
Project: City of Wasilla WWTP Pilot Study Field Crew: Jake Alward, John Marshall

File: 204700415 Date: August 28-29, 2018

Subsurface Surface Vegetation Plot Lagoon

Reference: August Water Sampling Event

1.1 BACKGROUND

The August sampling event was a two day event. All surface water locations were sampled. The leaves on the vegetation were beginning to turn yellow/brown as the colder weather came in. The first day of sampling was cloudy and rainy. The site was wetter than it had been all summer. The weather cleared up on the second day, but the site was still overall very wet.

1.2 SAMPLING EVENT HIGHLIGHTS

SURFACE

All 18 surface water locations and Mr. Shaw's property were sampled with a peristaltic pump. SW18 was duplicated. Overall, the site was very wet. It was once again difficult to move around the site without falling into holes up to your waist. The two ponds were full. At Mr. Shaw's property, we were driven down by a UTV to a location of flowing water, which is where we sampled.

IMPROVEMENTS FOR FUTURE SAMPLING:

The YSI was missing from the equipment when we got to the site, therefore the first day of sampling did not get in-situ test results.

1.3 OTHER ACTIVITIES

WEIR 1 (SW17)

Width: 2.21 -ft
Water depth: 0.70 -ft
Velocity: 0.45-ft/sec
Calculated flow: 0.69 -CF/sec

WEIR 2 (SW18)

Width: 3.22 -ft
Water depth: 0.75 -ft
Velocity: 0.30 -ft/sec
Calculated flow: 0.72 -CF/sec

Reference: August Water Sampling Event

1.4 SAMPLE RESULTS

The attached table summarizes detected analytes. All other were below detectable limits. Complete results can be found in the SGS reports.

1.5 DATA QUALITY

There was one duplicate taken during the August sampling event, SW18. There are no major differences to report.

Site ID	Nitrate	Nitrite	TSS	TKN	Ammonia	Total P	BOD	FC	E. Coli	TC
SW18	5.62	ND	5.19	ND	0.115	0.684	2.59	10	29	3450
SW18.1	5.09	ND	6.8	ND	0.105	0.691	2.49	21	22	2420
% Diff	-9.9%	0.0%	26.9%	0.0%	-9.1%	1.0%	-3.9%	71.0%	-27.5%	-35.1%

Attachment: Photo Log

August Photo Log



Photo 1:
SW-2



Photo 4:
SW-6



Photo 2:
SW-5



Photo 4:
SW-8



Photo 3:
SW-11



Photo 4:
SW-17

Attachment: Results Summary Table

Site ID	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10	SW11	SW12	SW13	SW14
Date Collected	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/28/2018	8/29/2018	8/29/2018	8/29/2018	8/29/2018
Time	10:01	10:27	10:44	12:19	12:38	12:00	11:43	14:28	14:05	13:46	9:30	9:50	10:12	11:13
Sample Type	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface	Surface
Water Temperature (°C)	-	-	-	-	-	-	-	-	-	-	9.7	11.25	11.43	9.3
Conductivity	-	-	-	-	-	-	-	-	-	-	415	314	255	386
pH	-	-	-	-	-	-	-	-	-	-	6.12	5.74	5.84	6.19
TSS	3	2.14	ND(0.500)	3.94	4.2	ND(0.490)	ND(0.500)	2.4	1.67	1.92	ND(0.471)	12.4	ND(0.510)	4.56
Ammonia	0.106	ND(0.0500)												
Total P	0.0674	0.0259	ND(0.0100)	0.0385	0.03	ND(0.0100)	ND(0.0100)	0.0546	ND(0.0100)	0.0308	0.0215	0.0918	ND(0.0100)	0.0716
BOD	24.7	2.07	ND(2.00)	ND(2.00)	2.74	ND(2.00)	ND(2.00)	ND(2.00)	ND(2.00)	ND(2.00)	17.9	2.11	ND(2.00)	ND(2.00)
FC	39	6	13	20	38	21	14	ND(1)	2	390	1	27	2	ND(1)
E. Coli	42	8	20	31	61	57	52	ND(1)	3	411	ND(1)	22	3	ND(1)
TC	1553	649	15530	12030	17330	770	2280	5790	6130	1553	548	11200	3870	1046

Site ID	SW15	SW16	SW17	SW18	SW18.1	Shaw
Date Collected	8/29/2018	8/29/2018	8/29/2018	8/29/2018	8/29/2018	8/29/2018
Time	10:52	10:32	12:00	12:25	12:25	13:01
Sample Type	Surface	Surface	Surface	Surface	Surface	Surface
Water Temperature (°C)	11.32	9.52	8.95	10	10	11.14
Conductivity	325	162	415	576	576	174
pH	6.29	5.83	6.87	6.84	6.84	6.48
DO	5.43	0.97	5.57	5.69	5.69	6.48
Nitrate	ND(0.0500)	ND(0.0500)	1.49	5.62	5.09	ND(0.0500)
Total Nitrate/Nitrite	ND	ND	1.49	5.62	5.09	ND
TSS	1.41	22.3	1.92	5.19	6.8	4.23
TKN	ND(0.500)	ND(0.500)	2.36	ND(0.500)	ND(0.500)	ND(0.500)
Ammonia	ND(0.0500)	ND(0.0500)	ND(0.0500)	0.115	0.105	ND(0.0500)
Total P	0.0443	0.0875	0.129	0.684	0.691	ND(0.0100)
BOD	ND(2.00)	3.88	ND(2.00)	2.59	2.49	ND(2.00)
FC	42	20	12	10	21	72
E. Coli	43	23	20	29	22	62
TC	4610	2420	1300	3450	2420	613

*In-situ tests were not performed on 8/28/18