Biological Assessment of

ECUA Pensacola Beach WWTP

Escambia County

NPDES # FL0024007

Sampled February 12, 2018

February 2019

Biology Program

DEP Laboratory

Division of Environmental Assessment and Restoration

DEP Laboratory Quality Manual

NELAC Certification No. E31780

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Summary of Results

During this sampling event, parameters collected, measured, and analyzed met the applicable Class III Marine Water Quality Criteria (62-302.530, F.A.C.) and effluent permit limits. Atrazine was detected at levels between the MDL and PQL in the effluent grab sample. PAH constituents and diethyl phthalate were detected in the sediment samples collected at the receiving water sites. Chromium, copper, lead**,** and nickel in the sediment sample from site 400 East and chromium, copper, and nickel in the sediment sample from site 200 West exceeded the Threshold Effects Level (TEL) values. There is no detectable nutrient enrichment from the effluent at the receiving water sites.

Facility Overview

The Pensacola Beach Wastewater Treatment Facility is an Advanced Domestic Wastewater Treatment (AWT) plant. A Facility Summary, including a description of the facility, summary of permit limits, Consent Order (CO), and Discharge Monitoring Report (DMR) information is provided in Appendix A. The facility is presently operating under Consent Order (CO) OGC File No. 11-0982 executed June 6, 2012, for the facility's wastewater collection system and sanitary sewer overflows from the system. The CO's final compliance date is June 5, 2028. The effluent discharge pipe extends approximately 400 feet from shore and discharges at a depth of approximately 20 feet into a portion of Santa Rosa Sound that is classified as a Class III Marine Water, WBID #915J, and as an Outstanding Florida Waters due to its being within the boundaries of the Gulf Islands National Seashore (Figure 1).

Receiving waters for this facility fall under the Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criteria for Santa Rosa Sound within the Pensacola Bay region (62-302.532(1)(l)5, F.A.C.). The NNC thresholds are expressed as annual geometric mean (AGM) values not to be exceeded more than once in a three-year period. These annual geometric mean values are 0.022 mg/L total phosphorus, 0.41 mg/L total nitrogen, and 3.4 µg/L chlorophyll *a*. This FYI event only provides single sample results; therefore, compliance should be determined with additional sampling events per Rule 62-302.352. http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria

Methods

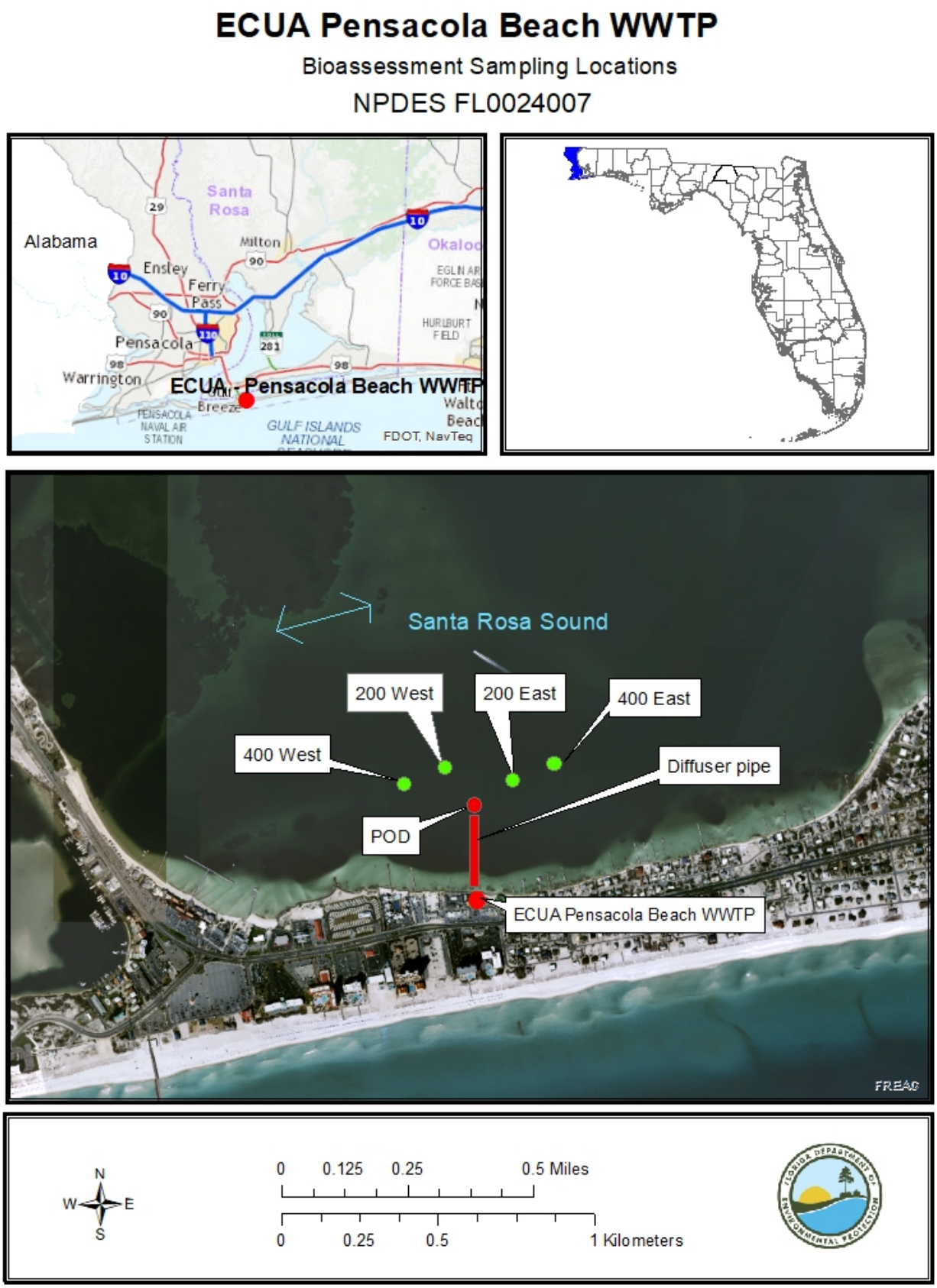
Effluent grab and composite samples were collected from monitoring site location EFF-01. Chemical and biological comparisons were made along a gradient at 200 foot intervals at 2 sites west (200 West and 400 West) and 2 sites east (200 East and 400 East) of the point of discharge (D-001), which is located approximately at latitude 30°20'12"N, longitude 87°07'56"W. In addition to water chemistry, algal growth potential (AGP) and microbiological sampling, all four sites (eastern and western) were sampled for sediment metals, particle grain size analysis, organic content and organic analytes. All the samples were collected during an incoming tide on 2/12/2018.

All field and laboratory methods followed DEP Standard Operating Procedures (see https://floridadep.gov/dear/quality-assurance/content/dep-sops and https://floridadep.gov/dear/florida-dep-laboratory/content/dep-laboratory-quality-assurance-manual-and-sops for details) and met DEP quality assurance/quality control standards (see https://floridadep.gov/dear/quality-assurance). Explanations of specific methods and measurements can be found in Appendix B.

All references to 62-302.530, F.A.C. are to the surface water quality criteria table with an effective date of 02/17/2016 and a notice identification number of 17115667.

The following were involved in this investigation: Nathan Mulkey, Christopher Slade, (DEP Northwest Regional Operation Center, Pensacola), Dana Vestal and Amy Miller (DEP Northwest District), and DEP Laboratory in Tallahassee. The report was reviewed by District representatives and the Point Source Studies Review Committee (Mike Tanski, Andrew Tintle, and Adrienne Pennington).

Figure 1. Map of facility and sampling locations



Results

Physical and Chemical Parameters / Site Characterization (See Table 1 and Appendices C, D, and E)

- The shoreline in the vicinity of the plant is composed of riprap and vertical seawalls. The substrate at stations 400 E, 200 E and 200 W were similar and consisted primarily of fine silt and clay. The substrate at station 400 W was composed primarily of sand. Runoff into both stations was characterized as mostly natural with a few small stormwater sources.
- The effluent and Test Sites' field parameters complied with Class III Marine Water Quality Criteria (62-302.530, F.A.C.) and/or effluent permit limits.

Analytical Water Chemistry (See Table 2 and Appendix E)

- Nutrients detected in the effluent grab and composite samples met permit limits. In all receiving water samples, nutrients were either undetected or detected at levels between the laboratory method detection limit (MDL) and the practical quantitation limit (PQL).
- Chlorophyll *a* (corrected) was undetected in the effluent sample and was detected at a low level in all four receiving water samples.
- Carbonaceous biochemical oxygen demand (CBOD) was detected in the effluent composite sample at levels below the permit limit. Total suspended solids and total residual chlorine of the effluent were within permit limits.

Microbiology (See Table 2 and Appendix E)

- Enterococci and fecal coliform analyses were performed by the Wetlands Research Laboratory, University of West Florida, Pensacola, Florida.
- Enterococci were not detected in the effluent grab sample and, therefore, met facility permit limits. Enterococci were detected in the four receiving water samples at levels that complied with Class III Marine Water Quality Criterion (62-302.530(6)(c), F.A.C.).

Toxicity Whole Effluent Test (See Table 2)

- Tests were performed February 13 through February 19, 2018.
- During the chronic definitive bioassay, the effluent composite sample IC25 for the water flea, *Ceriodaphnia dubia*, was calculated as being greater than 100% effluent. The effluent permit limit for *C. dubia* is greater than or equal to 100% effluent. The effluent sample collected for the chronic definitive bioassay for the fish, *Pimephales promelas*, arrived at the laboratory with insufficient time to set the test up; therefore, the test was reported as No Result.
- For more information or to obtain copies of the toxicity bench sheets, please contact the Biology Laboratory at 850-245-8177.

Metals (See Table 3 and Appendix E)

- Effluent metals were detected at levels that complied with Class III Marine Quality Criteria (62-302.530, F.A.C.) and effluent permit limits.
- All metals in receiving water samples were either undetected or detected at levels that complied with Class III Marine Quality Criteria (62-302.530, F. A. C.).

Algal Growth Potential (See Table 4 and Appendix E)

- The effluent Algal Growth Potential (AGP) was 0.300 U mg dry ~~wt~~wt./L (undetected) of the freshwater unicellular green alga, *Pseudokirchneriella subcapitata*. The analytical chemistry suggests that the effluent is nitrogen limited (Miller et al. 1978).
- An aliquot of the AGP sample was salinity adjusted from an apparent salinity of approximately 0.54 parts per thousand (ppth) to a salinity of approximately 7.2 ppth by the addition of artificial sea salts to meet the salinity requirements of the test species.

- The effluent Algal Growth Potential (AGP) in the salinity adjusted sample was 3.78 mg dry wt/L using the saltwater species *Dunaliella tertiolecta.*
- The AGPs of the four receiving water samples were all 3.0 U mg dry wt/L (undetected) of the saltwater species *Dunaliella tertiolecta*.

Organic Constituents (See Table 5 and Appendix E)

- Atrazine and carbamazepine were detected in the effluent grab sample.

Sediments (See Table 6, Figures 2 and 3)

- The Site 400 E, 200 E, and 200 W sediments were composed primarily of silt and clay. Site 400 W sediments were primarily coarse sand. Sediment percent organic content was approximately 5 to 18 times greater in 400 E, 200 E and 200 W than in the 400 W sample.
- Benzo(a)pyrene, benzo(b)fluoranthene, ~~benzo(~~benzo (g,~~hg,)perylene~~h) perylene, benzo(k)fluoranthene, chrysene, fluoranthene, ~~indeno(~~Indeno (1,2,3)pyrene, and pyrene were detected in 400 E, 200 E, and 200 W sediment samples at a level between the MDL and PQL. Phenanthrene was detected in the 200 E sediment sample at a level between the MDL and PQL.
- No organic compounds were detected in 400 W sediments. Organic compounds detected in sediment samples were below the Threshold Effects Level (TEL) and the Probable Effects Level (PEL) for sediments.
- Arsenic, chromium, copper, lead, and nickel in Test site 400 E sample exceeded the Threshold Effects Level (TEL) for sediment metals. In site 200 W, total chromium, copper, and nickel exceeded the Threshold Effects Level (TEL) for sediment metals. Higher sediment metal levels at sites 400 E, 200 E and 200 W may be due to greater binding affinity of metals to smaller sediment particle sizes (Horowitz, 1985) which were in greater proportion at the those sites compared to site 400 W.

Figure 2. Sediment particle distribution.

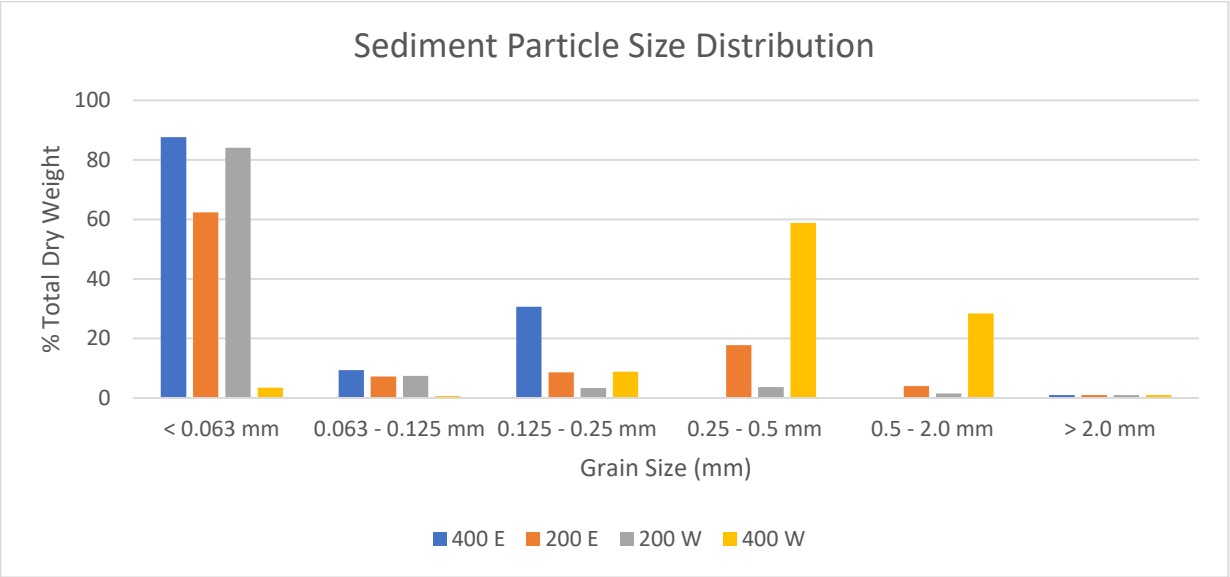
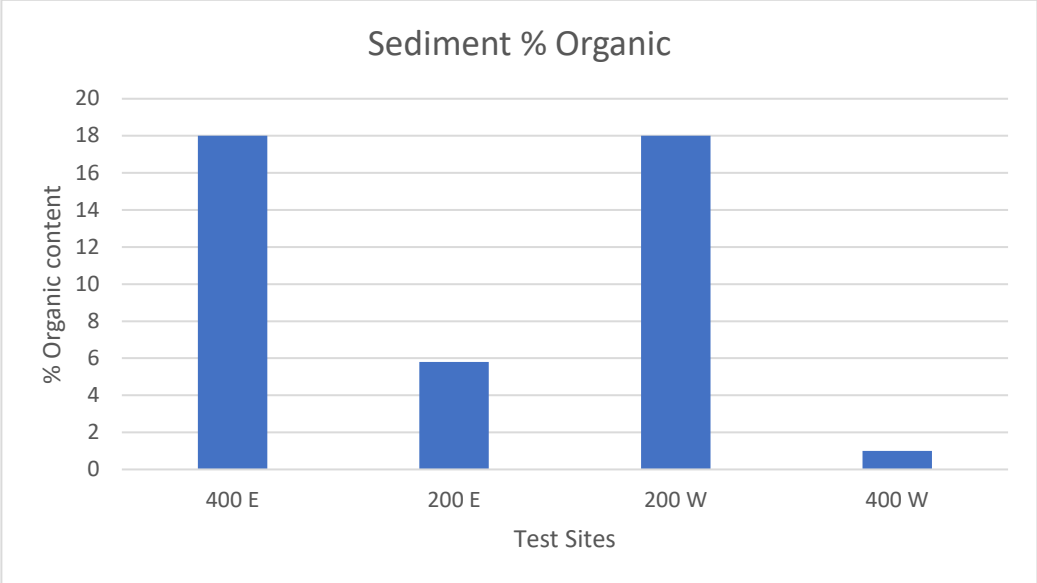


Figure 3. Percent sediment organic content.



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Literature Cited

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MacDonald, D. D. 1994. Approach to the assessment of sediment quality in Florida coastal waters. Volume 1. Development and evaluation of sediment quality assessment guidelines. Report to Florida Department of Manahan Environmental Protection, Office of Water Policy. 126 pp.

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA600/978-018. U. S. EPA, Cincinnati, Ohio. 126 p.

USEPA. 2000. Nutrient Criteria Technical Guidance Manual – River and Streams. EPA-822-B-00-002.

Table 1. Effluent limits, Class III Marine Criteria and field parameters.

ECUA Pensacola Beach WWTP	Units	Class III Criteria	Effluent Permit Limits	Composite	Grab	400 E	200 E	200 W	400 W
Sample Depth	m	-	-	-	-	0.3	0.3	0.3	0.3
Temperature	C	-	-	2.8	21.3	16.01	15.93	15.89	15.87
pH	SU	6.5 - 8.5	6.5 - 8.5 s	6.5	6.8	7.9	8.0	8.0	8.0
Specific Conductance	µmhos/cm	-	-	-	-	39,955	40,159	39,988	39,569
Salinity	ppt	-	-	0 c	0 c	30 c	30 c	30 c	30 c
Dissolved Oxygen	% saturation	≥ 42	-	-	-	102.6	101.9	103.1	103.5
Dissolved Oxygen	mg/L	-		8.53	7.89	8.36	8.30	8.41	8.47
Flow	MGD	-	2.4[1]	-	0.945[2]	-	-	-	-
Total Residual Chlorine (for disinfection)	mg/L	-	≥ 1.0	3.5	-	-	-	-	-
Total Residual Chlorine (after dechlorination)	mg/L	≤ 0.01	≤ 0.01	-	0.00	-	-	-	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

c - Value is calculated

s - Single sample

1 - Annual average daily flow

2 - Single sample result obtained from facility

Table 2. Effluent limits, Class III Marine Criteria and analytical water chemistry data

ECUA Pensacola Beach WWTP	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite	Effluent Grab	400 E	200 E	200 W	400 W
Ortho-phosphate	mg P/L	-	-	-	0.14	0.004 U	0.004 U	0.004 U	0.004 U
Total Phosphorus	mg P/L	< 0.022 [3]	≤ 2.0 s	0.20	0.20	0.008 I	0.01 I	0.009 I	0.01 I
Total Ammonia	mg N/L	-	-	-	0.047	0.004 I	0.003 I	0.002 I	0.002 U
Un-ionized Ammonia (calculated salinity)	mg/L	-	-	-	< 0.02 c	< 0.02 c	< 0.02 c	< 0.02 c	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	1.2	0.060	0.004 U	0.004 U	0.004 U	0.004 U
Total Kjeldahl Nitrogen	mg N/L	-	-	0.63	0.60	0.29 I	0.22 I	0.24 I	0.23 I
Organic Nitrogen	mg N/L	-	-	-	0.55 c	0.29 c	0.22 c	0.24 c	0.23 c
Total Nitrogen	mg N/L	< 0.41 [3]	≤ 6.0 p,s	1.8 c	0.66 c	0.29 c	0.22 c	0.24 c	0.23 c
Total Organic Carbon	mg C/L	-	-	4.4	4.2	2.3	2.1	2.0	1.9 I
Chlorophyll *a* - Corrected	µg/L	< 3.4 [3]	-	-	0.55 U	3.0	3.1	2.8	2.9
Phaeophytin	µg/L	-	-	-	0.40 U	0.40 U	0.40 U	0.40 U	0.44 U
CBOD, 5 day, N - inhibited	mg/L	-	≤ 10.0 p,s	2.1 AQ	-	1.1 I	0.99 I	1.1 I	0.99 I
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01 s	0.00	0.00	-	-	-	-
Total Suspended Solids	mg/L	-	≤ 10.0 p,s	2 U	-	3 U	3 U	3 U	3 UA
Turbidity	NTU	< 29 t	-	-	0.85	1.4	2.0	0.75	0.70
Color (true)	PCU	-	-	-	3.7 I	2.5 U	2.5 U	2.5 U	2.5 U
Alkalinity	mg CaCo3/L	-	-	-	73 A	93 A	94	95	93
Chloride	mg Cl/L	-		-	270	15,000	15,000	14,000	13,000
Fluoride	mg F/L	≤ 5.0	-	-	0.36	0.93	0.93	0.92	0.91
Sulfate	mg SO4/L	-	-	-	93	2,100	2,100	1,900	1,800
Microbiology									
Fecal Coliforms[4,5]	cfu/100 mL	-	≤ 86 s	-	2 U	-	-	-	-
Enterococci[4]	MPN/100 mL	≤ 130	≤104 s	-	10 U	10	20	10	10
Toxicity (IC25, Chronic definitive, Percent effluent)									
Bioassay - Water flea *(Ceriodaphnia dubia)*	%	≥ 100 p	≥ 100 p	> 100	-	-	-	-	-
Bioassay - Fish *(Pimephales promelas)*	%	≥ 100 p	≥ 100 p	No Result	-	-	-	-	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

c - Value is calculated

p - 24 hour flow proportioned composite

s - Single sample

t - Shall not exceed 29 NTUs above background

A - Value reported is the mean of two or more determinations

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
3 - Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criteria for Santa Rosa Sound within the Pensacola Bay region (62-302.532(1)(l)5, F.A.C.).
4 - Analyses performed by the Wetlands Research Laboratory, University of West Florida, Pensacola, Florida.
5 - Enterococci are used for Class III Marine Criteria; however, fecal coliforms were also analyzed.

Table 3. Effluent limits, Class III Marine Criteria and analytical metals data.

ECUA Pensacola Beach WWTP	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite	400 E	200 E	200 W	400 W
Hardness	mg/L	–	–	190 c	4,910 c	4,880 c	4,920 c	4,850 c
Aluminum	µg/L	≤ 1500	–	60 U	180 U	180 U	180 U	180 U
Arsenic	µg/L	≤ 50	–	1.65	1.66	1.65	1.71	1.65
Cadmium	µg/L	≤ 8.8	–	0.021 I	0.060 U	0.060 U	0.060 U	0.060 U
Calcium	mg/L	–	–	39.0	301	305	306	298
Chromium, Total [6]	µg/L	≤ 50	–	0.40 U	1.2 U	1.2 U	1.2 U	1.2 U
Copper	µg/L	≤ 3.7	≤ 3.7 p	2.42	0.60 U	0.60 U	0.60 U	0.60 U
Iron	µg/L	≤ 300	–	35 I	90 U	90 U	90 U	90 U
Lead	µg/L	≤ 8.5	–	0.11 I	0.50 U	0.50 U	0.50 U	0.50 U
Magnesium	µg/L	–	–	22.6	1010	1000	1010	996
Nickel	µg/L	≤ 8.3	–	1.75	0.60 U	0.60 U	0.60 U	0.60 U
Potassium	µg/L	–	–	15.0	310	320	320	310
Selenium	µg/L	≤ 71	–	0.20 U	0.60 U	0.60 U	0.60 U	0.60 U
Silver	µg/L	≤ 2.3	–	0.010 U	0.030 U	0.030 U	0.030 U	0.030 U
Sodium	mg/L	–	–	199	8,010	7,960	7,970	7,830
Zinc	µg/L	≤ 86	–	60	15 U	15 U	15 U	15 U

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

p - 24 hour flow proportioned composite

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

U - Material analyzed for but not detected; value reported is the method detection limit

6 - Class III Marine Water Quality Criterion (62-302.530(19)(b), F.A.C.) for chromium-VI

Table 4. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN), ortho-phosphate (OP), total nitrogen (TN) and total phosphorus (TP) limitation and ratios of nitrogen to phosphorus.

ECUA Pensacola Beach WWTP								
Location	**Test Species**	**AGP (measured)**	**Predicted AGP (TSIN) ± 20%**	**Predicted AGP (OP) ± 20%**	**Predicted AGP (TN) ± 20%**	**Predicted AGP (TP) ± 20%**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent Grab	*Pseudokirchneriella subcapitata*	0.300 U	4.1 ± 0.8	60.2 ± 12	25.1 ± 5	86 ± 17.2	0.8	3.3
Effluent Grab	*Dunaliella tertiolecta*	3.78 *	not applicable	not applicable	not applicable	not applicable	0.8	3.3
400 E	*Dunaliella tertiolecta*	3.00 U	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]
200 E	*Dunaliella tertiolecta*	3.00 U	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]
200 W	*Dunaliella tertiolecta*	3.00 U	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]
400 W	*Dunaliella tertiolecta*	3.00 U	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]	not applicable [7]

* - sample salinity adjusted to 7.2 ppth

U - Material analyzed for but not detected; value reported is the method detection limit.

7 - non-detect in the analytical chemistry; predictions could not be made and N:P ratios could not be calculated.

Table 5. Effluent limits, Class III Marine Criteria and analytical organic and pesticide data

ECUA Pensacola Beach WWTP	Units	Class III Criteria	Effluent Permit Limits	Grab	400 E	200 E	200 W	400 W
Atrazine	µg/L	–	–	0.014 I	–	–	–	–
Carbamazepine	µg/L	–	–	0.0020	–	–	–	–
Sucralose	µg/L	–	–	55	0.13	0.089	0.059	0.068
1,4-Dioxane	µg/L	–	–	0.41	0.071 I	0.020 U	0.020 U	0.020 U

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

U - Material analyzed for but not detected; value reported is the method detection limit

Table 6. Sediment data.

ECUA Pensacola Beach WWTP	Units	Sediment Quality Assessment Guidelines		400 E	200 E	200 W	400 W
		TEL	PEL				
Particle Size Distribution							
< 0.063 mm	mm	-	-	87.6	62.4	84.1	3.48
0.063 - 0.125 mm	mm	-	-	9.42 AJ	7.2	7.4	0.64
0.125 - 0.25 mm	mm	-	-	30.7 AJ	8.6	3.3	8.8
0.25 - 0.5 mm	mm	-	-	0.100K	17.8	3.64	58.8
0.5 - 2.0 mm	mm	-	-	0.100K	3.95	1.5	28.4
> 2.0 mm	mm	-	-	1.0K	1.0K	1.0K	1.0K
Organic Content							
Organic Content	% dry wt	-	-	18	5.8 A	18	1.0 K
Metals							
Arsenic	mg/Kg	7.24	41.6	18.8[8]	6.01	15.6[8]	0.393
Cadmium	mg/Kg	0.676	4.21	0.50	0.161	0.41	0.0098 U
Chromium	mg/Kg	52.3	160	69.6[8]	20.7	63.2[8]	1.33
Copper	mg/Kg	18.7	108	27.5[8]	9.39	25.4[8]	0.45
Lead	mg/Kg	30.2	112	30.4[8]	8.91	28.4	0.50
Nickel	mg/Kg	15.9	42.8	20.2[8]	6.0	18.5[8]	0.45 I
Silver	mg/Kg	0.733	1.77	0.202	0.060	0.174	0.0037 U
Zinc	mg/Kg	124	271	107	32.2	96	2.0 U
Benzo(a)anthracene	µg/kg	74.8	693	39 U	21 I	40 U	9.2 U
Benzo(a)pyrene	µg/kg	88.8	763	51 I	27 I	50 I	9.2 U
Benzo(b)fluoranthene	µg/kg	-	-	69 I	35 I	68 I	9.2 U
Benzo(g,h,i)perylene	µg/kg	-	-	53 I	28 I	58 I	9.2 U
Benzo(k)fluoranthene	µg/kg	-	-	53 I	29 I	60 I	9.2 U
Chrysene	µg/kg	108	846	49 I	33 I	54 I	9.2 U
Diethyl phthalate	µg/kg	-	-	350 U	150 U	370 I	83 U
Fluoranthene	µg/kg	113	1494	59 I	50 I	68 I	9.2 U
Indeno(1,2,3-cd)pyrene	µg/kg	-	-	47 I	24 I	48 I	9.2 U
Phenanthrene	µg/kg	86.7	544	39 U	21 I	40 U	9.2 U
Pyrene	µg/kg	153	6676	53 I	41 I	60 I	9.2 U

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

A - Value reported is the mean of two or more determinations

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

J - Estimated value

K - Actual value is known to be less than value given

U - Material analyzed for but not detected; value reported is the method detection limit

8 - Exceeds the threshold effects level from Sediment Quality Assessment Guidelines (MacDonald 1994)

Appendix A

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

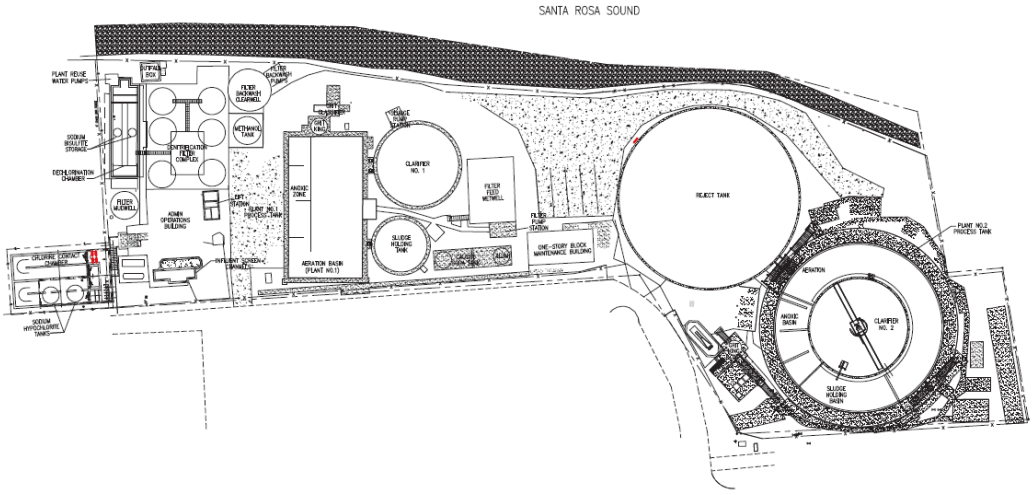
PART I: Information gathered prior to sampling event

Prepared By: Dana Vestal	**Contact Number:** (850) 595-0659
Facility Name (as it appears on permit): ECUA – Pensacola Beach WWTP	**Former Names:** Pensacola Beach WWTP
NPDES Permit Number: FL0024007	**Permit Expiration Date:** April 19, 2020
Physical Address: 53 Via De Luna Drive, Pensacola Beach, FL 32561	
District: Northwest	**County:** Escambia
Function of Facility: Domestic wastewater treatment facility.	
Facility Type: Domestic wastewater	**Permitted Capacity (MGD):** 2.4 MADF (monthly average daily flow)
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): CAL-02 (sum of FLW-01 + FLW-02 + FLW-03) 0.930 MGD (monthly averages) December 2016 through November 2017	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): All Reuse (FLW-02 + FLW-03) 0.127 MGD (monthly averages) December 2016 through November 2017	
Description of type of Discharge: ☒ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify:**	
Description of Sampling Location(s) - actual permit designation of permitted sampling point(s): FLW-01 Ultrasonic Total Effluent Flow Meter at Dechlorination Chamber Final Effluent Weir FLW-02 Part III Reuse Flow Meter ~~In~~in Line to SRIA Landscape Irrigation System FLW-03 Flow Meter in Onsite Plant Reuse Line from CCC Reuse Pump Station EFF-01 Automatic Effluent Sampler at the Outfall Box EFF-02 Part III Sample Point at Chlorine Contact Chamber final basin before Reuse Pump Station EFA-02 Chlorine Analyzer in Chlorine Contact Chamber final basin before Reuse Pump Station EFA-01 Chlorine Analyzer in final cell of Dechlorination Chamber CAL-01 Calculated Value CAL-02 Sum of Flows: FLW-01 + FLW-02 + FLW-03 INF-01 Influent Sampler at Influent Screening Structure SWI-1 Surface Water Station 8,500 feet Northeast from D-001 SWI-2 Surface Water Station 8,000 feet North from D-001 SWI-3 Surface Water Station 2,500 feet West-Northwest from D-001 SWI-4 Surface Water Station 9,000 feet Northwest from D-001	

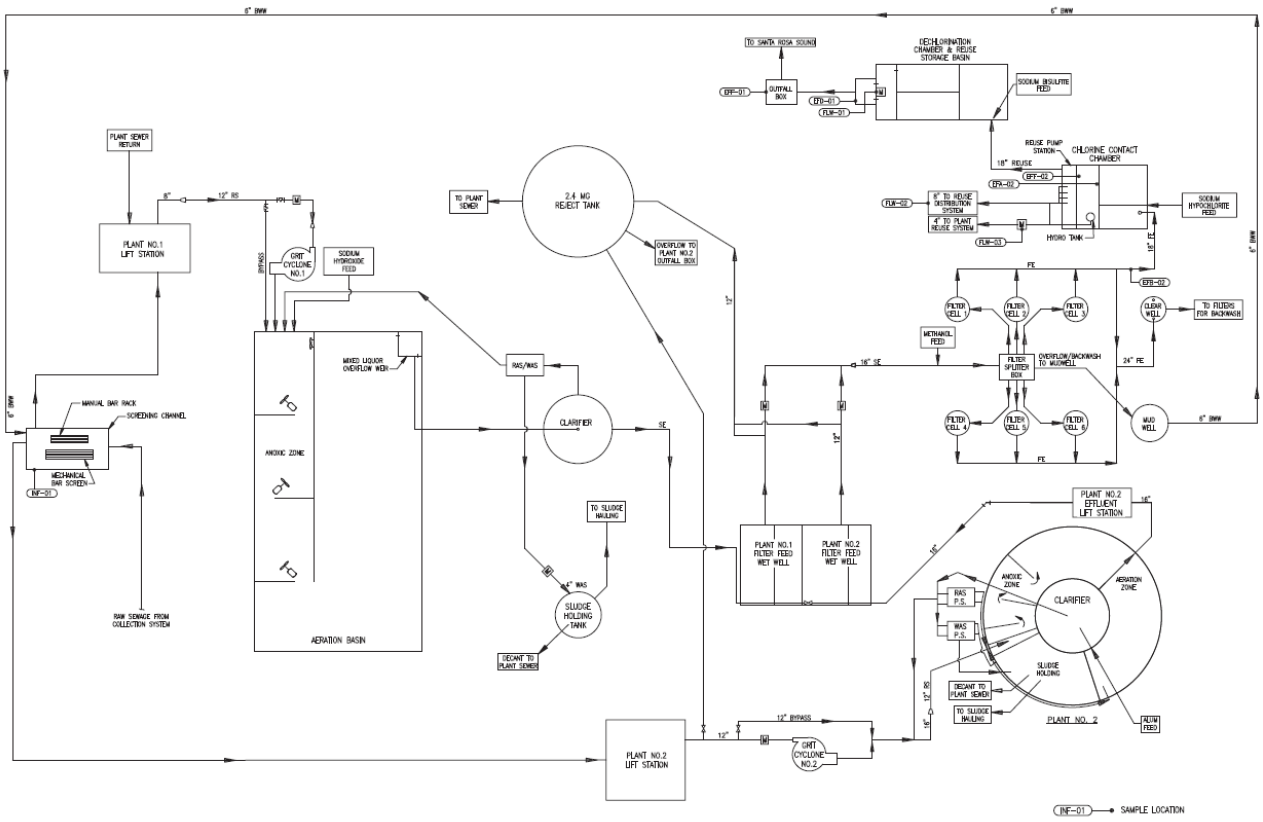
Description of Permitted Outfall(s): Surface Water Discharge D-001: 2.4 MGD annual average daily flow discharge to Santa Rosa Sound, Class III Marine waters, (WBID# 915) which is approximately 400 feet in length and discharges at a depth of approximately 20 feet. The point of discharge is located approximately at latitude 30°20'12"N, 87°7'53"W. Land Application R-001: 0.432 MGD annual average daily flow permitted capacity slow-rate public access system. R-001 is a reuse system which consists of Santa Rosa Island Authority's franchise (general service) area. The area bounded on the North by Santa Rosa Sound, on the South by the Gulf of Mexico, on the West by the Fort Pickens National Park and on the east by the Gulf Islands National Seashore.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility): The facility has two treatment trains each with a design capacity of 1.2 MGD and discharging effluent that meets the 5:5:3:1 CBOD5, TSS, Nitrogen and Phosphorus requirements defined under section 403.086(4)(a), F.S., and high level disinfection requirements as defined by Rule 62-600.440(5), F.A.C. Each plant is a 1.2 MGD design capacity, extended aeration treatment process using a Modified Ludzack-Ettinger process for the removal of BOD, TSS, and nitrogen along with alum addition for phosphorus removal. Both plants share a common influent mechanical bar screen; the plants have an individual influent pump stations and vortex grit removal chambers. Plant No. 1 consists of a 100,000-gallons anoxic basin, 370,000-gallons aeration basin, 100,000-gallons sludge holding tank and 50-ft diameter clarifier. Plant No. 2 consists of a 125,000-gallons anoxic basin, 440,000-gallons aeration basin, 157,000-gallons sludge holding tank and 60-ft diameter clarifier. Flow from both plants combines in a six-cell denitrification filter system followed by disinfection in a new dual chamber 58,500-gallons chlorine contact chamber using sodium hypochlorite. Reclaimed water from the chlorine contact chamber is either discharged to Santa Rosa Sound following dichlorination or is pumped to a slow-rate, public access landscape irrigation system for reuse. The facility also includes a 2.4 MGD effluent holding tank that is available for storage of off-spec reclaimed wastewater. Residuals are concentrated in the sludge holding tanks and loaded into tanker trucks for transport to the ECUA's Central Water Reclamation Facility in Pensacola for further treatment.





A1 SITE LAYOUT PLAN
SCALE: 1" = 25' 0 12.5' 25' 50'



PART I: Continued

List <u>current</u> Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under
(Leave cell blank if not applicable)

I.A.1. D-001

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow (D-001)	MGD	Max Max	2.4 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.A.4
Flow (WWTP Reuse)	MGD	Max	Report	Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-03	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFF-01	
Solids, Total Suspended	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFF-01	
Nitrogen, Total	mg/L	Max Max Max Max	3.0 3.75 4.5 6.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFF-01	
Phosphorus, Total (as P)	mg/L	Max Max Max Max	1.0 1.25 1.5 2.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFF-01	
Coliform, Fecal	#/100mL	Max Max Max	14 14 86	Monthly Median Annual Average Single Sample	Weekly	Grab	EFF-02	See I.A.5
Enterococci	#/100mL	Max Max	35 104	Monthly Geometric Mean Single Sample	5/Month	Grab	EFF-02	See I.A.7
pH	s.u.	Min Max	6.5 8.5	Single Sample Single Sample	Continuous	Meter	EFF-01	See I.A.3

Chlorine, Total Residual (Intermediate Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-02	
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours	Meter	EFA-01	
Oxygen, Dissolved Percent Saturation (Daily average)	Percent samples in compliance	Min	90	Monthly Total	Daily; 24 hours	Calculated	CAL-01	See I.A.9 I.A.12
Oxygen, Dissolved Percent Saturation (Weekly average)	# of exceedances	Max	1	Quarterly Total	Weekly	Calculated	CAL-01	See I.A.10
Oxygen, Dissolved Percent Saturation (Monthly average)	# of exceedances	Max	1	Annual Total	Monthly	Calculated	CAL-01	See I.A.11

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Copper, Total Recoverable	µg/L	Max	3.7	Single Sample	Semi-Annually; twice per year	24-hr FPC	EFF-01	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Semi-Annually; twice per year	24-hr FPC	EFF-01	See I.A.8
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	percent	Min	100	Single Sample	Semi-Annually; twice per year	24-hr FPC	EFF-01	See I.A.8
Temperature (C), Water	Deg C	Max	Report	Single Sample	Quarterly	Grab	SWI-1 SWI-2 SWI-3 SWI-4	
pH	s.u.	Max	Report	Single Sample	Quarterly	Grab		
Oxygen, Dissolved Percent Saturation	percent	Max	Report	Single Sample	Quarterly	Grab		
Oxygen, Dissolved (DO)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Specific Conductance	umhos/cm	Max	Report	Single Sample	Quarterly	Grab		
Salinity	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Transparency, Secchi Disk	in	Max	Report	Single Sample	Quarterly	Grab		
Nitrogen, Total	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Phosphorus, Total(as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Chlorophyll a	mg/L	Max	Report	Single Sample	Quarterly	Grab		

R-001.

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow (General Service Area)	MGD	Max Max	0.432 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-02	See I.B.4
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFF-01	
Solids, Total Suspended (High- Level Disinfection)	mg/L	Max	5.0	Single Sample	3 Days/Week	Grab	EFF-02	
Coliform, Fecal (High Level Disinfection)	#/100mL	Max	25	Single Sample	3 Days/Week	Grab	EFF-02	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	3 Days/Week	Calculated	EFF-02	See I.B.5
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFF-02	See I.B.3
Chlorine, Total Residual (High- Level Disinfection)	mg/L	Min	1.3	Single Sample	Continuous	Meter	EFA-02	
Turbidity (High- Level Disinfection)	NTU	Max	Report	Single Sample	Continuous	Meter	EFF-02	See I.B.6 and I.B.8
Giardia	cysts/100L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFF-02	See I.B.9
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFF-02	See I.B.9

Footnotes:

I.A.3.: Hourly measurement of pH and total residual chlorine for disinfection during the period of required operator attendance may be substituted for continuous measurement.

I.A.4.: A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months.

I.A.5.: The effluent limitation for the monthly median for fecal coliform is only applicable if 10 or more values are

reported. If fewer than 10 values are reported, the monthly median shall be calculated and reported on the Discharge Monitoring Report.

I.A.7.: The enterococci monthly geometric mean value shall be based on all samples of effluent collected during a period of 30 consecutive days (monthly); a minimum of 5 samples of effluent, each collected on ~~nonconsecutive days,~~nonconsecutive days is required.

I.A.8.: The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from outfall D-001.

a. Effluent Limitation

(1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) shall not be less than 100% effluent. [Rules 62-302.530(61) and 62-4.241(1)(b), F.A.C.]

(2) For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test. [Rule 62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]

b. Monitoring Frequency

(1) Routine toxicity tests shall be conducted once every six months, the first starting within 60 days of the effective date of this permit and lasting for the duration of this permit.

c. Sampling Requirements

(1) For each routine test or additional follow-up test conducted, a total of three flow proportional 24-hr composite samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.

(2) The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test.

(3) Samples for routine and additional follow-up tests shall not be collected on the same day.

d. Test Requirements

(1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: **100%**, **50%**, **25%**, **12.5%**, and **6.25%** final effluent.

(2) The permittee shall conduct a daphnid, **Ceriodaphnia dubia**, Survival and Reproduction Test and a fathead minnow, **Pimephales promelas**, Larval Survival and Growth Test, concurrently.

(3) All test species, procedures and quality assurance criteria used shall be in accordance with **Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms**, 4th Edition, EPA-821-R-02-013. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.

(4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7.2.3.

e. Quality Assurance Requirements

(1) A standard reference toxicant (SRT) quality assurance (QA) chronic toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly chronic toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.

(2) If the mortality in the control (0% effluent) exceeds 20% for either species in any test or the "test acceptability criteria" are not met, the test for that species (including the control) shall be invalidated and the test repeated. Test acceptability criteria for each species are defined in EPA-821-R-02-013, Section 13.12 (**Ceriodaphnia dubia**) and Section 11.11 (**Pimephales promelas**). The repeat test shall begin within 21 days after the last day of the invalid test.

(3) If 100% mortality occurs in all effluent concentrations for either test species prior to the end of any test and the control mortality is less than 20% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.

(4) Routine and additional follow-up tests shall be evaluated for acceptability based on the observed dose response relationship as required by EPA-821-R-02-013, Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.

f. Reporting Requirements

(1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:

(a) Routine and Additional Follow-up Test Results: The calculated IC25 for each test species shall be entered on the DMR.

(2) A bioassay laboratory report for each routine test shall be prepared according to EPA-821-R-02-013, Section 10, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days after the last day of the test.

(3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-013, Section 10, and mailed within 30 days after the last day of the second valid additional follow-up test.

(4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.

(5) The same bioassay data shall not be reported as the results of more than one test.

(6) All bioassay laboratory reports shall be sent to:

Florida Department of Environmental Protection
Northwest District Office

160 W Government Street, Suite 308
Pensacola, Florida 32502-5740
g. Test Failures
(1) A test fails when the test results do not meet the limits in 8.a.(1).
(2) Additional Follow-up Tests:
(a) If a routine test does not meet the chronic toxicity limitation in 8.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 8.d.
(b) The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.
(c) The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5%, and 6.25% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be analyzed according to the procedures in EPA-821-R-02-013.
(3) In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.
(a) The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.
(b) The Department shall review and approve the plan before initiation.
(c) The plan shall be initiated within 30 days following the Department's written approval of the plan.
(d) Progress reports shall be submitted quarterly to the Department at the address above.
(e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 8.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 8.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.
(f) Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in 8.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests. If a test within the sequence of the four is deemed invalid, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test

will not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.
(4) If chronic toxicity test results indicate greater than 50% mortality within 96 hours in an effluent concentration equal to or less than the effluent concentration specified as the acute toxicity limit in 8.a.(2), the Department may revise this permit to require acute definitive whole effluent toxicity testing.
(5) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for acute or chronic whole effluent toxicity failures.

I.A.9.: No more than 10 percent of the daily average percent dissolved oxygen (DO) saturation values shall be below 42%. To report the "percent samples in compliance," count the number of daily average values greater than or equal to 42%, divide by the total number of daily average values, and multiply by 100% (round to the nearest integer).

I.A.10.: The weekly average DO percent saturation shall not be below 51% more than once in any three month period. To report the “number of exceedances,” count the number of weekly average values less than the 51% during the rolling 12 week period. The weekly average value shall only be counted if samples or readings are taken on 3 or more days during the week.

I.A.11.: The monthly average DO percent saturation shall not be below 56% more than once in any twelve month period. To report the “number of exceedances,” count the number of monthly average values less than the 56% during the rolling 12 month period. The monthly average value shall only be counted if samples or readings are taken on 10 or more days during the month.

I.A.12.: Daily samples shall total a minimum of 10 per week with at least one sample 7 days a week and when multiple samples are taken in a day each sample measured at least four hours apart.

I.B.3.: Hourly measurement of pH during the period of required operator attendance may be substituted for continuous measurement.

I.B.4.: A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months.

I.B.5.: To report the "% less than detection," count the number of fecal coliform observations that were less than detection, divide by the total number of fecal coliform observations in the month, and multiply by 100% (round to the nearest integer).

I.B.6.: The maximum turbidity shall be limited as described in the approved operating protocol, such that the permit limitations for total suspended solids and fecal coliforms will be achieved.

I.B.8.: Instruments for continuous on-line monitoring of total residual chlorine and turbidity shall be equipped with an automated data logging or recording device.

I.B.9.: Intervals between sampling for Giardia and Cryptosporidium shall not exceed two years.

PART I: Continued

Receiving Waters: Santa Rosa Sound	**Classification (indicate whether fresh or marine):** Class III Marine

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.): See above, permit requirements I.A.1. and footnotes I.A.8.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):

Administrative Order AO-091NW (AO) for Dissolved Oxygen (DO), compliance date May 1, 2017. Interim limits of 4.0 mg/L and Report the three new DO percent saturation limits provided. Submit for review and approval engineering report evaluating feasibility of alternatives to treatment system to achieve compliance with DO criteria for the receiving water body due no later than 12 months from the effective date of the Order, by April 19, 2016. Submit quarterly reports beginning the first quarter 2015, due by the 25th day after the quarter.

On April 25, 2016 the Department issued an AO closure letter due to a request received on April 25, 2016 to close the AO with a minor permit revision. A review of the DO data for the facility from June 2015 through February 2016 indicates that the facility is in compliance with the new effluent limits for DO percent saturation in the permit. The final DMRs are effective May 1, 2016. AO completed and closed out.

Consent Order (CO) OGC File No. 11-0982 was executed on June 6, 2012 for the facility's wastewater collection system and sanitary sewer overflows from the system. The CO's final compliance date is 6/5/2028.

Facility Mixing Zone Details (if applicable): None

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year: Date of exceedance, max turbidity reported for the day was 0.7 NTU. DMR Comment indicates "temporary spike from something flowing through the turbidity meter. High level disinfection was discontinued following the operating protocol."

Date	Parameter and Units	Limit	Result
May 18, 2017	Total Suspended Solids, mg/L	5.0 Maximum	5.2

Describe previous FYI and WQBEL study:

Previous FYI5 performed July 22 and August 1, 2013:
ftp://ftp.dep.state.fl.us/pub/labs/lds/reports/13724.pdf

Conclusion

Atrazine was detected at levels between the MDL and PQL in the receiving water samples at all 4 sites; however, it was not detected in the effluent grab sample. 1,4, dioxane was detected in the effluent grab sample and at one receiving water site (200 West). All metals detected in the effluent and receiving water samples were present at levels that complied with Class III Marine Water Quality Criteria (62-302.530, F.A.C.) and effluent permit limits. PAH constituents and diethyl phthalate were detected in the sediment samples collected at the receiving water sites. Chromium, copper, and nickel in the sediment sample from site 400 East exceeded TEL values. There is no detectable nutrient enrichment from the effluent at the receiving water sites. The macroinvertebrate community was depauperate at all the receiving water sites which is likely due to the lack of habitat and effects of the metals and PAH's found there.

Level I WQBEL Issued with the Draft Permit -009:

The Level I WQBEL process applies to the renewal of existing permits when data are sufficient to determine that the receiving waters currently meet standards and are expected to continue to meet standards with the discharge [Rule 62-650.400(1)].
The Pensacola Beach WWTP discharge is located in a portion of Santa Rosa Sound within 0.6 miles from the western boundary of that portion of Santa Rosa Sound classified as Class III Marine Waters and in a portion of classified as Outstanding Florida Waters, the Gulf Islands National Seashore.
Effluent limitations are carried forward from the previous permit with the exception of Dissolved Oxygen (DO) which was made more stringent to meet the new DO percent saturation criteria 62-302.533, F.A.C. and Silver monitoring and limit is deleted as there were no detectable results during the last permit cycle, ~~therefore~~therefore, no reasonable potential to exceed the water quality criteria. The previous permit limits were based on a Level II WQBEL which was finalized by FDEP in May 2003.
The receiving water body, Santa Rosa Sound, WBID 915, is listed for impairment for Mercury in fish tissue, fecal coliform and bacteria in shellfish and causing beach advisories.
Mercury:
In accordance with the Statewide TMDL for Mercury, Subsection 62-304.900(1), F.A.C., mercury minimization plans (MMP) addressing sources of mercury within their jurisdiction ~~are~~is required for domestic wastewater facilities with a permitted capacity of greater than one MGD that demonstrate quantifiable mercury levels in their effluent.
The Pensacola Beach WWTP has demonstrated that they do not have quantifiable levels of total mercury in their effluent. See data table below, no sample was above the analytical method PQL. Therefore, they do not need a limit for mercury in their permit, nor do they need to prepare an MMP for the facility.

Parameter	WQC	Date	Result (µg/L)	MDL (µg/L)	PQL (µg/L)	Method
Mercury	0.025 µg/L	Dec-11	0.00020 U	0.0002	0.0005	1631 E
		Nov-12	0.00039 I	0.0002	0.0005	1632 E
		Nov-13	0.00020 U	0.0002	0.0005	1633 E

Fecal Coliform: The permit includes appropriate limits for intermediate-level disinfection by chlorination and Fecal Coliform criteria appropriate for Class II Shellfish Harvesting and swimming.
Enterococci: Santa Rosa Sound is a coastal recreational water with designated bathing beaches which 40 CFR 131.41 adopted a water quality criteria for Enterococci. The permit maintains effluent limits for Enterococci as a single sample maximum 104 #/100 mL and a monthly geometric mean 35 #/100 mL.
DEP's *Biological Assessment of Pensacola Beach WWTF* **(**Sampled July 22 and August 1, 2013) ftp://ftp.dep.state.fl.us/pub/labs/lds/reports/13724.pdf sampled four locations in Santa Rosa Sound close to the outfall and concluded "There is no detectable nutrient enrichment from the effluent at the receiving water sites."
Carbonaceous Biological Oxygen Demand 5-day (CBOD5)/Total Suspended Solids (TSS)/

Total Nitrogen (TN)/Total Phosphorus (TP):
Existing effluent limits are advanced wastewater treatment level of 5/5/3/1 mg/L annual averages for CBOD5/TSS/TN/TP respectively, that were based on a Level II WQBEL which was finalized by FDEP in May 2003 and determined to be protective of the OFW Santa Rosa Sound's water quality, 403.085(2), F.S.
New numeric nutrient criteria (NNC) for Santa Rosa Sound (WBID 915) are now effective by Rule 62-302.532(1)(l)5, F.A.C. as:
Total Nitrogen (TN): 0.41 mg/L as AGM
Total Phosphorus (TP): 0.022 mg/L as AGM
Chlorophyll a: 3.4 μg/L as AGM
The Department set the NNC as ambient water data and not effluent limits and were based upon available data and current conditions including this existing discharge. Santa Rosa Sound, based upon previous criteria, is not listed as impaired for dissolved oxygen (DO) or nutrients criteria. Santa Rosa Sound has not yet been assessed against the new DO percent saturation or NNC criteria. The proposed permit limits for DO percent saturation and AWT CBOD5/TSS/TN/TP provide reasonable assurance that the water quality standards of Santa Rosa Sound will be protected.
The permit also includes four stations in Santa Rosa Sound to be monitored quarterly for water quality parameters. This data can be used in future assessments of the water quality in Santa Rosa Sound.
Metals: There have been no exceedances or violations of the metals limits in the current permit during the last permit cycle.
The facility has provided reasonable assurance that the discharge will not adversely affect the designated use of the receiving water. No limits, other than those included in this permit are needed to maintain Florida water quality standards.

Describe previous or current Enforcement Actions (including WLs): Current CO indicated above. Previous CO OGC # 06-1522 unauthorized discharge/failure to sample closed. Previous CO OGC # 99-2101 unauthorized discharge to Santa Rosa Sound from failures at both treatment trains now closed.

Describe any violations or problems noted in previous inspection: Previous facility inspection completed on August 2, 2016 overall rating “In Compliance” with a “Minor Non-Compliance” rating for Effluent Quality for Total Nitrogen and CBOD5. Exceedances adequately explained, did not continue, resolved adequately.

Discuss whether DMR trends within previous five years are improving or declining: Improving, 1 in 2017, 1 in 2016, 4 in 2015, 2 in 2014, 11 in 2013.

Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse):

PART II: Sampling Event Information

Date(s) sample collected: February 12, 2018, February 14, 2018, February 16, 2018	**Sampler(s):** Dana Vestal on the first 2 days, Amy Miller the last day of sampling
Temperature (Deg C): 21.3	**pH (SU):** 6.77
Dissolved Oxygen (mg/L): 7.89 mg/L	**Conductivity (umhos/cm):** Not available
Total Residual Chlorine (mg/L) – for Disinfection: >2.2	**Total Residual Chlorine - after Dechlorination (mg/L):** 0.00
Method of Chlorination: Liquid chlorine	**Method of De-chlorination:** Sodium bisulfite

Flow During Sample Collection for each outfall(MGD): February 12, 2018 0.945 to D-001, February 14, 2018 0.762 to D-001, February 16, 2018 0.767 to D-001

Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day): 12 monthly average flows for March 2017 through February 2018 FLW-01 0.797, FLW-02 0.087, FLW-03 0.0258, CAL-02 0.907.

Describe Discharge during Sampling Event:
☒ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent**
☐ **Other, please specify:**

Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here: Facility composite samples are set up from midnight to 11 p.m. by manual hourly grabs based on flow rates for a 24-hour composite sample. The composite samples were collected the day prior to our site visits which led to a hold time issue for toxicity. For any future composite sampling at the facility better communication should be used to ensure that composite sample periods end no more than 6 hours prior to the Department's arrival onsite to collect the samples.

Appendix B

Explanation of Measurements

Biological assessments are prepared by DEP staff to provide information for review of NPDES permit renewal applications. Biological assessments, in conjunction with other information concerning the subject facility and its receiving-water body, are used to determine appropriate permit conditions. References to Rule 62-302.530, F.A.C., are to the currently applicable surface water quality criteria table with an effective date of 02/17/2016 and a notice identification number of 17115667. New limits for *Escherichia coli* (*E. coli*), enterococci, and total ammonia nitrogen were approved on 07/24/2017**.**

1) Quality Assurance and Quality Control

All field and laboratory methods followed DEP Standard Operating Procedures (see https://floridadep.gov/dear/quality-assurance/content/dep-sops and https://floridadep.gov/dear/florida-dep-laboratory/content/dep-laboratory-quality-assurance-manual-and-sops for details) and met DEP quality assurance/quality control standards (see https://floridadep.gov/dear/quality-assurance).

2) Chemical Analyses of the Effluent

The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following DEP SOPs. The results from these analyses were compared with Water Quality Criteria (62-302, F.A.C.) and facility permit limits.

3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62-302.500(1)a and/or facility permit limits. A 25% inhibition concentration (IC25) is the effluent concentration causing a 25% reduction in a biological response such as biomass or reproduction when compared to a control population. An IC25 of less than 100% in a chronic test may constitute exceedances of 62-302.530(20), 62-302.530(61) and/or facility permit limits. A no observed effect concentration (NOEC) less than 100% effluent in a chronic test may constitute an exceedance of 62-302.530(61) and/or facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

4) Bacteriological Testing

High levels of fecal coliform bacteria may constitute an exceedance of 62-302.530(6) and/or facility permit limits. Fecal coliform and enterococci results often are based on colony counts outside the acceptable range (B-qualifier). The dilutions performed on the sample did not yield results within the method acceptable range of 20- 60 colony forming units per plate. The B-qualifier does not affect data quality.

5) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. AGP results within the range 6.10 to 20.0 mg dry wt/L are suggested to be representative of high productivity for freshwaters (Miller et al. 1978). High AGP values may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C..

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of $\pm$ 20%. When the ratio of nitrogen to phosphorus (N: P) is less than 10:1, nitrogen limitation of algal production is likely. When the N: P ratio is 20:1 or greater, phosphorus limitation is likely (USEPA 2000). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may constitute an exceedance of 62-302.530(61), F.A.C.

6) Sediment Sampling

Sediments were collected using a petite ponar dredge at all sampling stations. Sediment samples were analyzed for metals, organic constituents, pesticides, organic content and sediment grain size. The results from these analyses were compared with sediment quality assessment guidelines applicable to Florida coastal waters (Table 4. in MacDonald 1994). The range of sediment contaminant concentrations that fall below the threshold effects level (TEL) are not likely to be associated with adverse biological effects on aquatic organisms. The range of sediment contaminant concentrations that fall above the probable effects level (PEL) are usually or always associated with adverse biological effects. Within the range of concentrations delineated by the TEL (lower limit) and the PEL (upper limit), adverse biological effects are possible, but it is difficult to predict the occurrence, nature, and/or severity of these effects (MacDonald 1994).

7) Definition of Qualifiers

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
V - Analyte was detected in both sample and method blank.
X - Too few individuals to calculate SCI value.
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
Z - Colonies were too numerous to count (TNTC)

Appendix C

Chain of Custody

Request Number: RQ-2018-02-05-31

FYI5 ECUA Pensacola Beach WWTP FL0024007 Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection

Central Laboratory Submittal Form

last revised Jan 25, 2018

Requester: Lillian Haynes

Field Report Prepared By: Dana Vesta

Collected By: Dana Vesta 2/12/18

Sampling Agency: FDEP

Location	Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern / Central	Composite end Date	Time	Bottle Group(s) (See pg 2)
ECUA Pensacola Beach WWTP	Grab	2/8/18	9:38	Central	dis.	dech	A
Field ID: D001 Grabs	Matrix: wastewater	Diss. Oxygen: 7.89 mg/L / % sat	Total Res. Chlorine (mg/L): 7.22 / 0.00				
WIN/STORET #	Temp (C): 21.3	pH: 6.77	Sample Depth: ft / m	Sp. Conductance (umho/cm)			
Latitude: dd / dms	Longitude: dd / dms	Salinity (ppt)	Comments				

Location	Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern / Central	Composite end Date	Time	Bottle Group(s)
ECUA Pensacola Beach WWTP	Comp	2/11/18	0:00	Central	2/12/18	23:00	B
Field ID: D001 Composites	Matrix: wastewater	Diss. Oxygen: 85.3 mg/L / % sat	Total Res. Chlorine (mg/L): 35 disin.				
WIN/STORET #	Temp (C): 20	pH: 6.5	Sample Depth: ft / m	Sp. Conductance (umho/cm)			
Latitude: dd / dms	Longitude: dd / dms	Salinity (ppt)	Comments				

Location	Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern / Central	Composite end Date	Time	Bottle Group(s)
ECUA Pensacola Beach WWTP	Grab	2/12/18	0:05	Central			E
Field ID: Field Blanks	Matrix: DI water	Diss. Oxygen: mg/L / % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #	Temp (C)	pH	Sample Depth: ft / m	Sp. Conductance (umho/cm)			
Latitude: dd / dms	Longitude: dd / dms	Salinity (ppt)	Comments				

Location	Comp / Grab	Collection (comp begin or grab) Date	Time	Eastern / Central	Composite end Date	Time	Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen: mg/L / % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #	Temp (C)	pH	Sample Depth: ft / m	Sp. Conductance (umho/cm)			
Latitude: dd / dms	Longitude: dd / dms	Salinity (ppt)	Comments				

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Dana Vesta	2/12/18 12:12	FedEx	5	SR	2/13/18 9:25

2 Biocassay jugs X 2.13.18 Hulk/ln HJ

Request Number: RQ-2018-02-05-31

Florida Department of Environmental Protection

Central Laboratory Submittal Form

last revised Jan 25, 2018

FYI5 ECUA Pensacola Beach WWTP FL0024007
Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Requester: Lillian Haynes

Field Report Prepared By: N. Milky

Collected By: Nathan Milky / Stephen Skala

Sampling Agency: FDEP NWROC

Location: Santa Rosa Sound 400 ft east of POD	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 2/12/18	Time 0955	Eastern (Central)	Composite end Date	Time	Bottle Group(s) (See pg 2): C/D
Field ID: 400 E	Matrix (type, e.g., (Salt), Fresh, etc)		Diss. Oxygen 8.36	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #	Temp (C) 16.01	pH 7.92	Sample Depth 0.3 ☐ ft ☑ m	Sp. Conductance (umho/cm) 39,55	
Latitude 30.33729 ☑ dd ☐ dms	Longitude 87.13055 ☑ dd ☐ dms	Salinity (ppt)	Comments		
Location: Santa Rosa Sound 200 ft east of POD	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 2/12/18	Time 1021	Eastern (Central)	Composite end Date	Time	Bottle Group(s): C/D
Field ID: 200 E	Matrix (type, e.g., (Salt), Fresh, etc)		Diss. Oxygen 8.30	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #	Temp (C) 15.93	pH 7.96	Sample Depth 0.3 ☐ ft ☑ m	Sp. Conductance (umho/cm) 40,159	
Latitude 30.33714 ☑ dd ☐ dms	Longitude 87.13158 ☑ dd ☐ dms	Salinity (ppt)	Comments		
Location: Santa Rosa Sound 200 ft west of POD	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 2/12/18	Time 1055	Eastern (Central)	Composite end Date	Time	Bottle Group(s): C/D
Field ID: 200 W	Matrix (type, e.g., (Salt), Fresh, etc)		Diss. Oxygen 8.41	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #	Temp (C) 15.89	pH 7.97	Sample Depth 0.3 ☐ ft ☑ m	Sp. Conductance (umho/cm) 39,988	
Latitude 30.33731 ☑ dd ☐ dms	Longitude 87.13289 ☑ dd ☐ dms	Salinity (ppt)	Comments		
Location: Santa Rosa Sound 400 ft west of POD	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 2/12/18	Time 1125	Eastern (Central)	Composite end Date	Time	Bottle Group(s): C/D
Field ID: 400 W	Matrix (type, e.g., (Salt), Fresh, etc)		Diss. Oxygen 8.47	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #	Temp (C) 15.87	pH 7.96	Sample Depth 0.3 ☐ ft ☑ m	Sp. Conductance (umho/cm) 39,569	
Latitude 30.33731 ☑ dd ☐ dms	Longitude 87.13289 ☑ dd ☐ dms	Salinity (ppt)	Comments		

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
[illegible]	2/12/18	Fed Ex	4	SR	2-13-18 / 9:25

Request Number: RQ-2018-02-05-31

FYI5 ECUA Pensacola Beach WWTP FL0024007 Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Requester: Lillian Haynes

Collected By: Dana Vestal

Field Report Prepared By: Dana Vestal

Sampling Agency: FDEP

Location: ECUA Pensacola Beach WWTP	☒ Comp ☐ Grab	Collection (comp begin or grab) Date: 2/13/18 Time: 0:01	Eastern Central	Composite end Date: 2/14/18 Time: 23:00						Bottle Group(s) (See pg 2): B
Field ID: D001 Composites	Matrix (type, e.g., Salt, Fresh, etc): wastewater		Diss. Oxygen: 95.1 ☐ mg/L ☒ % sat		Total Res. Chlorine (mg/L): 3.6					
WIN/STORET #	Temp (C): 29.1	pH: 6.66	Sample Depth ☐ ft ☐ m		Sp. Conductance (umho/cm)					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date: Time:	Eastern Central	Composite end Date: Time:						Bottle Group(s):
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m		Sp. Conductance (umho/cm)					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date: Time:	Eastern Central	Composite end Date: Time:						Bottle Group(s):
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m		Sp. Conductance (umho/cm)					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date: Time:	Eastern Central	Composite end Date: Time:						Bottle Group(s):
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m		Sp. Conductance (umho/cm)					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Dana Vestal	2/14/18 9:10A	FedEx	1		02/15/18 C10:30

m. Faircloth 2/15/18 1048 2 Biohazard bags

Request Number: RQ-2018-02-05-31

Florida Department of Environmental Protection

Central Laboratory Submittal Form

last revised Jan 25, 2018

FYI5 ECUA Pensacola Beach WWTP FL0024007
Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Requester: Lillian Haynes

Field Report Prepared By: Dana Vesta

Collected By: Dana Vesta

Sampling Agency: FDEP

Location: ECUA Pensacola Beach WWTP	☒ Comp ☐ Grab	Collection (comp begin or grab) Date: 2/15/18 Time: 12:00am - 11:00pm	Eastern Central	Composite end Date: 2/15/18 Time: 12:00am 11:00pm						Bottle Group(s) (See pg 2): B
Field ID: D-001 Composites		Matrix (type, e.g., Salt, Fresh, etc): Wastewater		Diss. Oxygen: 87.3	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L): 4.0				
WIN/STORET #		Temp (C): 72.2°F		pH: 6.6	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)		Comments						
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date: Time:	Eastern Central	Composite end Date: Time:						Bottle Group(s):
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)		pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)		Comments						
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date: Time:	Eastern Central	Composite end Date: Time:						Bottle Group(s):
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)		pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)		Comments						
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date: Time:	Eastern Central	Composite end Date: Time:						Bottle Group(s):
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
WIN/STORET #		Temp (C)		pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)		Comments						

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Dana Vesta	2/16/18 10:40am	FedEx	2		2.17.18 0903

blue cooler - 1.3°C
red cooler - 1.4°C
1.5°C

Appendix D

Physical/Chemical and Habitat Assessment field sheets

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD9000-26 MARINE PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (4/25/00)

LAT/LONGS:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
30.33729 N 87.13354		2/12/18	1125	Pensacola Bay

REMARKS:	COUNTY:	SITE LOCATION:	FIELD ID/NAME:
FIS Pole Beach	Escambia	400 ft West of POD	400 West

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☐ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious ☐

Width of riparian vegetation (m) on least buffered side: ____

Draw aerial view sketch of sampling area including habitats and community types

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered, more sinuous

Artificially Impounded ☐ yes

High Water Mark: ____ (m above present water level) + ____ (present depth in m) = ____ (m above bed)

Tide Types and Times

Low 7:47 AM PM

High 8:36 AM PM

Canopy Cover %: Open: ☒ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily ☐

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☐ Other: ☐

Sediment Oils: Absent: ☒ Slight: ☐ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☐ Sand smothering: none ☐ slight ☐ moderate ☐ severe ☐ Silt smothering: none ☐ slight ☐ moderate ☐ severe ☐

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled
Seagrass	0.3			Sand	100	
Rock or Shell Rubble	2.0			Mud/Muck/Silt		
Aquatic Vegetation	3.5			Other:		

Community Types

Mangroves ☐ Oyster bars ☐ Reef ☐ Natural beach ☐ Other: ☐

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	DO%	SAL Seachi
Top	0.3	15.87	7.96	8.47	39569	99.6	25.28
Mid-depth	2.0	15.86	7.97	8.44	39594	99.5	25.30
Bottom	3.5	15.78	7.95	7.99	40534	95.1	25.95

3.9

System Type: Stream: ☐ (1st - 2nd order, 3rd - 4th order, 5th - 6th order, 7th order or greater) Estuary: ☒ Other: ☐

Water Odors (check box): Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐

Water Surface Oils (check box): None: ☒ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☒ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Tannic: ☐ Green (algae): ☐ Clear: ☒ Other: ☐

Weather Conditions/Notes:

Total Depth: 4.0 m

Overcast + Breezy 5-10 KTS North breeze

Abundance:

	Absent	Rare
Periphyton	☐	☐
Fish	☐	☐
Aquatic Macrophytes	☐	☐
Iron/sulfur Bacteria	☐	☐

SAMPLING TEAM: Nathan Milky / Skyler Stahl

SIGNATURE: [signature]

2/12/18

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD9000-26 MARINE PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (4/25 00)

LAT/LONGS:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
30.33731 87.13289		2/12/18	1055	Pensacola Bay

REMARKS:	COUNTY:	SITE LOCATION:	FIELD ID/NAME:
FWS Perdido Beach	Escambia	200 ft West of POD	200 West

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☐ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious ☐

Width of riparian vegetation (m) on least buffered side:

Draw aerial view sketch of sampling area including habitats and community types

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered, more sinuous

Artificially Impounded ☐ yes

High Water Mark: _____ (m above present water level) + _____ (present depth in m) = _____ (m above bed)

Tide Types and Times

Low 7:47 AM PM

High 8:36 AM PM

AM PM

Canopy Cover % : Open : ☑ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded ☐

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☐ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☑ Other: ☐

Sediment Oils: Absent: ☑ Slight: ☐ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☑ Sand smothering: none slight moderate severe Silt smothering: none slight moderate severe Other:

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled
Seagrass				Sand	40	
Rock or Shell Rubble				Mud/Muck/Silt	60	
Aquatic Vegetation				Other:		

method

Community Types

Mangroves ☐ Oyster bars ☐ Reef ☐ Natural beach ☐ Other: ☐

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	DO%	SAL
Top	0.3	15.89	7.97	8.41	39988	94.3	25.58
Mid-depth	2.3	15.88	7.97	8.36	40031	97.9	25.61
Bottom	4.1	16.37	7.89	8.70	44,916	68.0	29.00

Secchi 3.9

System Type : Stream: ☐ (1st - 2nd order 3rd - 4th order 5th - 6th order 7th order or greater) Estuary: ☑ Other: ☐

Water Odors (check box): Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐

Water Surface Oils (check box): None: ☑ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☑ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Tannic: ☐ Green (algae): ☑ Clear: ☐ Other: ☐

Weather Conditions/Notes:

Total Depth: 4.6

Overcast + Breezy 5 knots

Abundance:

	Absent	Rare	Common
Periphyton	☐	☐	☐
Fish	☐	☐	☐
Aquatic Macrophytes	☐	☐	☐
Iron/sulfur Bacteria	☐	☐	☐

SAMPLING TEAM: Nathan Milby / Stephen Shake

SIGNATURE: [signature]

2/12/18

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD9000-26 MARINE PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (4/25/00)

LAT/LONGS:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
30.33714 N 87.13158		2/12/18	1021	Pensacola Bay

REMARKS:	COUNTY:	SITE LOCATION:	FIELD ID/NAME:
FWS Perdido Beach	Escambia	200 ft East of POD	200 East

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☐ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious ☐

Width of riparian vegetation (m) on least buffered side: ____

Draw aerial view sketch of sampling area including habitats and community types

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered, more sinuous
Artificially Impounded ☐ yes

High Water Mark: ____ (m above present water level) + ____ (present depth in m) = ____ (m above bed)

Tide Types and Times

Low 7:47 AM PM

High 8:36 AM PM

Canopy Cover %: Open: ☑ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded (81-100%): ☐

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☐ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☑ Other: ☐ Slight smell

Sediment Oils: Absent: ☐ Slight: ☑ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☐ Sand smothering: none slight (moderate severe) Silt smothering: none slight (moderate severe) Other:

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled
Seagrass				Sand	50	
Rock or Shell Rubble				Mud/Muck/Silt	50	
Aquatic Vegetation				Other:		

Community Types

Mangroves ☐ Oyster bars ☐ Reef ☐ Natural beach ☐ Other: ☐ ____

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	DO%	SAL	Secchi
Top	0.3	15.93	7.96	8.30	40159	98.2	25.70	
Mid-depth	2.2	15.82	7.95	8.06	40439	95.9	25.88	3.9
Bottom	3.9	15.35	7.85	5.36	45371	63.1	29.23	

System Type: Stream: ☐ (1st - 2nd order 3rd - 4th order 5th - 6th order 7th order or greater) Estuary: ☑ Other: ☐ ____

Water Odors (check box): Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐

Water Surface Oils (check box): None: ☑ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☑ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Tannic: ☐ Green (algae): ☐ Clear: ☑ Other: ☐ ____

Weather Conditions/Notes:
Total Depth 4.4m
Wind picking up to ghost 5kts

Abundance:	Absent	Rare	Common
Periphyton	☐	☐	☐
Fish	☐	☐	☐
Aquatic Macrophytes	☐	☐	☐
Iron/sulfur Bacteria	☐	☐	☐

SAMPLING TEAM: Nathan Mulkey / Stephen Sade

SIGNATURE: [signature] 2/12/18

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD9000-26 MARINE PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (4/25/00)

LAT/LONGS:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER
30.33729 N 87.13055		2/12/18	0955	Pensacola Bay

REMARKS:	COUNTY:	SITE LOCATION:	FIELD ID NAME
FWS Perdido Beach	Escambia	400 ft East of POD	400 East

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☐ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious ☐

Width of riparian vegetation (m) on least buffered side:

Draw aerial view sketch of sampling area including habitats and community types

Tide Types and Times

Low 7:47 AM PM

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered, more sinuous

Artificially Impounded ☐ yes

High Water Mark: _____ (m above present water level) + _____ (present depth in m) = _____ (m above bed)

High 8:36 AM PM

Canopy Cover % : Open : ☑ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded ☐

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☐ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☑ Other: ☐

Sediment Oils: Absent: ☑ Slight: ☐ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☑ Sand smothering: none ☐ slight ☐ moderate ☐ severe ☐ Silt smothering: none ☐ slight ☐ moderate ☐ severe ☐

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled
Seagrass				Sand		
Rock or Shell Rubble				Mud/Muck/Silt	100	1
Aquatic Vegetation				Other:		

Community Types

Mangroves ☐ Oyster bars ☐ Reef ☐ Natural beach ☐ Other: ☐

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	DO%	SAL
Top	0.3	16.01	7.92	8.36	39955	99.1	25.57
Mid-depth	2.2	15.75	7.89	8.15	40680	96.6	26.10
Bottom	3.9	15.35	7.81	6.66	42860	~~42860~~ 78.9	27.58

System Type : Stream: ☐ (1st - 2nd order 3rd - 4th order 5th - 6th order 7th order or greater) Estuary: ☑ Other: ☐

Water Odors (check box): Normal: ☑ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐

Water Surface Oils (check box): None: ☑ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☑ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Tannic: ☐ Green (algae): ☐ Clear: ☑ Other: ☐

Weather Conditions/Notes:

Total Depth: 4.4m

Nitrile lot#: 7341010 12/7/18

Sulphonic lot#: 7233020 8/21/18

Abundance:

	Absent	Rare
Periphyton	☐	☐
Fish	☐	☐
Aquatic Macrophytes	☐	☐
Iron/sulfur Bacteria	☐	☐

SAMPLING TEAM: Nathan Mulky / Stephen Slade

SIGNATURE: [signature] 2/12/18

Secchi 4.1

poor

Appendix E

Chemical analysis of effluent and receiving water

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 0:00	D-001 COMP	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.1 AQ	mg/L	0.2	2
2/12/2018 0:00	D-001 COMP	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	100 L	IC25		
2/12/2018 0:00	D-001 COMP	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	No Result Q	NOEC		
2/12/2018 0:00	D-001 COMP	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	No Result Q	IC25		
2/12/2018 0:00	D-001 COMP	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	100	NOEC		
2/12/2018 0:00	D-001 COMP	Metals	Potassium	15.0	mg/L	0.3	1.2
2/12/2018 0:00	D-001 COMP	Metals	Silver	0.010 U	µg/L	0.01	0.04
2/12/2018 0:00	D-001 COMP	Metals	Magnesium	22.6	mg/L	0.04	0.16
2/12/2018 0:00	D-001 COMP	Metals	Iron	35 I	µg/L	30	120
2/12/2018 0:00	D-001 COMP	Metals	Zinc	60	µg/L	5	20
2/12/2018 0:00	D-001 COMP	Metals	Cadmium	0.021 I	µg/L	0.02	0.08
2/12/2018 0:00	D-001 COMP	Metals	Calcium	39.0	mg/L	0.075	0.3
2/12/2018 0:00	D-001 COMP	Metals	Aluminum	60 U	µg/L	60	240
2/12/2018 0:00	D-001 COMP	Metals	Lead	0.11 I	µg/L	0.05	0.2
2/12/2018 0:00	D-001 COMP	Metals	Sodium	199	mg/L	1	4
2/12/2018 0:00	D-001 COMP	Metals	Arsenic	1.65	µg/L	0.05	0.2
2/12/2018 0:00	D-001 COMP	Metals	Selenium	0.20 U	µg/L	0.2	0.8
2/12/2018 0:00	D-001 COMP	Metals	Nickel	1.75	µg/L	0.2	0.8
2/12/2018 0:00	D-001 COMP	Metals	Copper	2.42	µg/L	0.2	0.8
2/12/2018 0:00	D-001 COMP	Metals	Chromium	0.40 U	µg/L	0.4	1.6
2/12/2018 0:00	D-001 COMP	Nutrients	Total-P	0.20	mg P/L	0.005	0.05
2/12/2018 0:00	D-001 COMP	Nutrients	NO2NO3-N	1.2	mg N/L	0.04	0.1
2/12/2018 0:00	D-001 COMP	Nutrients	Organic Carbon	4.4	mg C/L	0.5	1
2/12/2018 0:00	D-001 COMP	Nutrients	Kjeldahl Nitrogen	0.63	mg N/L	0.08	0.2
2/12/2018 0:00	D-001 COMP	Nutrients	TSS	2 U	mg/L	2	10
2/12/2018 0:00	D-001 COMP	Nutrients	Temperature	2.8	C		
2/12/2018 0:00	D-001 COMP	Nutrients	Total Residual Chlorine	3.5	mg/L		
2/12/2018 0:00	D-001 COMP	Nutrients	pH	6.5			
2/12/2018 0:00	D-001 COMP	Nutrients	Dissolved Oxygen	85.3	mg/L		
2/12/2018 10:38	D-001 GRABS	AGP/LN	Algal Growth Potential-Salinity Adjusted	3.78	mg DryWt/L	3	3
2/12/2018 10:38	D-001 GRABS	AGP/LN	Algal Growth Potential	0.300 U	mg DryWt/L	0.3	0.9
2/12/2018 10:38	D-001 GRABS	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	µg/L	0.4	1.2
2/12/2018 10:38	D-001 GRABS	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	µg/L	0.55	1.7

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:38	D-001 GRABS	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	0.40 U	µg/L	0.4	1.2
2/12/2018 10:38	D-001 GRABS	Nutrients	Fluoride	0.36	mg F/L	0.035	0.1
2/12/2018 10:38	D-001 GRABS	Nutrients	O-Phosphate-P	0.14	mg P/L	0.004	0.01
2/12/2018 10:38	D-001 GRABS	Nutrients	Kjeldahl Nitrogen	0.60	mg N/L	0.08	0.2
2/12/2018 10:38	D-001 GRABS	Nutrients	Turbidity	0.85	NTU	0.1	0.13
2/12/2018 10:38	D-001 GRABS	Nutrients	Organic Carbon	4.2	mg C/L	0.5	1
2/12/2018 10:38	D-001 GRABS	Nutrients	NO2NO3-N	0.060	mg N/L	0.004	0.01
2/12/2018 10:38	D-001 GRABS	Nutrients	Chloride	270	mg Cl/L	2	5
2/12/2018 10:38	D-001 GRABS	Nutrients	Total Alkalinity	73 A	mg CaCO3/L	0.65	2.5
2/12/2018 10:38	D-001 GRABS	Nutrients	Total-P	0.20	mg P/L	0.005	0.05
2/12/2018 10:38	D-001 GRABS	Nutrients	Color (true)	3.7 I	PCU	2.5	6
2/12/2018 10:38	D-001 GRABS	Nutrients	Ammonia-N	0.047	mg N/L	0.002	0.005
2/12/2018 10:38	D-001 GRABS	Nutrients	Sulfate	93	mg SO4/L	2	5
2/12/2018 10:38	D-001 GRABS	Pesticides	Ametryn	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Atrazine Desisopropyl	0.020 UJ	µg/L	0.02	0.082
2/12/2018 10:38	D-001 GRABS	Pesticides	Azinphos Methyl	0.021 UJ	µg/L	0.021	0.083
2/12/2018 10:38	D-001 GRABS	Pesticides	Diazinon	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Ethion	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Metalaxyl	0.041 U	µg/L	0.041	0.17
2/12/2018 10:38	D-001 GRABS	Pesticides	Mevinphos	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Simazine	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	MCPP	0.0020 U	µg/L	0.002	0.008
2/12/2018 10:38	D-001 GRABS	Pesticides	Atrazine Desethyl	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Bromacil	0.041 U	µg/L	0.041	0.17
2/12/2018 10:38	D-001 GRABS	Pesticides	Chlorpyrifos Methyl	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Demeton	0.025 U	µg/L	0.025	0.099
2/12/2018 10:38	D-001 GRABS	Pesticides	Chlorpyrifos Ethyl	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Bentazon	8.0E-04 U	µg/L	0.0008	0.0032
2/12/2018 10:38	D-001 GRABS	Pesticides	Butylate	0.021 U	µg/L	0.021	0.083
2/12/2018 10:38	D-001 GRABS	Pesticides	Naled	0.041 U	µg/L	0.041	0.17
2/12/2018 10:38	D-001 GRABS	Pesticides	Atrazine	0.014 I	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Norflurazon	0.031 U	µg/L	0.031	0.12
2/12/2018 10:38	D-001 GRABS	Pesticides	Prometryn	0.021 U	µg/L	0.021	0.083
2/12/2018 10:38	D-001 GRABS	Pesticides	Acetaminophen	0.0080 U	µg/L	0.008	0.032
2/12/2018 10:38	D-001 GRABS	Pesticides	Alachlor	0.062 U	µg/L	0.062	0.25
2/12/2018 10:38	D-001 GRABS	Pesticides	Ethoprop	0.0052 U	µg/L	0.0052	0.021
2/12/2018 10:38	D-001 GRABS	Pesticides	Fenamiphos	0.031 U	µg/L	0.031	0.12

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:38	D-001 GRABS	Pesticides	Hexazinone	0.031 U	µg/L	0.031	0.12
2/12/2018 10:38	D-001 GRABS	Pesticides	Parathion Ethyl	0.021 U	µg/L	0.021	0.083
2/12/2018 10:38	D-001 GRABS	Pesticides	2,4-D	0.0020 U	µg/L	0.002	0.008
2/12/2018 10:38	D-001 GRABS	Pesticides	Fonofos	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Malathion	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Parathion Methyl	0.010 U	µg/L	0.01	0.041
2/12/2018 10:38	D-001 GRABS	Pesticides	Prometon	0.021 UJ	µg/L	0.021	0.083
2/12/2018 10:38	D-001 GRABS	Pesticides	Carbamazepine	0.0020	µg/L	0.0004	0.0016
2/12/2018 10:38	D-001 GRABS	Pesticides	Sucralose	55	µg/L	0.1	0.4
2/12/2018 10:38	D-001 GRABS	Pesticides	Disulfoton	0.0052 U	µg/L	0.0052	0.021
2/12/2018 10:38	D-001 GRABS	Pesticides	Metolachlor	0.062 U	µg/L	0.062	0.25
2/12/2018 10:38	D-001 GRABS	Pesticides	Metribuzin	0.021 U	µg/L	0.021	0.083
2/12/2018 10:38	D-001 GRABS	Pesticides	Phorate	0.0052 U	µg/L	0.0052	0.021
2/12/2018 10:38	D-001 GRABS	Pesticides	Triclopyr	0.0040 U	µg/L	0.004	0.016
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Pyrene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.2 U	µg/L	3.2	13
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Dimethyl phthalate	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2 U	µg/L	3.2	13
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2-Nitrophenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Acenaphthene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Di-n-octyl phthalate	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Benzo(a)pyrene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.2 U	µg/L	3.2	13
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Isophorone	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Hexachlorobenzene	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Acenaphthylene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Benzo(b)fluoranthene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Butyl benzyl phthalate	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Diethyl phthalate	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Naphthalene	0.21 U	µg/L	0.21	0.84

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	1,4-Dioxane	0.41	µg/L	0.02	0.08
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2,4-Dinitrophenol	16 U	µg/L	16	63
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Anthracene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Benzo(k)fluoranthene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Chrysene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.2 U	µg/L	3.2	13
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Di-n-butyl phthalate	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Pentachlorophenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Benzo(a)anthracene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Hexachlorobutadiene	3.2 U	µg/L	3.2	13
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Hexachloroethane	3.2 U	µg/L	3.2	13
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2-Chlorophenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Phenanthrene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2,4-Dimethylphenol	11 U	µg/L	11	42
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Benzidine	110 U	µg/L	110	420
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Fluoranthene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Fluorene	0.21 U	µg/L	0.21	0.84
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Nitrobenzene	2.1 U	µg/L	2.1	8.4
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	Phenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2,4-Dichlorophenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	2-Chloronaphthalene	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	3,3'-Dichlorobenzidine	42 U	µg/L	42	170
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1 U	µg/L	1.1	4.2
2/12/2018 10:38	D-001 GRABS	Priority Organic Pollutants	4-Nitrophenol	16 U	µg/L	16	63
2/12/2018 10:38	D-001 GRABS	Nutrients	pH	6.77			
2/12/2018 10:38	D-001 GRABS	Nutrients	Temperature	21.3	C		
2/12/2018 10:38	D-001 GRABS	Nutrients	Total Residual Chlorine	72.2	mg/L		
2/12/2018 10:38	D-001 GRABS	Nutrients	Dissolved Oxygen	7.89	mg/L		
2/12/2018 10:55	400 E	AGP/LN	Algal Growth Potential-Salinity Adjusted	3.00 U	mg DryWt/L	3	3
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.1 I	mg/L	0.2	2

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.0	µg/L	0.55	1.7
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 0.0078-0.0156 mm,FineSilt	23.2 A	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	ParticleSize0.0039-0.0078mm,VeryFineSilt	12.1 A	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 1.0-2.0mm,Very Coarse Sand	0.100 K	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	µg/L	0.4	1.2
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 0.125-0.25 mm, Fine Sand	3.07 AJ	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 0.50-1.0 mm, Coarse Sand	0.100 K	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size <0.0039 mm, Clay	5.89 A	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 0.0156-0.031mm,MediumSilt	26.6 A	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Sediment % Organic	18	% dry wt		
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 0.031-0.0625mm,CoarseSilt	19.8 A	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size 0.25-0.50 mm, Medium Sand	0.100 K	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Particle Size >2.0 mm, ASTM Sieve #10	1.0 K	%totdrywt	0	1
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	3.1	µg/L	0.4	1.2
2/12/2018 10:55	400 E	Chlorophyll/Grain Size/BOD	ParticleSize 0.0625-0.125mm,VeryFineSand	9.42 AJ	% vol <2mm	0	0.01
2/12/2018 10:55	400 E	Overflow	Enterococci-Quanti-Tray	10	MPN/100 mL	10	10
2/12/2018 10:55	400 E	Metals	Zinc	107	mg/Kg	5.8	23
2/12/2018 10:55	400 E	Metals	Sodium	8.01E+03	mg/L	50	200
2/12/2018 10:55	400 E	Metals	Selenium	0.60 U	µg/L	0.6	2.4
2/12/2018 10:55	400 E	Metals	Nickel	0.60 U	µg/L	0.6	2.4
2/12/2018 10:55	400 E	Metals	Lead	0.50 U	µg/L	0.5	2
2/12/2018 10:55	400 E	Metals	Chromium	1.2 U	µg/L	1.2	4.8
2/12/2018 10:55	400 E	Metals	Cadmium	0.060 U	µg/L	0.06	0.24
2/12/2018 10:55	400 E	Metals	Arsenic	1.66	µg/L	0.15	0.6
2/12/2018 10:55	400 E	Metals	Silver	0.202	mg/Kg	0.011	0.043
2/12/2018 10:55	400 E	Metals	Aluminum	180 U	µg/L	180	720
2/12/2018 10:55	400 E	Metals	Zinc	15 U	µg/L	15	60
2/12/2018 10:55	400 E	Metals	Calcium	301	mg/L	0.22	0.9
2/12/2018 10:55	400 E	Metals	Cadmium	0.50	mg/Kg	0.029	0.12
2/12/2018 10:55	400 E	Metals	Nickel	20.2	mg/Kg	1.1	4.3
2/12/2018 10:55	400 E	Metals	Iron	90 U	µg/L	90	360
2/12/2018 10:55	400 E	Metals	Copper	27.5	mg/Kg	0.11	0.43
2/12/2018 10:55	400 E	Metals	Chromium	69.6	mg/Kg	0.72	2.9
2/12/2018 10:55	400 E	Metals	Arsenic	18.8	mg/Kg	0.029	0.12
2/12/2018 10:55	400 E	Metals	Silver	0.030 U	µg/L	0.03	0.12
2/12/2018 10:55	400 E	Metals	Lead	30.4	mg/Kg	0.29	1.2
2/12/2018 10:55	400 E	Metals	Potassium	310	mg/L	30	120

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:55	400 E	Metals	Magnesium	1.01E+03	mg/L	4	16
2/12/2018 10:55	400 E	Metals	Copper	0.60 U	µg/L	0.6	2.4
2/12/2018 10:55	400 E	Nutrients	Organic Carbon	2.3	mg C/L	1	2
2/12/2018 10:55	400 E	Nutrients	Fluoride	0.93	mg F/L	0.18	0.5
2/12/2018 10:55	400 E	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
2/12/2018 10:55	400 E	Nutrients	Total Alkalinity	93 A	mg CaCO3/L	0.65	2.5
2/12/2018 10:55	400 E	Nutrients	Color (true)	2.5 U	PCU	2.5	6
2/12/2018 10:55	400 E	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/12/2018 10:55	400 E	Nutrients	Sulfate	2.1E+03	mg SO4/L	40	100
2/12/2018 10:55	400 E	Nutrients	TSS	3 U	mg/L	3	10
2/12/2018 10:55	400 E	Nutrients	Total-P	0.008 I	mg P/L	0.004	0.01
2/12/2018 10:55	400 E	Nutrients	Turbidity	1.4	NTU	0.1	0.13
2/12/2018 10:55	400 E	Nutrients	Chloride	1.5E+04	mg Cl/L	40	100
2/12/2018 10:55	400 E	Nutrients	Ammonia-N	0.004 I	mg N/L	0.002	0.005
2/12/2018 10:55	400 E	Nutrients	Kjeldahl Nitrogen	0.29 I	mg N/L	0.16	0.4
2/12/2018 10:55	400 E	Pesticides	Sucralose	0.13	µg/L	0.01	0.04
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Acenaphthylene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	µg/L	3	12
2/12/2018 10:55	400 E	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	µg/L	3	12
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4,6-Trichlorophenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dinitrotoluene	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	3,3'-Dichlorobenzidine	2.1E+04 U	µg/kg	21000	85000
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Chloro-3-methylphenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.1E+03 U	µg/kg	2100	8500
2/12/2018 10:55	400 E	Priority Organic Pollutants	Butyl benzyl phthalate	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachloroethane	1.1E+03 U	µg/kg	1100	4200
2/12/2018 10:55	400 E	Priority Organic Pollutants	Naphthalene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Pentachlorophenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	µg/L	15	60
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	µg/L	3	12
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Nitrophenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Chrysene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	µg/L	2	8

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:55	400 E	Priority Organic Pollutants	Diethyl phthalate	2.0 U	µg/L	2	8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Phenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Chlorophenol	1.1E+03 U	µg/kg	1100	4200
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Nitrophenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Anthracene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Azobenzene/1,2-Diphenylhydrazine	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzidine	7.7E+03 UJ	µg/kg	7700	31000
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(g,h,i)perylene	53 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Fluoranthene	59 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachlorobutadiene	1.1E+03 U	µg/kg	1100	4200
2/12/2018 10:55	400 E	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Pyrene	53 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	1,4-Dioxane	0.071 I	µg/L	0.02	0.08
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Nitrophenol	15 U	µg/L	15	60
2/12/2018 10:55	400 E	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	µg/L	2	8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Naphthalene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,6-Dinitrotoluene	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Di-n-butyl phthalate	2.1E+03 U	µg/kg	2100	8500
2/12/2018 10:55	400 E	Priority Organic Pollutants	Diethyl phthalate	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachlorobenzene	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachlorocyclopentadiene	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Isophorone	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1E+03 U	µg/kg	2100	8500
2/12/2018 10:55	400 E	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	µg/L	2	8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	µg/L	3	12
2/12/2018 10:55	400 E	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	µg/L	2	8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Nitrobenzene	2.0 U	µg/L	2	8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(k)fluoranthene	53 I	µg/kg	39	160

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-chloroethyl)ether	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Chrysene	49 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Phenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Acenaphthene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	µg/L	3	12
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachloroethane	3.0 U	µg/L	3	12
2/12/2018 10:55	400 E	Priority Organic Pollutants	Phenanthrene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1E+03 U	µg/kg	1100	4200
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dinitrophenol	2.1E+03 U	µg/kg	2100	8500
2/12/2018 10:55	400 E	Priority Organic Pollutants	Acenaphthene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(a)anthracene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzidine	100 U	µg/L	100	400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Isophorone	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Dibenzo(a,h)anthracene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Dimethyl phthalate	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	47 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	µg/L	10	40
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Chlorophenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	µg/L	40	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Pentachlorophenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Bromophenyl phenyl ether	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(b)fluoranthene	69 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Di-n-octyl phthalate	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Phenanthrene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	µg/L	1	4
2/12/2018 10:55	400 E	Priority Organic Pollutants	Anthracene	0.20 U	µg/L	0.2	0.8

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	µg/L	2	8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Fluorene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dichlorophenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	2,4-Dimethylphenol	2.1E+03 U	µg/kg	2100	8500
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Chloronaphthalene	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	2-Nitrophenol	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Acenaphthylene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Benzo(a)pyrene	51 I	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Priority Organic Pollutants	Fluorene	39 U	µg/kg	39	160
2/12/2018 10:55	400 E	Priority Organic Pollutants	Nitrobenzene	350 U	µg/kg	350	1400
2/12/2018 10:55	400 E	Nutrients	pH	7.92			
2/12/2018 10:55	400 E	Nutrients	Specific Conductance	39955	umhos/cm		
2/12/2018 10:55	400 E	Nutrients	Sample Depth	0.3	m		
2/12/2018 10:55	400 E	Nutrients	Dissolved Oxygen	8.36	mg/L		
2/12/2018 10:55	400 E	Nutrients	Dissolved Oxygen	8.36	mg/L		
2/12/2018 10:55	400 E	Nutrients	Temperature	16.01	C		
2/12/2018 10:55	400 E	Nutrients	pH	7.92			
2/12/2018 10:55	400 E	Nutrients	Sample Depth	0.3	m		
2/12/2018 10:55	400 E	Nutrients	Temperature	16.01	C		
2/12/2018 10:55	400 E	Nutrients	Specific Conductance	39955	umhos/cm		
2/12/2018 10:55	400 E	Nutrients	% Solid	16.7 A	%	0.1	0.1
2/12/2018 11:21	200 E	AGP/LN	Algal Growth Potential-Salinity Adjusted	3.00 U	mg DryWt/L	3	3
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 0.0078-0.0156 mm,FineSilt	16.4	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	ParticleSize 0.0625-0.125mm,VeryFineSand	7.21	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 1.0-2.0mm,Very Coarse Sand	0.100 K	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 0.0156-0.031mm,MediumSilt	18.9	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	µg/L	0.4	1.2
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	3.3	µg/L	0.4	1.2
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 0.125-0.25 mm, Fine Sand	8.62	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.1	µg/L	0.55	1.7
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.99 I	mg/L	0.2	2
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 0.25-0.50 mm, Medium Sand	17.8	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 0.50-1.0 mm, Coarse Sand	3.95	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	ParticleSize0.0039-0.0078mm,VeryFineSilt	8.62	% vol <2mm	0	0.01

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size <0.0039 mm, Clay	4.45	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size 0.031-0.0625mm,CoarseSilt	14.0	% vol <2mm	0	0.01
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Sediment % Organic	5.8 A	% dry wt		
2/12/2018 11:21	200 E	Chlorophyll/Grain Size/BOD	Particle Size >2.0 mm, ASTM Sieve #10	1.0 K	%totdrywt	0	1
2/12/2018 11:21	200 E	Overflow	Enterococci-Quanti-Tray	20	MPN/100 mL	10	10
2/12/2018 11:21	200 E	Metals	Aluminum	180 U	µg/L	180	720
2/12/2018 11:21	200 E	Metals	Arsenic	6.01	mg/Kg	0.01	0.041
2/12/2018 11:21	200 E	Metals	Nickel	6.0	mg/Kg	0.39	1.5
2/12/2018 11:21	200 E	Metals	Magnesium	1.00E+03	mg/L	4	16
2/12/2018 11:21	200 E	Metals	Sodium	7.96E+03	mg/L	50	200
2/12/2018 11:21	200 E	Metals	Zinc	15 U	µg/L	15	60
2/12/2018 11:21	200 E	Metals	Cadmium	0.060 U	µg/L	0.06	0.24
2/12/2018 11:21	200 E	Metals	Silver	0.030 U	µg/L	0.03	0.12
2/12/2018 11:21	200 E	Metals	Selenium	0.60 U	µg/L	0.6	2.4
2/12/2018 11:21	200 E	Metals	Copper	0.60 U	µg/L	0.6	2.4
2/12/2018 11:21	200 E	Metals	Potassium	320	mg/L	30	120
2/12/2018 11:21	200 E	Metals	Cadmium	0.161	mg/Kg	0.01	0.041
2/12/2018 11:21	200 E	Metals	Iron	90 U	µg/L	90	360
2/12/2018 11:21	200 E	Metals	Nickel	0.60 U	µg/L	0.6	2.4
2/12/2018 11:21	200 E	Metals	Chromium	1.2 U	µg/L	1.2	4.8
2/12/2018 11:21	200 E	Metals	Arsenic	1.65	µg/L	0.15	0.6
2/12/2018 11:21	200 E	Metals	Calcium	305	mg/L	0.22	0.9
2/12/2018 11:21	200 E	Metals	Zinc	32.2	mg/Kg	2.1	8.2
2/12/2018 11:21	200 E	Metals	Lead	8.91	mg/Kg	0.1	0.41
2/12/2018 11:21	200 E	Metals	Lead	0.50 U	µg/L	0.5	2
2/12/2018 11:21	200 E	Metals	Silver	0.060	mg/Kg	0.0039	0.015
2/12/2018 11:21	200 E	Metals	Copper	9.39	mg/Kg	0.039	0.15
2/12/2018 11:21	200 E	Metals	Chromium	20.7	mg/Kg	0.26	1
2/12/2018 11:21	200 E	Nutrients	Ammonia-N	0.003 I	mg N/L	0.002	0.005
2/12/2018 11:21	200 E	Nutrients	TSS	3 U	mg/L	3	10
2/12/2018 11:21	200 E	Nutrients	Turbidity	2.0	NTU	0.1	0.13
2/12/2018 11:21	200 E	Nutrients	Color (true)	2.5 U	PCU	2.5	6
2/12/2018 11:21	200 E	Nutrients	Total Alkalinity	94	mg CaCO3/L	0.65	2.5
2/12/2018 11:21	200 E	Nutrients	Total-P	0.01 I	mg P/L	0.004	0.01
2/12/2018 11:21	200 E	Nutrients	Sulfate	2.1E+03	mg SO4/L	40	100
2/12/2018 11:21	200 E	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
2/12/2018 11:21	200 E	Nutrients	Chloride	1.5E+04	mg Cl/L	40	100

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:21	200 E	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/12/2018 11:21	200 E	Nutrients	Organic Carbon	2.1	mg C/L	1	2
2/12/2018 11:21	200 E	Nutrients	Kjeldahl Nitrogen	0.22 I	mg N/L	0.16	0.4
2/12/2018 11:21	200 E	Nutrients	Fluoride	0.93	mg F/L	0.18	0.5
2/12/2018 11:21	200 E	Pesticides	Sucralose	0.089	µg/L	0.01	0.04
2/12/2018 11:21	200 E	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39 U	µg/L	39	160
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	Fluoranthene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Isophorone	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	µg/L	2.9	12
2/12/2018 11:21	200 E	Priority Organic Pollutants	Pyrene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dinitrophenol	920 U	µg/kg	920	3700
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzidine	3.3E+03 UJ	µg/kg	3300	13000
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-chloroethyl)ether	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	24 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Phenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.02	0.08
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Nitrophenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Acenaphthene	17 U	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(a)anthracene	21 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachlorobutadiene	460 U	µg/kg	460	1800
2/12/2018 11:21	200 E	Priority Organic Pollutants	Naphthalene	17 U	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Nitrobenzene	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Pyrene	41 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzidine	97 U	µg/L	97	390
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Chrysene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Di-n-butyl phthalate	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dinitrotoluene	150 U	µg/kg	150	620

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:21	200 E	Priority Organic Pollutants	Acenaphthylene	17 U	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	920 U	µg/kg	920	3700
2/12/2018 11:21	200 E	Priority Organic Pollutants	Dimethyl phthalate	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Isophorone	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	µg/L	15	58
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Nitrophenol	15 U	µg/L	15	58
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Di-n-octyl phthalate	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	µg/L	2.9	12
2/12/2018 11:21	200 E	Priority Organic Pollutants	Phenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Chloro-3-methylphenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Anthracene	17 U	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(a)pyrene	27 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Di-n-butyl phthalate	920 U	µg/kg	920	3700
2/12/2018 11:21	200 E	Priority Organic Pollutants	Chrysene	33 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Fluorene	17 U	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dimethylphenol	9.7 U	µg/L	9.7	39
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dichlorophenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Chloronaphthalene	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Acenaphthene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	µg/L	2.9	12
2/12/2018 11:21	200 E	Priority Organic Pollutants	Diethyl phthalate	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachloroethane	2.9 U	µg/L	2.9	12
2/12/2018 11:21	200 E	Priority Organic Pollutants	Nitrobenzene	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Chlorophenol	460 U	µg/kg	460	1800
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Bromophenyl phenyl ether	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(b)fluoranthene	35 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Dibenzo(a,h)anthracene	17 U	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachlorobenzene	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Pentachlorophenol	150 U	µg/kg	150	620

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Chlorophenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Nitrophenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Anthracene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Butyl benzyl phthalate	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Dimethyl phthalate	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Fluorene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4,6-Trichlorophenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dichlorophenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	3,3'-Dichlorobenzidine	9.2E+03 U	µg/kg	9200	37000
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Chloronaphthalene	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Nitrophenol	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(k)fluoranthene	29 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Butyl benzyl phthalate	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Di-n-octyl phthalate	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachloroethane	460 U	µg/kg	460	1800
2/12/2018 11:21	200 E	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	µg/L	1.9	7.8
2/12/2018 11:21	200 E	Priority Organic Pollutants	Pentachlorophenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Phenanthrene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Azobenzene/1,2-Diphenylhydrazine	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Fluoranthene	50 I	µg/kg	17	68
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachlorocyclopentadiene	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	N-Nitrosodimethylamine	920 U	µg/kg	920	3700
2/12/2018 11:21	200 E	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	µg/L	2.9	12
2/12/2018 11:21	200 E	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Acenaphthylene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachlorobenzene	0.97 U	µg/L	0.97	3.9
2/12/2018 11:21	200 E	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	µg/L	2.9	12
2/12/2018 11:21	200 E	Priority Organic Pollutants	Naphthalene	0.19 U	µg/L	0.19	0.78
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,4-Dimethylphenol	920 U	µg/kg	920	3700
2/12/2018 11:21	200 E	Priority Organic Pollutants	1,2,4-Trichlorobenzene	460 U	µg/kg	460	1800
2/12/2018 11:21	200 E	Priority Organic Pollutants	2,6-Dinitrotoluene	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Benzo(g,h,i)perylene	28 I	µg/kg	17	68

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:21	200 E	Priority Organic Pollutants	Diethyl phthalate	150 U	µg/kg	150	620
2/12/2018 11:21	200 E	Priority Organic Pollutants	Phenanthrene	21 I	µg/kg	17	68
2/12/2018 11:21	200 E	Nutrients	Dissolved Oxygen	8.30	mg/L		
2/12/2018 11:21	200 E	Nutrients	Specific Conductance	40159	umhos/cm		
2/12/2018 11:21	200 E	Nutrients	Sample Depth	0.3	m		
2/12/2018 11:21	200 E	Nutrients	Sample Depth	0.3	m		
2/12/2018 11:21	200 E	Nutrients	Specific Conductance	40159	umhos/cm		
2/12/2018 11:21	200 E	Nutrients	Temperature	15.93	C		
2/12/2018 11:21	200 E	Nutrients	pH	7.96			
2/12/2018 11:21	200 E	Nutrients	% Solid	38.1	%	0.1	0.1
2/12/2018 11:21	200 E	Nutrients	Dissolved Oxygen	8.30	mg/L		
2/12/2018 11:21	200 E	Nutrients	pH	7.96			
2/12/2018 11:21	200 E	Nutrients	Temperature	15.93	C		
2/12/2018 11:55	200 W	AGP/LN	Algal Growth Potential-Salinity Adjusted	3.00 U	mg DryWt/L	3	3
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	ParticleSize0.0039-0.0078mm,VeryFineSilt	11.8	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.1 I	mg/L	0.2	2
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.8	µg/L	0.55	1.7
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 0.0078-0.0156 mm,FineSilt	22.9	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 0.25-0.50 mm, Medium Sand	3.64	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size >2.0 mm, ASTM Sieve #10	1.0 K	%totdrywt	0	1
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	µg/L	0.4	1.2
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size <0.0039 mm, Clay	5.63	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 0.125-0.25 mm, Fine Sand	3.29	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 0.0156-0.031mm,MediumSilt	26.2	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 0.50-1.0 mm, Coarse Sand	1.50	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	2.9	µg/L	0.4	1.2
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 1.0-2.0mm,Very Coarse Sand	0.100 K	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	ParticleSize 0.0625-0.125mm,VeryFineSand	7.40	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Sediment % Organic	18	% dry wt		
2/12/2018 11:55	200 W	Chlorophyll/Grain Size/BOD	Particle Size 0.031-0.0625mm,CoarseSilt	17.6	% vol <2mm	0	0.01
2/12/2018 11:55	200 W	Overflow	Enterococci-Quanti-Tray	10	MPN/100 mL	10	10
2/12/2018 11:55	200 W	Metals	Lead	0.50 U	µg/L	0.5	2
2/12/2018 11:55	200 W	Metals	Selenium	0.60 U	µg/L	0.6	2.4
2/12/2018 11:55	200 W	Metals	Zinc	15 U	µg/L	15	60
2/12/2018 11:55	200 W	Metals	Nickel	18.5	mg/Kg	1.1	4.4
2/12/2018 11:55	200 W	Metals	Chromium	63.2	mg/Kg	0.73	2.9
2/12/2018 11:55	200 W	Metals	Chromium	1.2 U	µg/L	1.2	4.8

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:55	200 W	Metals	Calcium	306	mg/L	0.22	0.9
2/12/2018 11:55	200 W	Metals	Arsenic	15.6	mg/Kg	0.029	0.12
2/12/2018 11:55	200 W	Metals	Cadmium	0.41	mg/Kg	0.029	0.12
2/12/2018 11:55	200 W	Metals	Copper	25.4	mg/Kg	0.11	0.44
2/12/2018 11:55	200 W	Metals	Lead	28.4	mg/Kg	0.29	1.2
2/12/2018 11:55	200 W	Metals	Silver	0.174	mg/Kg	0.011	0.044
2/12/2018 11:55	200 W	Metals	Cadmium	0.060 U	µg/L	0.06	0.24
2/12/2018 11:55	200 W	Metals	Copper	0.60 U	µg/L	0.6	2.4
2/12/2018 11:55	200 W	Metals	Silver	0.030 U	µg/L	0.03	0.12
2/12/2018 11:55	200 W	Metals	Iron	90 U	µg/L	90	360
2/12/2018 11:55	200 W	Metals	Sodium	7.97E+03	mg/L	50	200
2/12/2018 11:55	200 W	Metals	Arsenic	1.71	µg/L	0.15	0.6
2/12/2018 11:55	200 W	Metals	Aluminum	180 U	µg/L	180	720
2/12/2018 11:55	200 W	Metals	Magnesium	1.01E+03	mg/L	4	16
2/12/2018 11:55	200 W	Metals	Potassium	320	mg/L	30	120
2/12/2018 11:55	200 W	Metals	Zinc	96	mg/Kg	5.8	23
2/12/2018 11:55	200 W	Metals	Nickel	0.60 U	µg/L	0.6	2.4
2/12/2018 11:55	200 W	Nutrients	Fluoride	0.92	mg F/L	0.18	0.5
2/12/2018 11:55	200 W	Nutrients	Kjeldahl Nitrogen	0.24 I	mg N/L	0.16	0.4
2/12/2018 11:55	200 W	Nutrients	Organic Carbon	2.0	mg C/L	1	2
2/12/2018 11:55	200 W	Nutrients	Total-P	0.009 I	mg P/L	0.004	0.01
2/12/2018 11:55	200 W	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
2/12/2018 11:55	200 W	Nutrients	Chloride	1.4E+04	mg Cl/L	40	100
2/12/2018 11:55	200 W	Nutrients	Ammonia-N	0.002 I	mg N/L	0.002	0.005
2/12/2018 11:55	200 W	Nutrients	TSS	3 U	mg/L	3	10
2/12/2018 11:55	200 W	Nutrients	Total Alkalinity	95	mg CaCO3/L	0.65	2.5
2/12/2018 11:55	200 W	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/12/2018 11:55	200 W	Nutrients	Sulfate	1.9E+03	mg SO4/L	40	100
2/12/2018 11:55	200 W	Nutrients	Turbidity	0.75	NTU	0.1	0.13
2/12/2018 11:55	200 W	Nutrients	Color (true)	2.5 U	PCU	2.5	6
2/12/2018 11:55	200 W	Pesticides	Sucralose	0.059	µg/L	0.01	0.04
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzidine	7.7E+03 UJ	µg/kg	7700	31000
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(k)fluoranthene	60 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.1E+03 U	µg/kg	2100	8600
2/12/2018 11:55	200 W	Priority Organic Pollutants	Fluorene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachlorocyclopentadiene	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1E+03 U	µg/kg	2100	8600

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:55	200 W	Priority Organic Pollutants	Nitrobenzene	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Chrysene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dichlorophenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dimethylphenol	2.1E+03 U	µg/kg	2100	8600
2/12/2018 11:55	200 W	Priority Organic Pollutants	3,3'-Dichlorobenzidine	2.1E+04 U	µg/kg	21000	86000
2/12/2018 11:55	200 W	Priority Organic Pollutants	Fluoranthene	68 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachlorobenzene	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	µg/L	10	40
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	µg/L	15	60
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Nitrophenol	15 U	µg/L	15	60
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	µg/L	3	12
2/12/2018 11:55	200 W	Priority Organic Pollutants	Isophorone	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Chloro-3-methylphenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(b)fluoranthene	68 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(g,h,i)perylene	58 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Di-n-butyl phthalate	2.1E+03 U	µg/kg	2100	8600
2/12/2018 11:55	200 W	Priority Organic Pollutants	Acenaphthene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	µg/L	3	12
2/12/2018 11:55	200 W	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Nitrobenzene	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Butyl benzyl phthalate	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Chrysene	54 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Dibenzo(a,h)anthracene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Naphthalene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Phenanthrene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Phenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Chlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Acenaphthylene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	µg/L	0.2	0.8

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:55	200 W	Priority Organic Pollutants	Fluorene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	µg/L	3	12
2/12/2018 11:55	200 W	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dinitrotoluene	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(a)pyrene	50 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Diethyl phthalate	370 I	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	48 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Pyrene	60 I	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.02	0.08
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Diethyl phthalate	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachloroethane	3.0 U	µg/L	3	12
2/12/2018 11:55	200 W	Priority Organic Pollutants	Naphthalene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Chlorophenol	1.1E+03 U	µg/kg	1100	4300
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Bromophenyl phenyl ether	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Acenaphthene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Anthracene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Azobenzene/1,2-Diphenylhydrazine	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	µg/L	3	12
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1E+03 U	µg/kg	1100	4300
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Chloronaphthalene	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Nitrophenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Nitrophenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzo(a)anthracene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Dimethyl phthalate	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Isophorone	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Pentachlorophenol	360 U	µg/kg	360	1400

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	2-Nitrophenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Benzidine	100 U	µg/L	100	400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Phenanthrene	0.20 U	µg/L	0.2	0.8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Phenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4,6-Trichlorophenol	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,6-Dinitrotoluene	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Bis(2-chloroethyl)ether	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Di-n-octyl phthalate	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachlorobutadiene	1.1E+03 U	µg/kg	1100	4300
2/12/2018 11:55	200 W	Priority Organic Pollutants	Hexachloroethane	1.1E+03 U	µg/kg	1100	4300
2/12/2018 11:55	200 W	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	µg/L	40	160
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	µg/L	2	8
2/12/2018 11:55	200 W	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	µg/L	3	12
2/12/2018 11:55	200 W	Priority Organic Pollutants	Pentachlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:55	200 W	Priority Organic Pollutants	2,4-Dinitrophenol	2.1E+03 U	µg/kg	2100	8600
2/12/2018 11:55	200 W	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	360 U	µg/kg	360	1400
2/12/2018 11:55	200 W	Priority Organic Pollutants	Acenaphthylene	40 U	µg/kg	40	160
2/12/2018 11:55	200 W	Nutrients	Dissolved Oxygen	8.41	mg/L		
2/12/2018 11:55	200 W	Nutrients	Dissolved Oxygen	8.41	mg/L		
2/12/2018 11:55	200 W	Nutrients	Temperature	15.89	C		
2/12/2018 11:55	200 W	Nutrients	Sample Depth	0.3	m		
2/12/2018 11:55	200 W	Nutrients	% Solid	16.4	%	0.1	0.1
2/12/2018 11:55	200 W	Nutrients	pH	7.97			
2/12/2018 11:55	200 W	Nutrients	Sample Depth	0.3	m		
2/12/2018 11:55	200 W	Nutrients	Specific Conductance	39988	µmhos/cm		
2/12/2018 11:55	200 W	Nutrients	Temperature	15.89	C		

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:55	200 W	Nutrients	pH	7.97			
2/12/2018 11:55	200 W	Nutrients	Specific Conductance	39988	umhos/cm		
2/12/2018 12:25	400 W	AGP/LN	Algal Growth Potential-Salinity Adjusted	3.00 U	mg DryWt/L	3	3
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.9	µg/L	0.61	1.9
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 0.50-1.0 mm, Coarse Sand	26.6	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.99 I	mg/L	0.2	2
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	ParticleSize 0.0625-0.125mm,VeryFineSand	0.640	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Sediment % Organic	1.0 K	% dry wt		
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.44 U	µg/L	0.44	1.3
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 0.031-0.0625mm,CoarseSilt	0.520	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	2.9	µg/L	0.44	1.3
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 0.125-0.25 mm, Fine Sand	8.78	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 0.25-0.50 mm, Medium Sand	58.8	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	ParticleSize0.0039-0.0078mm,VeryFineSilt	0.660	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 0.0078-0.0156 mm,FineSilt	0.950	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 1.0-2.0mm,Very Coarse Sand	1.75	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size 0.0156-0.031mm,MediumSilt	0.820	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size <0.0039 mm, Clay	0.530	% vol <2mm	0	0.01
2/12/2018 12:25	400 W	Chlorophyll/Grain Size/BOD	Particle Size >2.0 mm, ASTM Sieve #10	1.0 K	%totdrywt	0	1
2/12/2018 12:25	400 W	Overflow	Enterococci-Quanti-Tray	10 U	MPN/100 mL	10	10
2/12/2018 12:25	400 W	Metals	Sodium	7.83E+03	mg/L	50	200
2/12/2018 12:25	400 W	Metals	Nickel	0.45 I	mg/Kg	0.37	1.5
2/12/2018 12:25	400 W	Metals	Chromium	1.2 U	µg/L	1.2	4.8
2/12/2018 12:25	400 W	Metals	Selenium	0.60 U	µg/L	0.6	2.4
2/12/2018 12:25	400 W	Metals	Arsenic	0.393	mg/Kg	0.0098	0.039
2/12/2018 12:25	400 W	Metals	Cadmium	0.060 U	µg/L	0.06	0.24
2/12/2018 12:25	400 W	Metals	Aluminum	180 U	µg/L	180	720
2/12/2018 12:25	400 W	Metals	Calcium	298	mg/L	0.22	0.9
2/12/2018 12:25	400 W	Metals	Zinc	2.0 U	mg/Kg	2	7.8
2/12/2018 12:25	400 W	Metals	Arsenic	1.65	µg/L	0.15	0.6
2/12/2018 12:25	400 W	Metals	Lead	0.50 U	µg/L	0.5	2
2/12/2018 12:25	400 W	Metals	Nickel	0.60 U	µg/L	0.6	2.4
2/12/2018 12:25	400 W	Metals	Copper	0.45	mg/Kg	0.037	0.15
2/12/2018 12:25	400 W	Metals	Copper	0.60 U	µg/L	0.6	2.4
2/12/2018 12:25	400 W	Metals	Magnesium	996	mg/L	4	16
2/12/2018 12:25	400 W	Metals	Silver	0.0037 U	mg/Kg	0.0037	0.015
2/12/2018 12:25	400 W	Metals	Zinc	15 U	µg/L	15	60

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 12:25	400 W	Metals	Silver	0.030 U	µg/L	0.03	0.12
2/12/2018 12:25	400 W	Metals	Iron	90 U	µg/L	90	360
2/12/2018 12:25	400 W	Metals	Potassium	310	mg/L	30	120
2/12/2018 12:25	400 W	Metals	Cadmium	0.0098 U	mg/Kg	0.0098	0.039
2/12/2018 12:25	400 W	Metals	Chromium	1.33	mg/Kg	0.25	0.98
2/12/2018 12:25	400 W	Metals	Lead	0.50	mg/Kg	0.098	0.39
2/12/2018 12:25	400 W	Nutrients	Sulfate	1.8E+03	mg SO4/L	40	100
2/12/2018 12:25	400 W	Nutrients	Turbidity	0.70	NTU	0.1	0.13
2/12/2018 12:25	400 W	Nutrients	Fluoride	0.91	mg F/L	0.18	0.5
2/12/2018 12:25	400 W	Nutrients	Kjeldahl Nitrogen	0.23 I	mg N/L	0.16	0.4
2/12/2018 12:25	400 W	Nutrients	Total-P	0.01 I	mg P/L	0.004	0.01
2/12/2018 12:25	400 W	Nutrients	Total Alkalinity	93	mg CaCO3/L	0.65	2.5
2/12/2018 12:25	400 W	Nutrients	Organic Carbon	1.9 I	mg C/L	1	2
2/12/2018 12:25	400 W	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/12/2018 12:25	400 W	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
2/12/2018 12:25	400 W	Nutrients	Color (true)	2.5 U	PCU	2.5	6
2/12/2018 12:25	400 W	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
2/12/2018 12:25	400 W	Nutrients	Chloride	1.3E+04	mg Cl/L	40	100
2/12/2018 12:25	400 W	Nutrients	TSS	3 UA	mg/L	3	10
2/12/2018 12:25	400 W	Pesticides	Sucralose	0.068	µg/L	0.01	0.04
2/12/2018 12:25	400 W	Priority Organic Pollutants	Azobenzene/1,2-Diphenylhydrazine	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(b)fluoranthene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-chloroethyl)ether	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Dimethyl phthalate	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Fluoranthene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachlorocyclopentadiene	83 UJ	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachloroethane	250 U	µg/kg	250	990
2/12/2018 12:25	400 W	Priority Organic Pollutants	Phenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	µg/L	10	40
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Acenaphthylene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	µg/L	3	12

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4,6-Trichlorophenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dichlorophenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dimethylphenol	500 U	µg/kg	500	2000
2/12/2018 12:25	400 W	Priority Organic Pollutants	3,3'-Dichlorobenzidine	5.0E+03 U	µg/kg	5000	20000
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Chloro-3-methylphenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Anthracene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(a)pyrene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(g,h,i)perylene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Butyl benzyl phthalate	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Chrysene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Dibenzo(a,h)anthracene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Pyrene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	µg/L	3	12
2/12/2018 12:25	400 W	Priority Organic Pollutants	Nitrobenzene	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Diethyl phthalate	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Nitrobenzene	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Pentachlorophenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Nitrophenol	15 U	µg/L	15	60
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Fluorene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Naphthalene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dinitrotoluene	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Di-n-octyl phthalate	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachlorobenzene	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	µg/L	15	60
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Chlorophenol	1.0 U	µg/L	1	4

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Nitrophenol	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Phenol	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachlorobutadiene	250 U	µg/kg	250	990
2/12/2018 12:25	400 W	Priority Organic Pollutants	Isophorone	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.02	0.08
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	µg/L	3	12
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,6-Dinitrotoluene	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Chlorophenol	250 U	µg/kg	250	990
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Nitrophenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Acenaphthene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzidine	1.8E+03 UJ	µg/kg	1800	7200
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(k)fluoranthene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	500 U	µg/kg	500	2000
2/12/2018 12:25	400 W	Priority Organic Pollutants	Di-n-butyl phthalate	500 U	µg/kg	500	2000
2/12/2018 12:25	400 W	Priority Organic Pollutants	Fluorene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	µg/L	40	160
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Chrysene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Phenanthrene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Pyrene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dinitrophenol	500 U	µg/kg	500	2000
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Nitrophenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzo(a)anthracene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Naphthalene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	Phenanthrene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	µg/L	3	12

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 12:25	400 W	Priority Organic Pollutants	Acenaphthene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Benzidine	100 U	µg/L	100	400
2/12/2018 12:25	400 W	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Diethyl phthalate	2.0 U	µg/L	2	8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachloroethane	3.0 U	µg/L	3	12
2/12/2018 12:25	400 W	Priority Organic Pollutants	Isophorone	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Pentachlorophenol	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Chloronaphthalene	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	Acenaphthylene	9.2 U	µg/kg	9.2	37
2/12/2018 12:25	400 W	Priority Organic Pollutants	N-Nitrosodimethylamine	500 U	µg/kg	500	2000
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	µg/L	1	4
2/12/2018 12:25	400 W	Priority Organic Pollutants	Anthracene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Fluoranthene	0.20 U	µg/L	0.2	0.8
2/12/2018 12:25	400 W	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	µg/L	3	12
2/12/2018 12:25	400 W	Priority Organic Pollutants	1,2,4-Trichlorobenzene	250 U	µg/kg	250	990
2/12/2018 12:25	400 W	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Priority Organic Pollutants	4-Bromophenyl phenyl ether	83 U	µg/kg	83	330
2/12/2018 12:25	400 W	Nutrients	% Solid	71.7	%	0.1	0.1
2/12/2018 12:25	400 W	Nutrients	Dissolved Oxygen	8.47	mg/L		
2/12/2018 12:25	400 W	Nutrients	Specific Conductance	39569	umhos/cm		
2/12/2018 12:25	400 W	Nutrients	Sample Depth	0.3	m		
2/12/2018 12:25	400 W	Nutrients	Dissolved Oxygen	8.47	mg/L		
2/12/2018 12:25	400 W	Nutrients	pH	7.96			
2/12/2018 12:25	400 W	Nutrients	Specific Conductance	39569	umhos/cm		
2/12/2018 12:25	400 W	Nutrients	Temperature	15.87	C		
2/12/2018 12:25	400 W	Nutrients	pH	7.96			
2/12/2018 12:25	400 W	Nutrients	Sample Depth	0.3	m		
2/12/2018 12:25	400 W	Nutrients	Temperature	15.87	C		
2/12/2018 11:05	FIELD BLANK	Overflow	Enterococci-Quanti-Tray	1 U	MPN/100 mL	1	1
2/12/2018 11:05	FIELD BLANK	Overflow	Fecal Coliforms-Membrane Filter	1 U	cfu/100 mL	1	1
2/12/2018 11:05	FIELD BLANK	Metals	Lead	0.050 U	µg/L	0.05	0.2
2/12/2018 11:05	FIELD BLANK	Metals	Silver	0.010 U	µg/L	0.01	0.04
2/12/2018 11:05	FIELD BLANK	Metals	Cadmium	0.020 U	µg/L	0.02	0.08
2/12/2018 11:05	FIELD BLANK	Metals	Nickel	0.20 U	µg/L	0.2	0.8
2/12/2018 11:05	FIELD BLANK	Metals	Selenium	0.20 U	µg/L	0.2	0.8
2/12/2018 11:05	FIELD BLANK	Metals	Aluminum	60 U	µg/L	60	240
2/12/2018 11:05	FIELD BLANK	Metals	Iron	30 U	µg/L	30	120

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:05	FIELD BLANK	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
2/12/2018 11:05	FIELD BLANK	Metals	Potassium	0.30 U	mg/L	0.3	1.2
2/12/2018 11:05	FIELD BLANK	Metals	Sodium	0.50 U	mg/L	0.5	2
2/12/2018 11:05	FIELD BLANK	Metals	Zinc	5.0 U	µg/L	5	20
2/12/2018 11:05	FIELD BLANK	Metals	Copper	0.20 U	µg/L	0.2	0.8
2/12/2018 11:05	FIELD BLANK	Metals	Calcium	0.075 U	mg/L	0.075	0.3
2/12/2018 11:05	FIELD BLANK	Metals	Arsenic	0.050 U	µg/L	0.05	0.2
2/12/2018 11:05	FIELD BLANK	Metals	Chromium	0.40 U	µg/L	0.4	1.6
2/12/2018 11:05	FIELD BLANK	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
2/12/2018 11:05	FIELD BLANK	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
2/12/2018 11:05	FIELD BLANK	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
2/12/2018 11:05	FIELD BLANK	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
2/12/2018 11:05	FIELD BLANK	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
2/12/2018 11:05	FIELD BLANK	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
2/12/2018 11:05	FIELD BLANK	Nutrients	Turbidity	0.10 U	NTU	0.1	0.13
2/12/2018 11:05	FIELD BLANK	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
2/12/2018 11:05	FIELD BLANK	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
2/12/2018 11:05	FIELD BLANK	Nutrients	Color (true)	2.5 U	PCU	2.5	6
2/12/2018 11:05	FIELD BLANK	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
2/12/2018 11:05	FIELD BLANK	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
2/12/2018 11:05	FIELD BLANK	Pesticides	Atrazine	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Sucralose	0.010 U	µg/L	0.01	0.04
2/12/2018 11:05	FIELD BLANK	Pesticides	Naled	0.041 U	µg/L	0.041	0.16
2/12/2018 11:05	FIELD BLANK	Pesticides	Azinphos Methyl	0.021 U	µg/L	0.021	0.082
2/12/2018 11:05	FIELD BLANK	Pesticides	Fenamiphos	0.031 U	µg/L	0.031	0.12
2/12/2018 11:05	FIELD BLANK	Pesticides	Malathion	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Atrazine Desethyl	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Atrazine Desisopropyl	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Chlorpyrifos Methyl	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Metolachlor	0.062 U	µg/L	0.062	0.25
2/12/2018 11:05	FIELD BLANK	Pesticides	Parathion Methyl	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Disulfoton	0.0051 U	µg/L	0.0051	0.021
2/12/2018 11:05	FIELD BLANK	Pesticides	Hexazinone	0.031 U	µg/L	0.031	0.12
2/12/2018 11:05	FIELD BLANK	Pesticides	Metalaxyl	0.041 U	µg/L	0.041	0.16
2/12/2018 11:05	FIELD BLANK	Pesticides	Mevinphos	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Norflurazon	0.031 U	µg/L	0.031	0.12
2/12/2018 11:05	FIELD BLANK	Pesticides	2,4-D	0.0020 U	µg/L	0.002	0.008

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:05	FIELD BLANK	Pesticides	Acetaminophen	0.0080 U	µg/L	0.008	0.032
2/12/2018 11:05	FIELD BLANK	Pesticides	Bentazon	8.0E-04 U	µg/L	0.0008	0.0032
2/12/2018 11:05	FIELD BLANK	Pesticides	Parathion Ethyl	0.021 U	µg/L	0.021	0.082
2/12/2018 11:05	FIELD BLANK	Pesticides	Triclopyr	0.0040 U	µg/L	0.004	0.016
2/12/2018 11:05	FIELD BLANK	Pesticides	Ametryn	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Bromacil	0.041 U	µg/L	0.041	0.16
2/12/2018 11:05	FIELD BLANK	Pesticides	Butylate	0.021 U	µg/L	0.021	0.082
2/12/2018 11:05	FIELD BLANK	Pesticides	Demeton	0.025 U	µg/L	0.025	0.099
2/12/2018 11:05	FIELD BLANK	Pesticides	Phorate	0.0051 U	µg/L	0.0051	0.021
2/12/2018 11:05	FIELD BLANK	Pesticides	Simazine	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Ethoprop	0.0051 U	µg/L	0.0051	0.021
2/12/2018 11:05	FIELD BLANK	Pesticides	Metribuzin	0.021 U	µg/L	0.021	0.082
2/12/2018 11:05	FIELD BLANK	Pesticides	Prometryn	0.021 U	µg/L	0.021	0.082
2/12/2018 11:05	FIELD BLANK	Pesticides	MCPP	0.0020 U	µg/L	0.002	0.008
2/12/2018 11:05	FIELD BLANK	Pesticides	Alachlor	0.062 U	µg/L	0.062	0.25
2/12/2018 11:05	FIELD BLANK	Pesticides	Chlorpyrifos Ethyl	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Diazinon	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Fonofos	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Pesticides	Prometon	0.021 U	µg/L	0.021	0.082
2/12/2018 11:05	FIELD BLANK	Pesticides	Carbamazepine	4.0E-04 U	µg/L	0.0004	0.0016
2/12/2018 11:05	FIELD BLANK	Pesticides	Ethion	0.010 U	µg/L	0.01	0.041
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Fluorene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	µg/L	3	12
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Nitrobenzene	2.0 U	µg/L	2	8.1
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Phenol	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	4-Nitrophenol	15 U	µg/L	15	61
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Acenaphthene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Acenaphthylene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	µg/L	3	12
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2-Nitrophenol	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	µg/L	40	160
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	µg/L	2	8.1

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	µg/L	2	8.1
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	µg/L	3	12
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Hexachloroethane	3.0 U	µg/L	3	12
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	µg/L	3	12
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Phenanthrene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	µg/L	2	8.1
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Chrysene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Naphthalene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	µg/L	10	40
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Diethyl phthalate	2.0 U	µg/L	2	8.1
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	µg/L	15	61
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Anthracene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Fluoranthene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	µg/L	3	12
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	µg/L	2	8.1
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Pentachlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.02	0.08
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Isophorone	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	µg/L	2	8.1
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Pyrene	0.20 U	µg/L	0.2	0.81
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	µg/L	1	4
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	2-Chlorophenol	1.0 U	µg/L	1	4

Date Sampled	Field_Sample	SCH_Group	Component	Result	Units	MDL	PQL
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Benzidine	100 U	µg/L	100	400
2/12/2018 11:05	FIELD BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	µg/L	0.2	0.81

EPA End Sheet

The Bioassay of the ECUA Pensacola Beach WWTF effluent sampled on February 12, 2018, NPDES #FL0024007

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N 2 5	3	F L 0 0 2 4 0 0 7	11 12	1 8 0 2 1 2	#	**B**	# **S**	# 1

Remarks

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The Priority Pollutants Analysis for Bioassay of the ECUA Pensacola Beach WWTF effluent sampled on February 12, 2018 NPDES #FL0024007

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N 2 5	3	F L 0 0 2 4 0 0 7	11 12	1 8 0 2 1 2	#	**X**	# **S**	# 1

Remarks

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