0.00	29	0.64	12	0.46	15	7.67	0.66	0.66	0.66	0.089	0.846	0.448			45.0		2281	10850
25	7:00	13.7	1.221	1.132	0.007	1.082	0.082	16	0.31	0	0.00	145	1.92	0	0.00	22	0.46	16	0.59	21	12.35	0.66	0.66	0.66	0.072	0.740	0.392		40.0		43.0	4562	21700
26	7:00	15.0	1.503	1.265	0.005	1.129	0.100	23	0.37	0	0.00	220	2.61	0	0.00	32	0.65	8	0.28	24	11.49	0.66	0.66	0.66	0.081	0.827	0.438	95.0	41.0	43.0	29.0	9124	43400
27	7:00	14.6	1.312	1.188	0.018	1.124	0.082	18	0.33	0	0.00	207	2.61	0	0.00	24	0.49	18	0.63	19	11.14	0.66	0.66	0.66	0.077	0.776	0.412			37.0		2281	10850
28	7:00	13.8	1.230	1.103	0.005	0.972	0.074	15	0.29	0	0.00	192	2.61	0	0.00	27	0.63	40	1.63	15	9.78	0.66	0.66	0.66	0.064	0.721	0.382		46.0		46.0	4562	21700
29	7:00	14.7	1.383	1.226	0.009	1.050	0.080	19	0.33	0	0.00	213	2.60	0	0.00	23	0.50	45	1.70	0	0.00	0.66	0.66	0.66	0.070	0.801	0.425	71.0		42.0		4562	21700
30	7:00	14.1	1.199	1.114	0.012	1.000	0.082	18	0.36	0	0.00	194	2.61	0	0.00	25	0.57	46	1.82	0	0.00	0.66	0.66	0.66	0.072	0.728	0.386		43.0		34.0	4562	21700
31	7:00	15.3	1.416	1.230	0.007	1.029	0.094	16	0.27	0	0.00	214	2.61	0	0.00	28	0.62	49	1.88	0	0.00	0.66	0.66	0.66	0.080	0.804	0.426	58.0		53.0	46.0	6843	32550
Total		484.6	46.038	41.506	0.349	37.111	2.958	627	10.15	0	0	6996	78.31	0	0.00	920	17.62	830	28.50	600	297.03				2.608	27.128	14.378	749	704	765	745	168794	802900
Ave.		15.6	1.485	1.339	0.011	1.197	0.095	20.2	0.33	0	0	226	2.53	0	0.00	29.7	0.57	26.8	0.92	19.4	9.58	0.66	0.66	0.66 #DIV/0!	0.084	0.875	0.464	53.5	37.1	38.3	35.5	5444.97	25900
Max		20.6	2.082	1.875	0.018	1.708	0.126	29.0	0.43	0	0	307	3.15	0	0	44	0.75	63	2.02	36	17.38	0.66	0.66	0.66 0	0.121	1.225	0.650	95.0	46.0	53.0	46.0	9,124	43,400
Min		13.7	1.199	1.103	0.004	0.972	0.074	15.0	0.24	0	0	145	1.90	0	0.00	22	0.39	6	0.19	0	0.00	0.66	0.66	0.66 0	0.064	0.721	0.382	25.0	26.0	25.0	26.0	2281	10850

1	20	% Sodium Permanganate	Pre-aerator	CHLORINATION		FLUORIDATION	
2	40	% BisulfiteSolution	Membrane Backwash				
3	12.5	% Sodium Hypochlorite Solution	Post Softener	Type of Chlorine Used	Sodium Hypochlorite 12.5 %	Type of Fluoride Used	Hydrofluosilicic Acid 19% F
4	20	% Ammonium Sulfate Solution	Post Softener				
5	19	% Fluorosilicic Acid Solution	Post Clearwell	Chlorine Analyzers Used: Hach CL17 (2) & 5500sc		Fluoride Analyzer Used: Hach 2200, SPADNS method	
6	33	% Phosphate Solution	Post Clearwell				
7	40	% BisulfiteSolution	Lagoon Effluent				

I certify that the information in this report is complete and accurate to the best of my knowledge.

Reported by: _____ Illinois Operator Certification ID 253419999

Date: _____

Date Bacterials Ser _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF PUBLIC WATER SUPPLIES

South Sangamon Water Commission - IL1670080

October 2020

Physical and Chemical Tests

	Raw						Pre UF Membrane				Post UF Membrane			Post IEX				Finished													Membrane Integrity		
																											Chlorine				Post Filter		
Date	pH	Temp	Total Alk.	Total Hard.	Total Fe	Total Mn	Turbidity	Total Fe	Total Mn	Soluble Mn	Total Fe	Total Mn	Turbidity	1	2	3	4	pH	Turbidity	Total Alk.	Total Hard.	Total Fe	Total Mn	Fluoride F	Ortho Phosphate	Free Ammonia	Mono-Chloramine	F	T	Distrbution				
														Chloride																			
		deg. C	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L		NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/l	mg/l	mg/l	mg/L	F	T	Bank 1	Bank 2	Bank 3
			as CaCO3																	as CaCO3										mg/l	mg/L	psi	psi	psi
1	8.10	15.5	280	350	0.68	0.210			0.355	0.086	0.8	0.144	0.30					8.40	0.31	280	150	0.01	0.035	0.65	1.65	0.01	0.00	1.74	1.80					
2	8.00	15.4	290	362	0.85	0.266			0.345	0.014	0.81	0.126	0.19					8.40	0.34	290	200	0.02	0.020	0.62	1.63	0.03	0.00	1.74	1.88					
3	8.10	15.5	274	358	0.56	0.229			0.273	0.088	0.04	0.116	0.23					8.40	0.33	282	160	0.01	0.003	0.61	1.52	0.02	0.00	1.99	2.02					
4	8.00	15.7	280	360	0.50	0.236			0.350	0.073	0.01	0.113	0.31					8.30	0.40	286	160	0.01	0.033	0.71	1.58	0.02	0.00	1.79	1.88					
5	8.00	15.2	282	356	0.71	0.224			0.302	0.027	0.01	0.076	0.25					8.50	0.36	278	170	0.01	0.026	0.62	1.59	0.03	0.00	1.81	1.97					
6	8.10	15.3	280	360	1.02	0.213			0.318	0.003	0.77	0.088	0.19					8.50	0.39	275	180	0.02	0.016	0.53	1.63	0.03	0.00	1.94	2.05					
7	8.00	15.6	280	358	0.65	0.167			0.376	0.019	0.73	0.099	0.20					8.40	0.34	280	160	0.01	0.027	1.10	1.72	0.04	0.00	1.98	1.99			pass		
8	8.00	15.3	275	360	0.98	0.248			0.363	0.010	0.92	0.101	0.15					8.30	0.26	270	100	0.02	0.002	0.54	1.36	0.03	0.00	1.82	1.91				pass	pass
9	8.00	15.8	270	340	0.68	0.223			0.359	0.009	0.78	0.199	0.17					8.40	0.20	270	110	0.02	0.005	0.78	1.45	0.03	0.00	1.86	1.88					
10	8.00	15.5	280	345	0.73	0.271			0.375	0.033	0.59	0.116	0.19	47.2	60.1	30.1	33.1	8.40	0.32	280	100	0.01	0.030	0.69	1.66	0.03	0.00	1.96	2.07					
11	8.10	15.6	270	350	0.67	0.233			0.375	0.021	0.76	0.115	0.20					8.50	0.30	275	110	0.02	0.011	0.70	1.60	0.04	0.00	1.86	1.96					
12	8.10	16.5	280	352	1.23	0.250			0.333	0.054	0.73	0.128	0.17					8.40	0.42	270	120	0.02	0.033	0.65	1.65	0.01	0.00	1.91	2.00					
13	8.00	17.0	280	345	0.55	0.241			0.344	0.096	0.63	0.138	0.21	31.9	159.5	68.3	36.2	8.50	0.26	275	100	0.02	0.028	0.77	1.67	0.01	0.00	1.93	1.98					
14	7.80	16.5	300	336	0.88	0.249			0.366	0.043	0.02	0.130	0.28					8.40	0.33	292	100	0.02	0.030	0.67	1.55	0.02	0.00	1.99	2.04			pass	pass	pass
15	7.80	16.6	310	346	0.83	0.246			0.337	0.090	0.01	0.086	0.29					8.40	0.34	300	94	0.01	0.020	0.63	1.65	0.01	0.00	2.02	2.17					
16	7.90	16.3	300	346	0.65	0.230			0.322	0.133	0.03	0.082	0.30					8.50	0.40	290	100	0.01	0.016	0.70	1.63	0.01	0.00	1.94	2.13					
17	8.10	15.3	300	346	0.54	0.244			0.344	0.093	0.01	0.078	0.33					8.50	0.39	280	92	0.01	0.022	0.60	1.57	0.01	0.00	1.97	2.03					
18	8.00	15.9	290	348	0.98	0.253			0.342	0.100	0.01	0.099	0.41					8.50	0.34	282	100	0.02	0.021	0.58	1.60	0.02	0.00	1.89	1.94					
19	7.80	16.0	320	356	1.09	0.102			0.076	0.055	0.01	0.051	0.31					8.50	0.32	275	128	0.03	0.014	0.68	1.58	0.01	0.00	2.00	2.17			pass		
20	8.10	14.8	345	370	0.59	0.220			0.361	0.048	0.63	0.078	0.20					8.50	0.31	275	120	0.01	0.031	0.66	1.61	0.00	0.00	1.82	1.84					
21	8.10	15.1	310	360	1.53	0.234			0.359	0.033	0.84	0.072	0.22					8.50	0.24	270	102	0.01	0.015	0.80	1.60	0.01	0.00	1.75	1.86					
22	8.00	16.2	280	352	0.64	0.233			0.342	0.053	0.76	0.078	0.21					8.40	0.26	275	100	0.02	0.032	0.77	1.61	0.00	0.00	1.74	1.99				pass	pass
23	8.00	15.6	285	350	1.64	0.298			0.482	0.020	0.95	0.074	0.34					8.40	0.41	278	100	0.02	0.017	0.80	1.67	0.01	0.00	1.59	1.60					
24	8.00	15.0	280	345	0.72	0.243			0.423	0.036	1.06	0.077	0.30					8.40	0.30	275	100	0.01	0.019	0.72	1.62	0.01	0.00	1.77	2.07					
25	8.00	15.1	282	358	0.70	0.223			0.319	0.063	0.46	0.095	0.30	32	44.2	36.1	68.9	8.50	0.32	270	110	0.01	0.011	0.68	1.71	0.02	0.00	1.62	1.65					
26	8.10	14.6	282	340	2.21	0.250			0.388	0.008	1.31	0.083	0.31					8.50	0.32	275	130	0.02	0.020	0.90	1.64	0.00	0.00	1.94	2.08			pass		
27	8.10	15.0	280	345	0.47	0.233			0.346	0.071	0.58	0.098	0.22					8.40	0.38	270	98	0.02	0.030	0.73	1.60	0.02	0.00	1.86	2.01					
28	8.00	14.7	290	342	0.73	0.213			0.357	0.086	1.01	0.106	0.24					8.50	0.37	280	102	0.02	0.030	0.61	1.61	0.02	0.00	1.91	2.01				pass	pass
29	8.10	15.0	280	350	0.59	0.212			0.376	0.056	0.62	0.092	0.27	19.3	46.1	17.5	48.7	8.50	0.54	280	140	0.02	0.014	0.58	1.75	0.00	0.00	1.95	2.14					
30	8.00	15.1	285	350	6.14	0.500			0.340	0.075	0.46	0.123	0.21					8.40	0.26	280	100	0.02	0.005	0.82	1.55	0.01	0.00	1.83	2.00					
31	8.10	15.3	292	356	3.02	0.318			0.314	0.089	0.02	0.056	0.39					8.50	0.29	320	108	0.01	0.002	0.78	1.58	0.00	0.00	1.84	1.84					
Ave.	8.02	15.5	288	351	1.09	0.242	#DIV/0!	#DIV/0!	0.344	0.054	0.53	0.101	0.25	32.6	77.5	38.0	46.7	8.44	0.33	280	121	0.02	0.020	0.70	1.61	0.02	0.00	1.86	1.97	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Max	8.10	17.0	345	370	6.14	0.500	0.00	0.00	0.482	0.133	1.31	0.199	0.41	47	160	68	69	8.50	0.54	320	200	0.03	0.035	1.10	1.75	0.04	0.00	2.02	2.17	0.00	0.00	0.00	0.00	0.00
Min	7.80	14.6	270	336	0.47	0.102	0.00	0.00	0.076	0.003	0.01	0.051	0.15	19	44	18	33	8.30	0.20	270	92	0.01	0.002	0.53	1.36	0.00	0.00	1.59	1.60	0.00	0.00	0.00	0.00	0.00

Lagoon Effluent Tests	pH	Temp	T Chlor	Mn	Fe	Chloiride	TSS
Monthly		°C	mg/l	mg/l	mg/l	mg/L	mg/L
Date 10/6/2020	8.5		0.04	0.189	0.29	330	<4

Distribution Stability Tests	pH	Temp	TDS	Alkalinity	Calcium	Chloiride	Sulfate
Every Two Weeks		°C	mg/L	mg/L as CaCO3		mg/L	mg/L
Date 10/28/2020	8.45	17.5	600	220		39	56
Date							
Date							

Remarks: