Biological Assessment of Florida State Hospital WWTP Gadsden County NPDES # FL0031402 Sampled January 11, 13, and 15, 2021

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection
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Summary of Results

The pH and alkalinity values for the Test and Control Sites were lower than the minimum Class III Water Quality Criteria for Fresh Waters. Despite greater nutrient and algal growth potential (AGP) values measured in the effluent, the similar nutrient values, AGP, and rapid periphyton survey results from the Test and Control Sites indicate no detectable nutrient enrichment at the Test Site due to the effluent. The Test and Control Sites had similar habitat assessment scores, but the Test Site scored lower on both the Stream Condition Index and Shannon-Weaver diversity, suggesting a potential impact from the effluent on the macroinvertebrate community.

Facility Overview

The Florida State Hospital WWTP is a domestic wastewater treatment facility. A Facility Summary, including a description of the facility, summary of permit limits, and any relevant Administrative Order (AO), Consent Order (CO), and Discharge Monitoring Report (DMR) information is provided in Appendix A. The effluent is continuously discharged to a concrete lined ditch, which flows to a natural drainage feature and then discharges into North Mosquito Creek, a Class III freshwater creek [waterbody identification (WBID) 376A] (Figure 1).

North Mosquito Creek falls within the Panhandle West Nutrient Watershed Region for Numeric Nutrient Criteria (NNC). For this region, the NNC, expressed as annual geometric means, are 0.06 mg/L total phosphorus and 0.67 mg/L total nitrogen (Paragraph 62-302.531(2)(c), F.A.C.). For the Panhandle West bioregion, the daily average percent dissolved oxygen saturation shall not be below 67 percent saturation in more than 10 percent of the values (Paragraph 62-302.533(1)(a), F.A.C.). This FYI event only provides single sample results. It should be noted that waterbody impairment assessments are based on longer-term data, and individual exceedances of a criterion do not indicate use impairment.
http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria

Methods

Effluent grab and 24-hour flow proportioned composite samples were taken from monitoring site location EFD-01 for outfall D-001 on January 11, 2021. Effluent renewal composite samples were collected on January 13 and 15, 2021. Chemical and biological comparisons were made between a Control Site (located in Mosquito Creek beginning approximately 20 m upstream of the confluence of the drainage feature and North Mosquito Creek and ending approximately 120 m upstream) and a Test Site (located in Mosquito Creek approximately 110 m downstream of the confluence and ending 10 m downstream) (Figure 1). A section of the Test Site (0 m-30 m) was inaccessible due to fallen trees.

Samples were collected by Kevin Grace, Steve Hafner, and Larry Couch (DEP Northwest District Office, Pensacola) and Todd Risk and Rachael Dragon (DEP Biology Lab, Tallahassee). Analyses were performed by the DEP Laboratory in Tallahassee. The report was reviewed by

District representatives and the Point Source Studies Review Committee (Mike Tanski, Nancy Ross, and Adrienne Pennington).

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.

Class III Water Quality Criteria for Fresh and Marine Waters are found in Rule 62-302, F.A.C. All references to Rule 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.

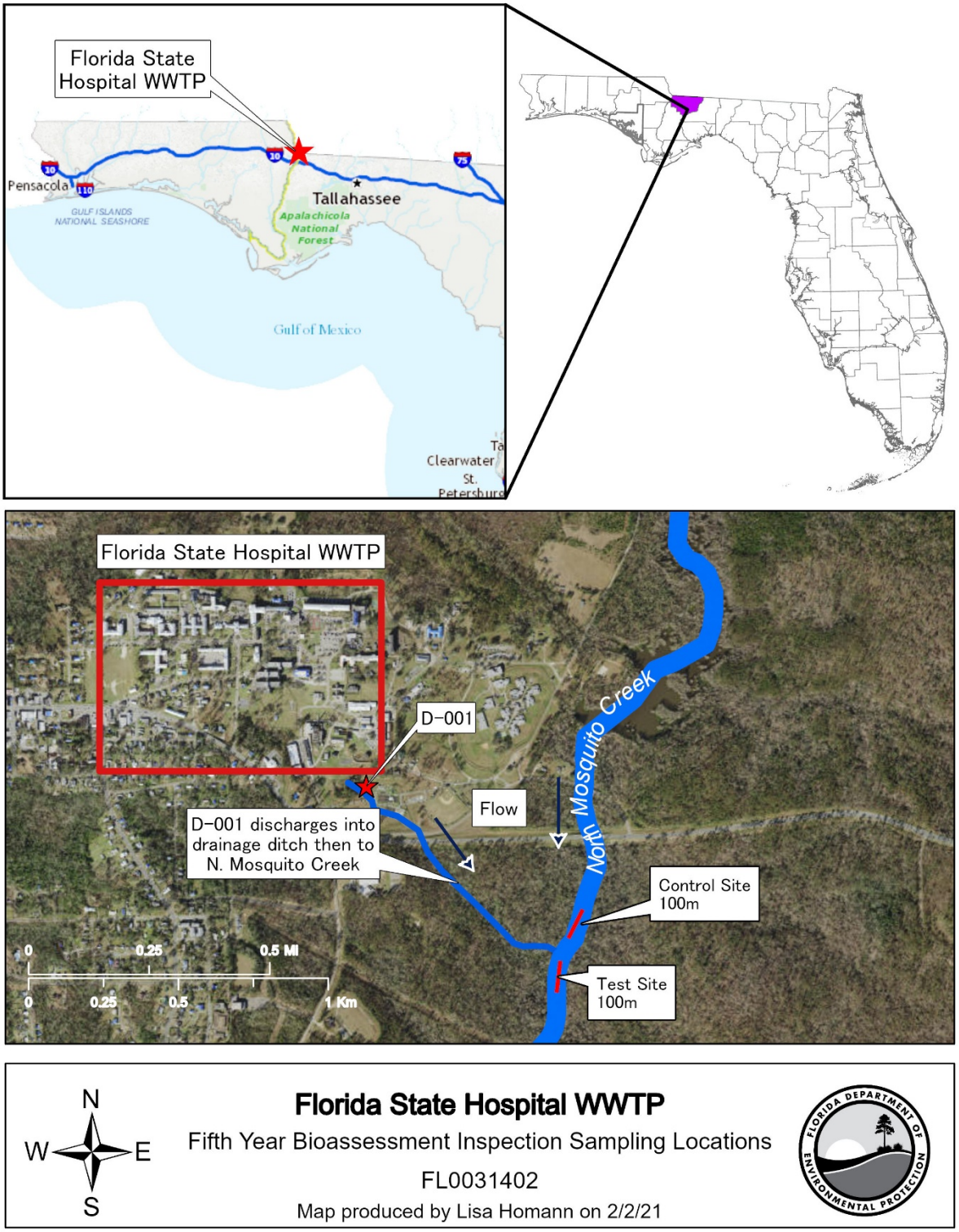


Figure 1. Map of Facility and Sampling Locations

Results

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

- Habitat Assessment scores were similar at the Test Site (118) and Control Site (117), which places both sites in the Suboptimal category. Both sites had measurements in the optimal range for water velocity, habitat smothering, artificial channelization, riparian zone width, and riparian zone vegetation quality. Both sites had marginal substrate diversity and right bank stability. Left bank stability was poor at both sites. Substrate availability was marginal at the Test Site and poor at the Control Site. Both sites had water that was clear in color and slightly turbid.

- The pH, specific conductance, dissolved oxygen, and total residual chlorine of the effluent complied with Class III Water Quality Criteria for Fresh Waters and effluent permit limits.

- The pH of the Test and Control Sites was below the minimum Class III Water Quality Criterion for Fresh Waters (Paragraph 62-302.530(52)(c), F.A.C.). The rule allows pH measurements to vary within one standard unit of natural background, if natural background is below 6 S.U. In the most recent Fifth Year Inspection event in 2011, ambient pH met Class III Water Quality Criteria for Fresh Waters.

- The specific conductance and dissolved oxygen measured at the Test and Control Sites complied with Class III Water Quality Criteria for Fresh Waters.

Analytical Water Chemistry (See Table 2 and Appendix E)

- All water chemistry analytes measured in the effluent grab and composite samples complied with permit limits.

- The alkalinity measured in the Test and Control Site samples was below the minimum Class III Water Quality Criterion for Fresh Waters (Subsection 62-302.530(1), F.A.C.). The rule allows up to 25 % lower alkalinity in waterbodies with natural alkalinity levels below 20 mg/L. The natural background alkalinity for WBID 376A has not been determined but the waterbody has a history of alkalinity measurements below 20 mg/L. In 2020 it was placed in category 4c Natural Condition for alkalinity.

- Nutrient measurements in the Test and Control Site samples were similar. Although effluent nutrient measurements were higher than those of the receiving waters, there was no detectable nutrient enrichment from the effluent at the Test Site.

- For comparative purposes only, the total phosphorus and total nitrogen in the effluent composite and grab samples were greater than the annual geometric mean NNC in the Panhandle West Nutrient Watershed Region. The total nitrogen values in the Test and Control Site samples was also above the NNC.

Microbiology (See Table 2 and Appendix B)

- Fecal indicator bacteria were not detected in the effluent grab sample and therefore complied with the *Escherichia coli* (*E. coli*) Class III Water Quality Criterion for Fresh Waters and the fecal coliform facility permit limit.

- *E. coli* was detected in both the Test and Control Site samples at levels which complied with the Class III Water Quality Criterion for Fresh Waters.

Toxicity Whole Effluent Test (See Table 2)

- Tests were performed January 12 through 19, 2021.

- The sample was aerated for 15 minutes at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.3 mg/L to 8.5 mg/L.

- Chronic bioassay results are reported as the 25% Inhibition Concentration (IC25). 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 62-302.200(5), 62-302.530(20) and/or facility permit limits.

- During the chronic definitive bioassay, the effluent composite sample IC25 for the fish, *Pimephales promelas*, was calculated as being greater than 100% effluent, and therefore complied with effluent permit limits.

- The percent minimum significant difference (PMSD) for the chronic definitive *Ceriodaphnia dubia* bioassay sample exceeded the method limit. The test was invalidated and 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)

- All metals detected in the effluent composite sample complied with Class III Water Quality Criteria for Fresh Waters and effluent permit limits.

- All metals detected in the Test and Control Site samples complied with Class III Water Quality Criteria for Fresh Waters.

- Copper and lead were detected in the equipment blank.

Algal Growth Potential (See Table 4 and Appendix B)

- The freshwater unicellular green alga, *Pseudokirchneriella subcapitata*, was used to determine the AGP values in the effluent grab, Test Site, and Control Site samples. The analytical chemistry suggests that the effluent is nitrogen limited and the Test and Control Sites are ortho-phosphate limited (Miller et al. 1978).

- The effluent AGP result of 135 mg dry wt/L is greater than the AGP range (6.10 to 20.0 mg dry wt/L) suggested to be representative of high productivity for fresh water (Miller et al. 1978). The AGP values measured in the Test and Control Site samples were similar to each other and within this range. The effluent AGP was over 20 times greater than the ambient water samples, suggesting a potential for nutrient enrichment in the receiving waters when the facility is discharging.

Flora (See Appendices B and D)

- Two temporally independent Linear Vegetation Survey (LVS) samplings showing a Coefficient of Conservatism score ≥ 2.5 and the frequency of occurrence of Florida Exotic Plant Pest Council (FLEPPC) exotic taxa ≤ 25% are needed to achieve NNC floral metrics. Sites with no observed macrophytes are considered to achieve the LVS component of the NNC. Two temporally independent Rapid Periphyton survey (RPS) samplings with ≤ 25% rank 4-6 (algae >6mm thick) coverage are needed to achieve NNC floral metrics. This FYI event only provides single sample results. It should be noted that waterbody impairment assessments are based on longer-term data, and individual exceedances of a criterion do not indicate use impairment.

- The RPS was performed at the Test and Control Sites. The canopy cover was lightly shaded at the Test Site and moderately shaded at the Control Site. Portions of the Test and Control Sites were not accessible. Filamentous mat-forming algae were not found at any of the sampled points at the Test or Control Sites. RPS did not indicate nutrient enrichment at the Test Site.

- Per the method, the LVS was not performed because aquatic plants were not observed at the Test Site and the Control Site contained less than $2m^2$ of aquatic macrophytes.

Macroinvertebrates (See Tables 5 and 6 and Appendices B and D)

- Quantitative macroinvertebrate data were collected from floating racks, each with 4 Hester-Dendy samplers, at the Test and Control Sites. The Shannon-Weaver diversity score was lower at the Test Site than at the Control Site (3.56 and 4.05, respectively). Although both samples were dominated by dipterans and trichopterans, the percentages of these two groups were more evenly distributed in the Test Site sample compared to the Control Site sample. Ephemeropterans were present in both samples at similar percentages. Both sites were dominated by suspension feeders.

- Qualitative macroinvertebrate data were collected from dipnet samples at the Test and Control Sites for the Stream Condition Index (SCI). The Test Site scored 46 on the SCI and the Control Site scored 63. The Test Site had a smaller number of total taxa, fewer Trichoptera and clinger taxa, a smaller percentage of Tanytarsini individuals, and a higher percentage of the dominant taxon, which can all indicate human disturbance. Conversely, the Test Site had a smaller percentage of very tolerant individuals than the Control Site, which tends to increase with human disturbance. Both sites had similar numbers of Ephemeroptera, long-lived taxa, sensitive taxa, and total number of individuals. Overall, the macroinvertebrate community at the Test Site was not as diverse

and balanced as that of the Control Site and may indicate an impact from the effluent discharging.

- For more information or to obtain a copy of the taxa lists, please contact the Biology Laboratory at 850-245-8177.

Organic Constituents (See Table 7 and Appendix E)

- Atrazine, diazinon, fipronil, fipronil sulfide, fipronil sulfone, fluxapyroxad, and tebuconazole were detected in the effluent grab sample. These organic constituents serve as herbicides, insecticides, and fungicides.

- There are no effluent permit limits for organic constituents. Diazinon was detected at a level that complied with Class III Water Quality Criteria for Fresh Waters.

Literature Cited

Fore, L.S., Frydenborg, R., Miller, D., Frick, T., Whiting, D., Espy, J., and Wolfe, L. 2007. Development and Testing of Biomonitoring Tools for Macroinvertebrates in Florida Streams (Stream Condition Index and Biorecon). Florida Department of Environmental Protection. 110 pp.

Karr, J.R. and Chu, E.W. 1998. Restoring life in running waters: Better biological monitoring. Island Press. Covelo, California. 200 p.

Magurran, A. E. 1988. Ecological diversity and its measurement. Princeton University Press, Princeton, New Jersey.

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

Plafkin, J. L., Barbour, M. T., Porter, K. D., Gross S. K., and Hughes, R. M. 1989. Rapid bioassessment protocols for use in streams and rivers: Benthic macroinvertebrates and fish. U. S. EPA, Office of Water Regulations and Standards, Washington D.C., EPA 440-4-89-001.

Stevenson, R. J. and Bahls, L. L. 1999. Periphyton protocols. Pp. 6.1-6.22 in: Rapid bioassessment protocols for use in wadeable streams and rivers. 2nd edition. By: M. T. Barbour, J. Gerritsen, B. D. Snyder and J. B. Stribling. EPA 841-B-99-002. U. S. Environmental Protection Agency, Office of Water, Washington, D. C.

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

Table 1. Measured field parameters

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and field parameters

Parameter	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab	Test Site	Control Site
Habitat Assessment	-	-	-	-	118	117
Sample Depth	m	-	-	-	0.3	0.2
Temperature	C	-	Report	15.3	9.4	9.4
pH	SU	6.0 - 8.5	6.0 - 8.5	7.0	5.5 e	5.7 e
Specific Conductance	µmhos/cm	≤ 1,275	-	347.9	65.3	65.8
Salinity	ppt	-	-	0.2 c	0.04 c	0.04 c
Dissolved Oxygen	% saturation	≥ 67	≥ 67	89.9	95.2	95.2
Dissolved Oxygen	mg/L	-	-	-	10.9	10.9
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01	0.02 U [1]	-	-

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

e - Value exceeds the Class III Water Quality Criteria or permit limits

c - Value is calculated

1- Measurement taken by DEP staff with Hach colorimeter with an MDL of 0.02 mg/L.

Table 2. Analytical water chemistry, microbiological, and toxicological data

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and analytical water chemistry, microbiological, and toxicological data

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab	Effluent Composite	Test Site	Control Site
Ortho-phosphate	mg P/L	-	-	0.99	-	0.019 Y	0.018 Y
Total Phosphorus	mg P/L	≤ 0.06 g	≤ 16.0 s p	1.2	1.4	0.038	0.039
Total Ammonia	mg N/L	≤ 6.39 s c (Effluent) ≤ 10.54 s c (Test) ≤ 10.54 s c (Control)	Report	0.64	0.56	0.017	0.017
Un-ionized Ammonia (calculated salinity)	mg N/L	-	≤ 0.02 s	< 0.02 c	-	< 0.02 c	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	7.9	7.7	0.87	0.87
Total Kjeldahl Nitrogen	mg N/L	-	-	1.2	2.0	0.34	0.43
Organic Nitrogen	mg N/L	-	-	0.6 c	1.4 c	0.32 c	0.41 c
Total Nitrogen	mg N/L	≤ 0.67 g	≤ 25.0 s p	9.1 c	9.7 c	1.21 c	1.3 c
Total Organic Carbon	mg C/L	-	-	2.1	2.2	5.2	5.3
Chlorophyll *a* - Corrected	µg/L	-	-	3.2	-	0.82 U	0.82 U
Phaeophytin	µg/L	-	-	0.90 U	-	0.90 U	0.90 U
CBOD, 5 day, N - inhibited	mg/L	-	≤ 40.0 s p	-	13	2.2 J	2.3
Total Suspended Solids	mg/L	-	≤ 40.0 s p	-	2 I	2 U	2 U
Turbidity	NTU	< 29 t	-	2.3	-	8.2	8.1
Color (true)	PCU	-	-	5.3 I	-	65 A	66
Alkalinity	mg CaCO3/L	≥ 20	-	67	-	18 e	18 e
Chloride	mg Cl/L	-	-	24	-	5.0	4.9
Fluoride	mg F/L	≤ 10.0	-	0.087 I	-	0.047 I	0.047 I
Sulfate	mg SO4/L	-	-	21	-	1.1	1.1
Fecal Coliforms	cfu/100 mL	-	≤ 800 s	2 U	-	60 Q	38 BQ
Escherichia coli	MPN/100 mL	≤ 410	-	1.0 U	-	78.9 Q	93.3 Q
Bioassay - Water flea *(Ceriodaphnia dubia)*	% effluent	-	≥ 100 p	-	No result	-	-

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab	Effluent Composite	Test Site	Control Site
Bioassay - Fish *(Pimephales promelas)*	% effluent	-	≥ 100 p	-	> 100	-	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
e - Value exceeds the Class III Water Quality Criteria or permit limits
c - Value is calculated
g - Value expressed as an annual geometric mean
p - 16-hour flow proportioned composite (FPC) for all analytes except toxicity (24-hour FPC)
s - Single sample
t - Shall not exceed 29 NTUs above background
B - Results based on colony counts outside the acceptance range
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J – Estimated value
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.

Table 3. Analytical metals data

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and analytical metals data

Analyte	Units	Effluent Permit Limits	Effluent Composite Class III Criteria	Effluent Composite	Test Site Class III Criteria	Test Site	Control Site Class III Criteria	Control Site
Hardness	mg CaCO3/L	Report	-	111 c	-	26.4 c	-	26.7 c
Aluminum	µg/L	-	-	135	-	370	-	337
Arsenic	µg/L	-	≤ 50	0.64	≤ 50	0.31	≤ 50	0.32
Cadmium	µg/L	-	≤ 0.292 b	0.020 U	≤ 0.101 b	0.020 U	≤ 0.102 b	0.020 U
Calcium	mg/L	-	-	32.5	-	5.89	-	5.99
Chromium, Total [2]	µg/L	-	≤ 93.8 b	0.40 U	≤ 29 b	0.54 I	≤ 29.3 b	0.50 I
Copper [3]	µg/L	≤ 10.2 b p	≤ 10.2 b	3.44	≤ 2.99 b	0.87	≤ 3.02 b	0.84
Iron	µg/L	-	≤ 1,000	170	≤ 1,000	730	≤ 1,000	700
Lead [3]	µg/L	-	≤ 3.63 b	0.20 U	≤ 0.584 b	0.29 I	≤ 0.593 b	0.27 I
Magnesium	mg/L	-	-	7.24	-	2.84	-	2.86
Nickel	µg/L	-	≤ 57 b	0.79 I	≤ 16.9 b	0.50 U	≤ 17.1 b	0.50 U
Potassium	mg/L	-	-	3.9	-	1.0 I	-	1.0 I
Selenium	µg/L	-	≤ 5.0	0.75 I	≤ 5.0	0.20 U	≤ 5.0	0.20 U
Silver	µg/L	-	≤ 0.07	0.010 U	≤ 0.07	0.010 U	≤ 0.07	0.010 U
Sodium	mg/L	-	-	43.8	-	2.4	-	2.5
Zinc	µg/L	-	≤ 131 b	11 I	≤ 38.8 b	5.0 U	≤ 39.2 b	5.0 U

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
b - Value is calculated based on hardness
c - Value is calculated
p - 16-hour flow proportioned composite (FPC) for all analytes except toxicity (24-hour FPC)
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
2 - Class III Water Quality Criterion for Fresh Waters (Paragraph 62-302.530(19)(a), F.A.C.) is for chromium-III
3 - Analyte detected in the equipment blank at 1.91 µg/L for copper and 0.5 µg/L for lead

Table 4. Algal Growth Potential (AGP)

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

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*	135	320 ± 65	430 ± 85	350 ± 69	520 ± 100	8.6	7.6
Test Site	*Pseudokirchneriella subcapitata*	6.36	34 ± 6.7	8.2 ± 1.6	46 ± 9.2	16 ± 3.3	46.7	31.8
Control Site	*Pseudokirchneriella subcapitata*	6.38	34 ± 6.7	7.7 ± 1.5	49 ± 9.9	17 ± 3.4	49.3	33.3

Table 5. Macroinvertebrate Hester-Dendy samples – quantitative

Florida State Hospital	Test Site	Control Site
Summary Statistics		
Shannon-Weaver Diversity	3.56	4.05
Number of Taxa	30	36
Number of EPT Taxa	11	12
Percent Dominant Taxon	27.78	16.35
Dominant Taxon Name	*Hydropsyche* sp. (Trichoptera)	*Hydropsyche* sp. (Trichoptera)
Total Number of Individuals (counted)	468	832
Total Number of Individuals (#/m^2)	929	1651
Community Composition: Percent of total		
Amphipoda	0.2	0.7
Coleoptera	1.1	0.5
Diptera	48.9	59.0
Ephemeroptera	8.8	10.3
Gastropoda	0.0	0.1
Oligochaeta	0.0	1.3
Plecoptera	0.0	0.0
Trichoptera	40.6	28.0
Other	0.4	0.1
Functional Feeding Groups: Percent of total		
Burrowing Deposit Feeders	0.0	1.3
Piercers	3.9	5.3
Predators	0.8	0.7
Scrapers	4.3	4.9
Shredders	8.4	13.0
Surface Deposit Feeders	26.1	31.0
Suspension Feeders	56.6	43.8

Table 6. Macroinvertebrate dipnet samples – qualitative

Florida State Hospital	**Test Site**		**Control Site**	
Stream Condition Index 2012	**46**		**63**	
Replicate	Rep 1	Rep 2	Rep 1	Rep 2
Stream Condition Index Metrics				
Number of Total Taxa	27	29	41	37
Number of Ephemeroptera Taxa	3	3	3	2
Number of Trichoptera Taxa	4	5	6	7
Number of Clinger Taxa	6	6	10	8
Number of Long-lived Taxa	2	2	2	2
Number of Sensitive Taxa	3	5	8	4
Percent of Dominant Taxon	44.1	36.1	17.2	17.3
Percent Suspension Feeders and Filterers	66.1	61.1	43.1	50.6
Percent of Tanytarsini Individuals	4.9	3.2	8.0	5.8
Percent of Very Tolerant Individuals	3.5	5.7	8.0	10.3
Total Number of Individuals	143	158	151	156
Community Composition: Percent of total				
Dominant Taxon Name	*Simulium notiale*	*Simulium notiale*	*Simulium notiale*	*Simulium notiale*
	(Diptera)	(Diptera)	(Diptera)	(Diptera)
Amphipoda	0.7	0.6	3.3	3.9
Bivalvia	5.6	8.2	2.7	8.3
Coleoptera	4.9	1.9	3.3	2.6
Diptera	60.1	51.3	39.1	37.8
Ephemeroptera	9.1	14.6	9.3	6.4
Gastropoda	4.2	4.4	4.0	6.4
Odonata	0.0	0.0	1.3	0.0
Oligochaeta	0.7	1.9	5.3	1.3
Plecoptera	0.0	0.0	0.0	0.0
Trichoptera	13.3	17.1	31.8	33.3
Other	1.4	0.0	0.0	0.0
Functional Feeding Groups: Percent of total				
Burrowing Deposit Feeders	0.7	1.9	5.3	1.3
Piercers	1.4	3.2	13.9	12.5
Predators	2.5	0.0	4.0	1.3
Scrapers	9.8	11.1	8.0	8.0
Shredders	4.2	3.5	6.6	6.4
Surface Deposit Feeders	15.4	19.3	17.9	18.0
Suspension Feeders	66.1	61.1	43.1	50.6
Unknown	0.0	0.0	0.0	0.6

Table 7. Detected Organic Constituents

Effluent limits, Class III Criteria for Fresh Waters, and analytical organic and pesticide data

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Atrazine	ng/L	-	-	0.28 I
Diazinon	ng/L	≤ 170	-	0.15 I
Fipronil	ng/L	-	-	0.67 I
Fipronil Sulfide	ng/L	-	-	0.15 I
Fipronil Sulfone	ng/L	-	-	0.63
Fluxapyroxad	ng/L	-	-	0.13 I
Tebuconazole	ng/L	-	-	1.2 I

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

Appendix A. Facility Summary

PART I: Information gathered prior to sampling event

Prepared By: Kevin Grace	**Contact Number:** 850-245-7629
Facility Name (as it appears on permit): Florida State Hospital WWTP	**Former Names:**
NPDES Permit Number: FL0031402	**Permit Expiration Date:**
Physical Address: Blackberry Lane, Chattahoochee, Florida 32324	
District: Northwest	**County:** Gadsden
Function of Facility: Domestic Wastewater Facility	
Facility Type: Domestic	**Permitted Capacity (MGD):** 1.3

Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months):
11/30/2019 – 11/30/2020 0.239 MGD

If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months):
N/A

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):

Monitoring Site Number	Description of Monitoring Site
FLW-01	Flow to D-001; The flow meter transducer is located in the effluent Parshall flume just outside the south wall of the ccc
EFD-01	Grab and composite samples of effluent to Mosquito Creek to the Apalachicola River.
EFA-01	Post-disinfection, samples are collected in ccc
OTH-01	Un-ionized Ammonia Monitoring Point at EFD-01 (WWTP discharge at v-notch on the discharge side of the Chlorine Contact Chamber)
SWB-02	Background Ambient Monitoring in North Mosquito Creek – beginning approx. 20m upstream from the confluence of the unnamed tributary and North Mosquito Creek, and ending approx.120 m upstream.
SWA-01	100 yards downstream of confluence of the drainage ditch serving FSH and N. Mosquito Creek

Description of Permitted Outfall(s):
Surface Water Discharge D-001: An existing 1.3 MGD annual average daily flow discharge to North Mosquito Creek, class III fresh waters, (WBID# 376A) which is approximately 0 feet in length and discharges at a depth of approximately 0 feet. The point of discharge is to a concrete lined ditch, which then flows to a natural drainage feature, which then discharges to North Mosquito Creek which is located approximately at latitude 30°42' 6.4" N, longitude 84°49' 58.8" W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility): Florida State Hospital wastewater treatment plant (WWTP) is an existing treatment plant with a treatment capacity of 1.3 MGD annual average daily flow (AADF). The WWTP operates in the extended aeration mode. The WWTP includes a bar screen (4 MGD capacity), a grit Chamber (3.7 peak factor @ 1.3 MGD AADF), two (2) -

primary clarifiers (59,400 gallons, each), two (2) - aeration tanks (in series @ 225,000 gallons, each), two (2) - final clarifiers (110,600 gallons, each), a chlorine contact chamber (27,300 gallons), a dechlorination tank (700 gallons), two (2) - anaerobic digesters (159,380 and 99,650 gallons), two (2) - aerobic digesters (70,500 and 73,300 gallons), eight (8) biosolids drying beds (total area of 17,040 ft2.), and a spare tank currently empty (72,590 gallons) which could be used to supplement either aeration tanks/digesters.

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)

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	1.3 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.A.4
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 25.0 30.0 40.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	
Solids, Total Suspended	mg/L	Max Max Max Max	20.0 25.0 30.0 40.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	
Nitrogen, Total	mg/L	Max Max Max Max	12.5 16.0 18.75 25.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	See I.A.11
Phosphorus, Total (as P)	mg/L	Max Max Max Max	8.0 10.0 12.0 16.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	See I.A.11
Coliform, Fecal	#/100mL	Max Max Max	200 200 800	Annual Average Mo. Geometric Mean Single Sample	Weekly	Grab	EFD-01	See I.A.5
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFD-01	See I.A.3
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	Continuous	Meter	EFA-01	See I.A.3 and I.A.6

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)

Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours	Grab	EFD-01	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Weekly	Grab	OTH-01	
Ammonia, Unionized (as NH3)	mg/L	Max	0.02	Single Sample	Weekly	Calculated	OTH-01	See I.A.7
Temperature (C), Water	Deg C	Max	Report	Single Sample	Weekly	Grab	OTH-01	See I.A.7
pH	s.u.	Max	Report	Single Sample	Weekly	Grab	OTH-01	See I.A.7
Oxygen, Dissolved Percent Saturation	% smpcmpln	Min	90	Monthly Total	Daily; 24 hours	Meter	EFD-01	See I.A.10
Copper, Total Recoverable	ug/L	Max	-	Single Sample	Monthly	16-hr FPC	EFD-01	See I.A.8
Hardness, Total (as CaCO3)	mg/L	Max	Report	Single Sample	Monthly	16-hr FPC	EFD-01	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Semi- Annually; twice per year	24-hr FPC	EFD-01	See I.A.9
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	percent	Min	100	Single Sample	Semi- Annually; twice per year	24-hr FPC	EFD-01	See I.A.9
Nitrogen, Total	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-02 SWA-01	
Nitrogen, Nitrate, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab		
pH	s.u.	Max	Report	Single Sample	Quarterly	Grab		
Chlorophyll a	ug/L	Max	Report	Single Sample	Quarterly	Grab		

PART I: Continued

List current 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)

Oxygen, Dissolved Percent Saturation	percent	Min	Report	Single Sample	Quarterly	Grab		
Stream Condition Index	no units	Min	Report	Single Sample	Every 5 years	Measured		See I.A.12

3. Hourly measurement of pH and total residual chlorine for disinfection during the period of required operator attendance may be substituted for continuous measurement. *[62-600.660(1)]*

4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. *[62-600.200(25)]*

5. The effluent limitation for the monthly geometric mean for fecal coliform is only applicable if 10 or more values are reported. If fewer than 10 values are reported, the monthly geometric mean shall be calculated and reported on the Discharge Monitoring Report to be used to calculate the annual average. *[62-600.440(5)(b)]*

6. Total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow. *[62-600.440(5)(c), (6)(b), and (7)(c)]*

7. Effluent samples for pH and temperature shall be monitored at the same time and location as the total ammonia grab sample which is used to calculate the unionized ammonia value. Unionized ammonia shall be calculated using the DEP Standard Operating Procedure for "Calculation of Un-Ionized Ammonia in Fresh Water" dated February 12, 2001. The sample point is OTH-01 which is the same location as EFD-01 (WWTP discharge @ v- notch on the discharge side of the Chlorine Contact Chamber). The monthly un-ionized ammonia value reported on the Part A DMR shall be the maximum un-ionized ammonia value on Part B DMR for the month during the sampling period. In addition, the values of total ammonia (as N), temperature and pH on Part B that were used to determine the largest value for un-ionized ammonia for the month shall be reported for those parameters on the Part A DMR. *[62-4.246(4) and 62-302.530(3)]*

8. The limit for "Copper, Total Recoverable" shall be calculated using the following equation(s): $Cu \leq e^{(0.8545[\ln H]-1.702)}$

   Total hardness shall be measured at the time of the effluent sample. The "ln H" means the natural logarithm of total hardness expressed as mg/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L.

   The measured effluent value shall be recorded on the DMR in the parameter row for "(effluent)." The calculated effluent limit shall be recorded on the DMR in the parameter row for "(calculated limit)." Compliance with the effluent limitation is determined by calculating the difference between the measured effluent value and the calculated. The compliance value shall be recorded on the DMR in the parameter row for "(effluent minus calculated limit)." The compliance value shall not exceed 0.00.
   [62-302.530(23) and 62-302.530(15)]

9. See Toxicity Test Requirements below.

10. No more than 10 percent of the daily average percent dissolved oxygen (DO) saturation values shall be below 67%. To report the percent samples in compliance (%

smpcmpln), count the number of daily average values greater than or equal to 67%, divide by the total number of daily average values, and multiply by 100% (round to the nearest integer). *[62-302.533(1)(a)]*

11. Discharge from D-001 to Mosquito Creek shall:

    a. comply with the nutrient water quality criteria for streams in Paragraph 62-302.531(2)(c), F.A.C.; and

    b. provide for compliance with applicable nutrient criteria in downstream waters pursuant to Subsection 62- 302.531(4), F.A.C. *[62-302.531(2)(c), F.A.C, 62-302.531(4), F.A.C.]*

12. Permittee shall conduct in year 2 of the permit biological monitoring in North Mosquito Creek. Biological monitoring shall include Stream Condition Index (SCI) in accordance with Standard Operating Procedures SCI1000 and DEP-SAS-001/11, Rapid Periphyton Survey (RPS) in accordance with Standard Operating Procedure FD 9000-25, and Linear Stream Vegetation Survey (LVS) in accordance with Standard Operating Procedure FD 9000-32. The biological monitoring shall be sufficient for interpreting compliance with narrative nutrient criterion pursuant to the document titled "Implementation of Florida's Numeric Nutrient Standards," dated April 2013, from 62-302.300(19), F.A.C. (Please refer to: http://www.flrules.org/Gateway/reference.asp?No=Ref-02905).
    [62-610.850(1)(a) and 62-302.531(2)(c), F.A.C.]

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
North Mosquito Creek	Class IIII freshwaters

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):

3. 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) for reproduction or growth 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 the next six- month period following the last routine testing, 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 reproduction or growth 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 9.a.(1).

(2) Additional Follow-up Tests:

(a) If a routine test does not meet the chronic toxicity limitation in 9.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 9.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 9.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 9.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 9.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 9.a.(2), the Department may revise this permit to require acute definitive whole effluent toxicity testing.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.): Administrative Order AO-104NW was closed out on 09/03/2019.

Facility Mixing Zone Details (if applicable):
N/A

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:

Date	Parameter and Units	Limit	Result
10/31/2020	P TRP6C / Percent	100.00	30.7

Describe previous FYI and WQBEL study:
The previous FYI5 was conducted on 03/28/2016. The sampling results indicated the following exceedance**:**

Florida State Hospital WWTF	**Units**	**Class III Criteria**	**Effluent Permit Limits**	**Effluent Comp 24-hour**
Bioassay- Fish (Pimephales promelas)	% effluent	-	≥ 100 p	19.4 e

Describe previous or current Enforcement Actions (including WLs):

Describe any violations or problems noted in previous inspection:
The previous inspection on 8/20/2020 found no deficiencies.

Discuss whether DMR trends within previous five years are improving or declining:

2020 – 1 exceedance
2019 – 1 exceedance
2018 – 0 exceedances
2017 – 1 exceedance
2016 – 0 exceedances

See table below for above referenced exceedances.

Date	Parameter	Description	Result	Limit	Units	Statistical Base
10/31/2020	P TRP6C	IC25 Statre 7Day Chr Pimephales	30.7	100.0	percent	ME - Minimum
10/31/2019	P TRP6C	IC25 Statre 7Day Chr Pimephales	83.91	100.0	percent	ME - Minimum
7/31/2017	P 74055	Coliform, Fecal	1600	800.0	#/100mL	MB - Maximum

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

Appendix B. Explanations 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.

- **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 (Chapter 62-302, F.A.C.) and facility permit limits.

- **Toxicity Bioassays**

  Greater than 50% mortality in an acute toxicity test may constitute an exceedance of Paragraph 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 Subsection 62-302.530(20), Subsection 62-302.530(62) and/or facility permit limits. A no observed effect concentration (NOEC) less than 100% effluent in a chronic test may constitute an exceedance of Subsection 62-302.530(62) and/or facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

- **Bacteriological Testing**

  High levels of fecal indicator bacteria may constitute an exceedance of Subsection 62-302.530(6) and/or facility permit limits. Fecal coliform 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.

- **Habitat Assessment**

  Habitat assessment is used to evaluate the physical structure and extent of disturbance in a waterbody. Eight aspects are ranked, with 20 possible points for each aspect (QA Rule SOP FT 3100). The Habitat Assessment score includes types and amounts of benthic substrates, water velocity, amount of sand or silt accumulation, extent of artificial channelization, bank stability, and riparian zone width and vegetation type. All scores are summed to yield an overall Habitat Assessment score. Habitat Assessment score ranges from 11-160 and overall habitat quality is assigned to one of four categories: Optimal (120-160 points), Suboptimal (80-119 points), Marginal (40-79 points), and Poor (11-39 points).

- **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 fresh waters (Miller et al. 1978). High AGP values may constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C. and/or Paragraph 62-302.530(48)(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 ± 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 Subsection 62-302.530(62), F.A.C.

- **Chlorophyll *a* Content**

  Chlorophyll *a* content is an estimate of algal biomass. High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may be constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a) F.A.C. and/or Paragraph 62-302.530(48)(b) F.A.C.

- **Benthic Macroinvertebrate Assemblages**

  Benthic macroinvertebrates were collected using two methods. Quantitative samples were collected from Hester-Dendy multi-plate samplers incubated for 28 days. Qualitative collections are made using 20 dipnet sweeps (QA Rule SOP FS7420). Benthic macroinvertebrates were sorted and identified to the lowest practical taxonomic level, usually species.

  - Taxa richness: Taxa richness is the number of distinct macroinvertebrate taxa present in a sample. Stress, habitat destruction and pollution tend to reduce the number of different types of organisms present (Karr and Chu 1998). Decreases in taxa richness related to a facility's effluent may constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C., Paragraph 62-302.530(48)(b), F.A.C. and/or Subsection 62-302.530(62), F.A.C.
  - Percent Contribution of Dominant Taxon: Percent contribution of the dominant taxon is calculated by dividing the number of individuals in the most abundant taxa by the total number of individuals counted. Percent contribution of the dominant taxon tends to increase with increasing perturbation (Plafkin *et al*., 1989). Increases in the percent contribution of the dominant taxon related to a facility's effluent may constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C. and/or Paragraph 62-302.530(48)(b), F.A.C.
  - Community Composition: Shifts in proportions of major groups of organisms downstream of a point source, compared to upstream, control conditions, may indicate negative effects of a discharge (Fore et. al. 2007, Karr and Chu 1998). Shifts in community composition related to a facility's effluent may constitute exceedances

of Subsection 62-302.530(47) F.A.C., Paragraph 62-302.530(48)(a), F.A.C., Paragraph 62-302.530(48)(b), F.A.C. and/or Subsection 62-302.530(62), F.A.C.

- Functional Feeding Groups: Environmental degradation may differentially affect groups of invertebrates based on how the group feeds (e.g. predators, deposit feeders, etc.). In Florida, pollution may be responsible for reducing the numbers of filter feeders and shredders (Fore et. al. 2007). Changes in the proportions of functional feeding groups related to a facility's effluent may constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C., Paragraph 62-302.530(48)(b), F.A.C. and/or Subsection 62-302.530(62), F.A.C..
- Shannon-Weaver Diversity Index: This index is specified in Chapter 62-302 F.A.C. as a measure of biological integrity. Low diversity scores are undesirable. Where diversity is low, only a few taxa are abundant as compared to an area where many taxa are present in equitable abundance among taxa (Magurran 1988). A difference of 25% in Shannon-Weaver diversity between results from Hester-Dendy multiplate samplers incubated for 28 days at test and control sites constitute exceedances of Subsection 62-302.530(10), F.A.C.
- The Stream Condition Index (SCI): The SCI is a biological assessment tool that measures the degree to which flowing fresh waters support a healthy, well-balanced biological community, as indicated by aquatic, benthic macroinvertebrates. Macroinvertebrate taxonomic and abundance data are used to calculate ten biological metric scores, each of which has been shown to respond predictably to human disturbance (Fore et al. 2007; DEP SOP SCI 1000; DEP-SAS-001/11, incorporated into the Quality Assurance Rule by reference Paragraph 62-160.210(2)(a), F.A.C.). The points for each of the metric scores (0 to 10) are summed to yield a final SCI score (range 0-100). The ten metrics are percent contribution of Tanytarsini, number of sensitive taxa, percent contribution of very tolerant taxa, number of total taxa, number of Ephemeroptera taxa, number of Trichoptera taxa, percent contribution of the dominant taxon, the percent contribution of suspension and filter feeders, number of long-lived taxa, and number of clinger taxa. As human disturbance increases, it is expected that the number of total taxa, the number of Ephemeroptera taxa, Trichoptera taxa, sensitive taxa, clinger taxa, long-lived taxa, and the percent contribution of Tanytarsini and suspension and filter feeders will decrease while percent contribution of dominant taxon and percent contribution of very tolerant taxa will increase.

  The SCI can be used to determine faunal health associated with Rule 62-302.531, F.A.C. An average SCI score of 40 or higher from at least two temporally independent SCIs, performed at representative locations and times indicates a balanced faunal community. Neither of the two most recent SCI scores should be less than 35. Failure of the SCI indicates that the stream does not meet the Clean Water Act goal of biological integrity, as measured by community structure and function. A failing SCI could be due to water quality problems or other physical disturbance factors such as habitat disruption or hydrologic alterations. While the stressor may not be known, a failed SCI does indicate that fauna is not well-balanced. A failing SCI score, if it is shown to be related to a facility's effluent, may constitute exceedances

of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C., Paragraph 62-302.530(48)(b), F.A.C., or of Subsection 62-302.530(62).

- **Rapid Periphyton Survey**

  Rapid Periphyton Survey (RPS) is a rapid method to quantify the extent and abundance of attached algae (periphyton) in a stream or river. A total of 99 points are assessed within a 100m area of sampling reach, 9 equidistant points along 11 cross-section transects spaced 10 m apart, If greater than 20% of sampled points have algal lengths greater than 6mm, a sample is collected and the autecological information associated with the dominant algae is evaluated (see DEP SOP FS 7230 Rapid Periphyton Survey). This method could be used to determine floral health associated with Rule 62-302.531, F.A.C.

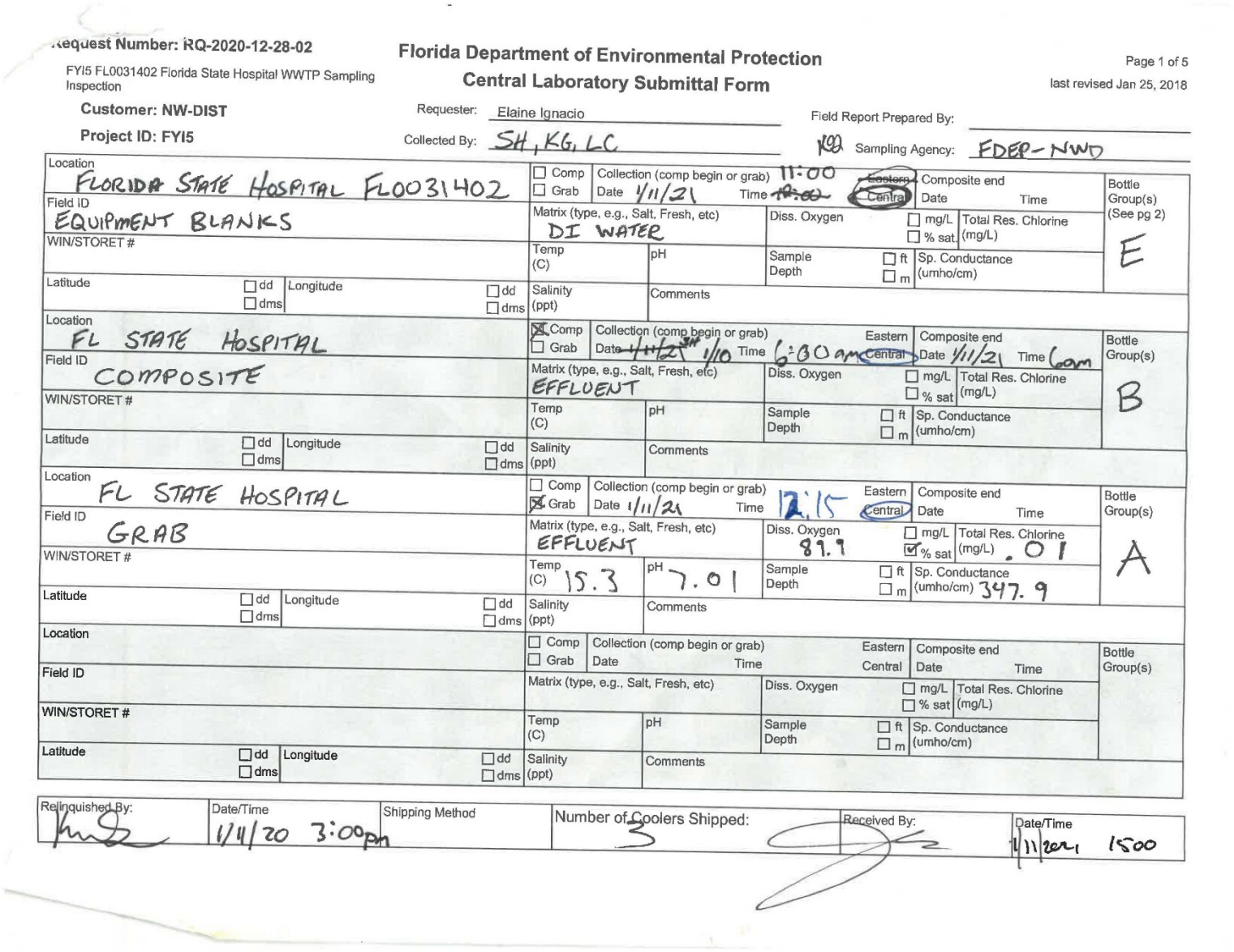
- **Linear Vegetation Survey**

  Linear Vegetation Survey (LVS) is a rapid screening tool for ecological condition, by determining how closely a site's flora resembles that of an undisturbed condition. When the total area of macrophytes equals or exceeds two square meters within the wetted area of the 100 m sampling reach, macrophyte taxonomic names are recorded (DEP SOP FS 7320 Stream and River Linear Vegetation Survey (LVS) Method). This method could be used to determine floral health associated with Rule 62-302.531, F.A.C.

- **Definition of Qualifiers** (Rule 62-160.700 F.A.C.)

  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-2020-12-28-02

FYI5 FL0031402 Florida State Hospital WWTP Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Page 1 of 5

last revised Jan 25, 2018

Requester: Elaine Ignacio

Collected By: SH, KG, LC

Field Report Prepared By:

Sampling Agency: FDEP-NWD

Location	Field ID	WIN/STORET #	Latitude / Longitude	Collection (comp begin or grab)	Matrix (type, e.g., Salt, Fresh, etc)	Temp (C)	pH	Diss. Oxygen	Total Res. Chlorine (mg/L)	Sample Depth	Sp. Conductance (umho/cm)	Salinity (ppt)	Comments	Composite end Date / Time	Bottle Group(s) (See pg 2)
FLORIDA STATE HOSPITAL FL0031402	EQUIPMENT BLANKS			☐ Comp ☐ Grab Date 1/11/21 Time 11:00 Eastern / Central	DI WATER			☐ mg/L ☐ % sat		☐ ft ☐ m					E
FL STATE HOSPITAL	COMPOSITE			☒ Comp ☐ Grab Date ~~1/11/21~~ 1/10 Time 6:30 am Eastern / Central	EFFLUENT			☐ mg/L ☐ % sat		☐ ft ☐ m				Date 1/11/21 Time 6am	B
FL STATE HOSPITAL	GRAB			☐ Comp ☒ Grab Date 1/11/21 Time 12:15 Eastern / Central	EFFLUENT	Temp (C) 15.3	pH 7.01	☐ mg/L ☑ % sat 87.9	Total Res. Chlorine (mg/L) .01	☐ ft ☐ m	Sp. Conductance (umho/cm) 347.9				A
				☐ Comp ☐ Grab Date Time Eastern / Central				☐ mg/L ☐ % sat		☐ ft ☐ m					

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
	1/11/20 3:00pm		3		1/11/2021 1500

Request Number: RQ-2020-12-28-02

FYI5 FL0031402 Florida State Hospital WWTP Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Page 1 of 5

last revised Jan 25, 2018

Requester: Elaine Ignacio

Collected By: Todd Risk + Rachael Dragus

Field Report Prepared By:

Sampling Agency:

Location: FSH	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 1/11/21 Time 3:45pm	Eastern / Central	Composite end Date	Time	Bottle Group(s) (See pg 2)				
Field ID: Test Site	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen 10.86	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
WIN/STORET #	Temp (C) 9.43	pH 5.5	Sample Depth 0.25	☐ ft ☑ m	Sp. Conductance (umho/cm) 65.3					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments: Ortho phosphate not filtered							
Location: FSH	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 1/11/21 Time 3:45pm	Eastern / Central	Composite end Date	Time	Bottle Group(s)				
Field ID: Test Site	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen 10.86	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		D				
WIN/STORET #	Temp (C) 9.43	pH 5.5	Sample Depth 0.25	☐ ft ☑ m	Sp. Conductance (umho/cm)					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							
Location: FSH	☐ Comp ☐ Grab	Collection (comp begin or grab) Date 1/11/21 Time 3:55	Eastern / Central	Composite end Date	Time	Bottle Group(s)				
Field ID: Control Site	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen 10.9	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
WIN/STORET #	Temp (C) 9.44	pH 5.7	Sample Depth .15	☐ ft ☑ m	Sp. Conductance (umho/cm) 65.8					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments: Ortho Phosphate not filtered							
Location: FSH	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 1/11/21 Time 3:55pm	Eastern / Central	Composite end Date	Time	Bottle Group(s)				
Field ID: Control Site	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen 10.9	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		D				
WIN/STORET #	Temp (C) 9.44	pH 5.7	Sample Depth 0.15	☐ ft ☑ m	Sp. Conductance (umho/cm) 65.8					
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
[signature]	1/12/21 09:16	Hand	3	Tyler Reynolds	01/12/2021 @ 9:10

Request Number: RQ-2020-12-28-02

FYI5 FL0031402 Florida State Hospital WWTP Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Page 1 of 2

last revised Jan 25, 2018

Requester: Elaine Ignacio

Field Report Prepared By:

Collected By:

Sampling Agency: FDEP-NWD

Location: FLORIDA STATE HOSPITAL FL0031402	☒ Comp ☐ Grab	Collection (comp begin or grab) Date 1/12/21 Time 6:00am	Eastern / Central	Composite end Date 1/13/21 Time 6:00am			Bottle Group(s) (See pg 2)
Field ID: COMPOSITE	Matrix (type, e.g., Salt, Fresh, etc): EFFLUENT		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				
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
Kevin Grace	11:26 am			IM	1/13/21 11:26

Request Number: RQ-2020-12-28-02

FYI5 FL0031402 Florida State Hospital WWTP Sampling Inspection

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Requester: Elaine Ignacio

Field Report Prepared By: Kevin Grace

Collected By:

Sampling Agency:

Location: Florida State Hospital WWTP	☒ Comp ☐ Grab	Collection (comp begin or grab) Date 1/14/21 Time 5:00	Eastern Central	Composite end Date 1/15/21 Time 5:00	Bottle Group(s) (See pg 2): B				
Field ID: Composite	Matrix (type, e.g., Salt, Fresh, etc): effluent			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						
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
Kevin Grace	1/15/21 1130	HD	1	Lauren Jordan 1.15.21 / 1150	1/15/21 1136

Appendix D. Physical/ Chemical and Habitat Assessment Field Sheets

81823

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: FDEP		STORET STATION NUMBER: 31010162	DATE (MM/DD/YY): 1/11/21	RECEIVING BODY OF WATER:
REMARKS:	COUNTY:	LOCATION: FSH Control		FIELD ID/NAME:

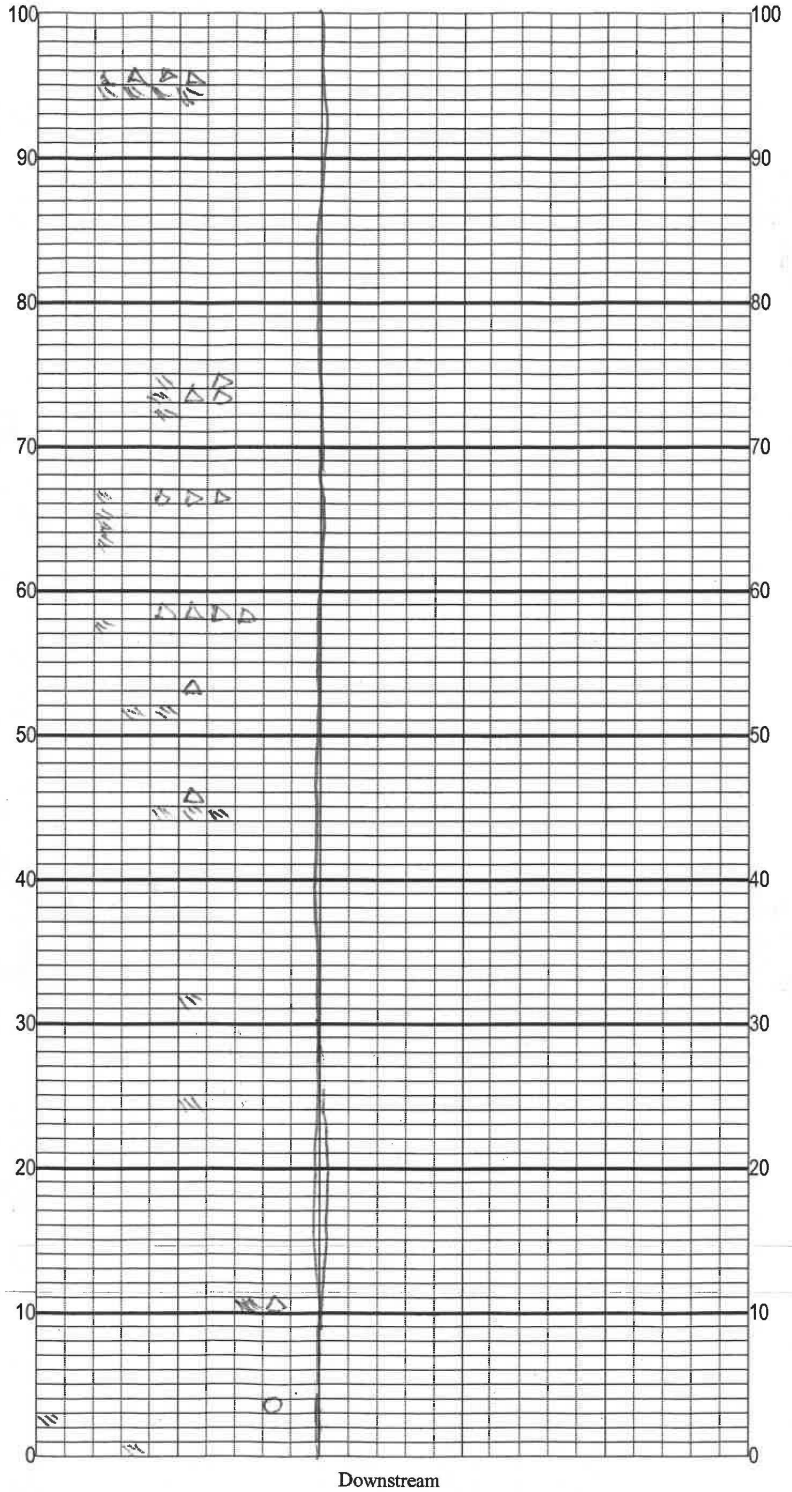
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 10	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed (10) 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 4	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity 17	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 (17) 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering 18 Primary Score 49	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 (19) 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank 5 Left Bank 5	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. (5)	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas. (3) 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 10	Width of vegetation greater than 18 m (10) 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 68	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. (10) 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

117 **TOTAL SCORE**

Date: 1/11/21	Analyst: Todd Risk	Signature:

62-160.800, F.A.C. Revision Date: January 2017

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Location: Mosquito Control

Date: 1/11/21

Sampler: T. Risk

100 m: Latitude	
Longitude	
0 m: Latitude	
Longitude	

Substrates: Code key, draw proportionate habitat abundance.	%
Snags	
Roots/undercut banks	
Leaf Packs (or mats)	
Aquatic Macrophytes	
Pools	total # observed = ____ # range expected = ____

Average width ~~20~~ 15 m

Average depth .75 m

Velocity measured at ____ meter mark.

WQ & chemistry taken at ____ meter mark.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

62-160.800, F.A.C

Revision Date: January 2017

81823

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: FSH Control | County: | Date: | Investigators: R.SK / Dragon

STORET Station Number:

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1			
	2			
	3			
	4			
	5			13
	6			
	7			
	8			
	9			
10	1			
	2			
	3			
	4			
	5			20
	6			
	7			
	8			
	9			
20	1			
	2			
	3			
	4			
	5			33
	6			
	7			
	8			
	9			
30	1			
	2			
	3			
	4			
	5			19
	6			
	7			
	8			
	9			
40	1			
	2			
	3			
	4			
	5			46
	6			
	7			
	8			
	9			
50	1			
	2			
	3			
	4			
	5			31
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1			
	2			
	3			
	4			
	5			55
	6			
	7			
	8			
	9			
70	1			
	2			
	3			
	4			
	5			17
	6			
	7			
	8			
	9			
80	1			
	2			
	3			
	4			
	5			
	6			41
	7			
	8			
	9			
90	1			
	2			
	3			
	4			
	5			39
	6			
	7			
	8			
	9			
100	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			

Secchi depth	
Estimated?	
# points ranked 4-6	
total points assessed	
% points ranked 4-6	

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	
SCI/Biorecon	
Water sample	
RQ-	

Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

blocked by trees

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

62-160.800, F.A.C. Revision Date: January 2017

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE _____

COUNTY _____ STORET # _____ LONGITUDE _____

DATE 1/11/21 TIME 1555 SAMPLING AGENCY FDEP

SITE NAME _____

FIELD ID/NAME FSH Control RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) :

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)

Landscape Development Intensity Index (LDI): _____

Local Watershed Erosion (select one) : ☐ None ☐ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : >20 Right Bank : >20

Hydrologic Modification Score (per FT 3101): _____

High Water Mark: 2 (m) + .75 (present depth) = 2.75 (above bed)

Artificially Impounded ☐ Yes ☒ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
15 m wide

m/s	.27 m/s	m/s
m deep	.75 m deep	m deep

Artificially Channelized : ☒ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ Recent, severe

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

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse

Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify) :

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☒	☐	☐
Silt Smothering:	☐	☒	☐	☐
Algae Smothering:	☒	☐	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☐ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)		7	
Undercut Banks / Roots			
Leaf Packs or Mat		7	
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....		6	
Mud / Muck / Silt			
Other			
Other			

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☐	☐	☐	☐
Fish:	☐	☐	☐	☒
Aquatic Plants:	☐	☒	☐	☐
Iron/Sulfur Bacteria:	☒	☐	☐	☐

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :								
Mid:								☐ VOB
Bottom								TOTAL DEPTH

Meter ID: _____

Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No
Sample Preserved? ☐ Yes ☐ No
Lot Number: _____ Exp: _____

Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☒ No
Sample Preserved? ☐ Yes ☐ No
Lot Number: _____ Exp: _____

Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:
showers. Cloudy.

☐ The antecedent hydrologic conditions have been met to my b



SAMPLING TEAM Todd Risk, Rachael Dragon

SIGNATURE : _____

DATE : 1/11/21

62-160.800, F.A.C.

Revision Date: January 2017

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: DEP		STORET STATION NUMBER:	DATE (MM/DD/YY): 1/11/21	RECEIVING BODY OF WATER:
REMARKS:	COUNTY:	LOCATION: FSH Test		FIELD ID/NAME:

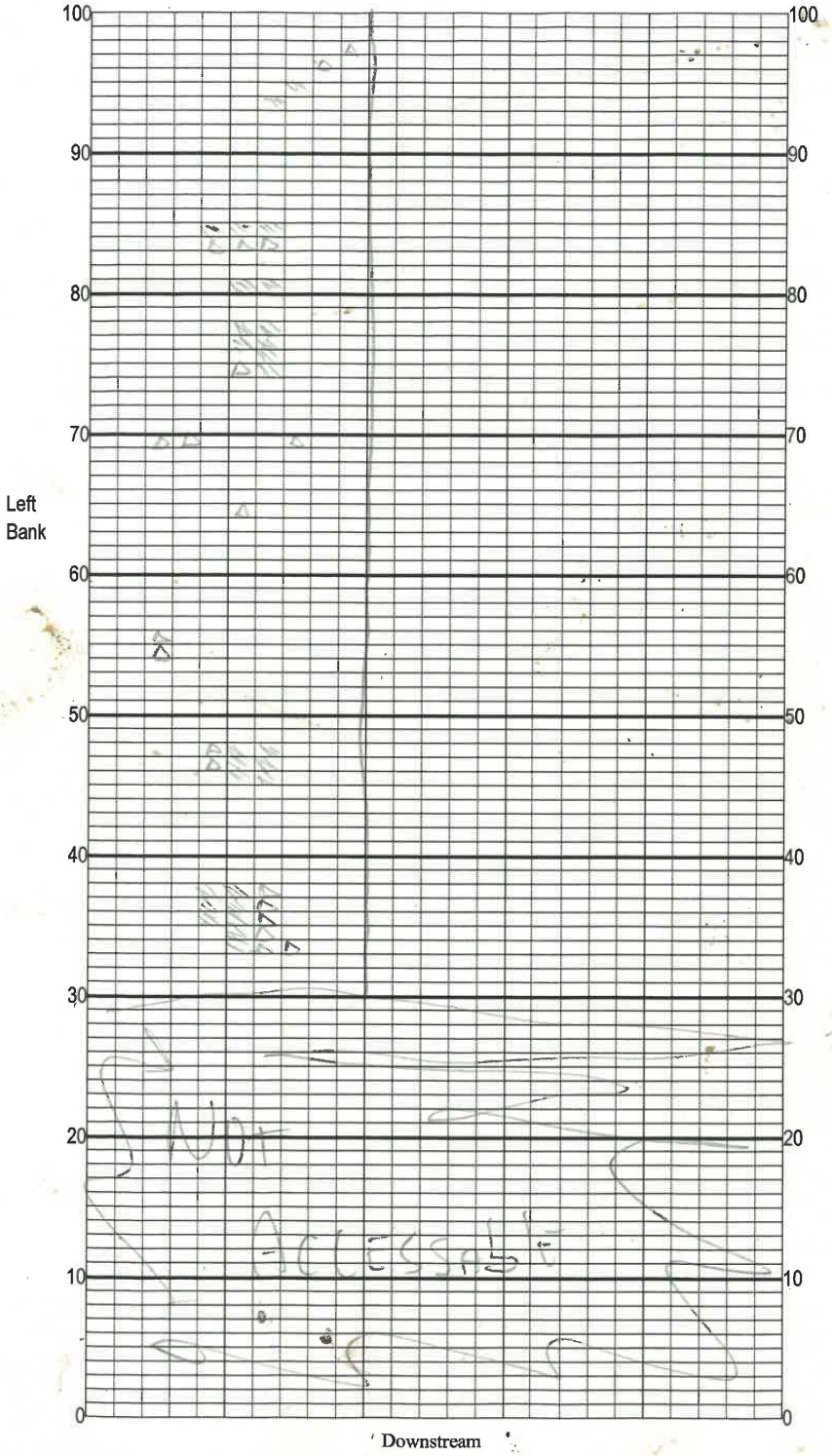
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 9	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 (9) 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 6	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 (6)	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity 12	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 (18) 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering 18 Primary Score 51	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 (18) 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank 4 Left Bank 3	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 (4)	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas. (3) 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 10	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 67	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. (10) 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

118 **TOTAL SCORE**

Date: 1/11/21	Analyst: TDS	Signature: TDS R.SH

62-160.800, F.A.C. Revision Date: January 2017

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Location: FSH Test

Date: 11/11/21

Sampler: Tom Rich

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

- Snags _____
- Roots/undercut banks _____
- Leaf Packs (or mats) _____
- Aquatic Macrophytes _____
- _____ _____
- _____ _____
- Pools total # observed = _____ # range expected = _____

Average width 15 m
Average depth .75 m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ meter mark.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

22 %
30 %

62-160.800, F.A.C

Revision Date: January 2017

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE _____

COUNTY _____ STORET # _____ LONGITUDE _____

DATE _____ TIME _____ SAMPLING AGENCY FSH

SITE NAME FSH TEST

FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)

Landscape Development Intensity Index (LDI)

Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank: >20 Right Bank: >20

Hydrologic Modification Score (per FT 3101)

High Water Mark: 3.5 (m.) + .25 (above present water level) = 3 (present depth) (above bed)

Artificially Impounded ☐ Yes ☑ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

17 m wide

m/s	m/s	m/s
m deep	m deep	m deep

Artificially Channelized: ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ Recent, severe

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

SEDIMENT / SUBSTRATE

Sediment Oils ☑ Absent ☐ Slight ☐ Moderate ☐ Profuse

Sediment Odors ☑ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify):

Smothering of Substrates

Sand Smothering:	None ☐	Slight ☑	Moderate ☐	Severe ☐
Silt Smothering:	None ☐	Slight ☑	Moderate ☐	Severe ☐
Algae Smothering:	None ☑	Slight ☐	Moderate ☐	Severe ☐

SUBSTRATE TYPE

Assessment Tool: ☑ SCI ☑ RPS ☐ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)		7	
Undercut Banks / Roots			
Leaf Packs or Mat		7	
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....		6	
Mud / Muck / Silt			
Other			
Other			

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☑	☐	☐	☐
Fish:	☐	☐	☐	☑
Aquatic Plants:	☑	☐	☐	☐
Iron/Sulfur Bacteria:	☑	☐	☐	☐

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :								
Mid:								☐ VOB
Bottom								TOTAL DEPTH

Meter ID:

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☑ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☑ Yes ☐ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: _____ Exp: _____

Color Tannic ☐ Green (Algae) ☐ Clear ☑ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☑ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: _____ Exp: _____

Clarity Clear ☐ Slightly Turbid ☑ Turbid ☐ Opaque ☐

System Type: Stream ☑ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

(cloudy. Shower)

☐ The antecedent hydrologic conditions have been met to my b



SAMPLING TEAM Diego / R. SK

SIGNATURE : _____ DATE : 1/11/21

62-160.800, F.A.C. Revision Date: January 2017

81824

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Test Site | County: | Date: | Investigators:

STORET Station Number:

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
10	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
20	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
30	1			
	2			
	3			
	4			
	5			
	6			23
	7			
	8			
	9			
40	1	N		
	2	N		
	3	N	X	
	4	N	X	
	5	N		
	6	D		41
	7			
	8	C		
	9			
50	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	X	
	2			
	3			
	4			
	5			76
	6			
	7			
	8			
	9			
70	1			
	2			
	3			
	4			53
	5			
	6			
	7			
	8			
	9			
80	1	N	X	
	2	N	X	
	3	N	X	
	4	N	X	
	5			
	6			5
	7			
	8			
	9			
90	1			
	2			
	3			
	4			
	5			75
	6			
	7			
	8			
	9			
100	1			
	2			
	3		X	
	4	N	X	
	5			16
	6			
	7			
	8	N	X	
	9			

Secchi depth	
Estimated?	

# points ranked 4-6	
total points assessed	
% points ranked 4-6	

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	
SCI/Biorecon	
Water sample	
RQ-	

Algal Thickness Rank	
N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

0-30m & 50m Not Accessable

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

62-160.800, F.A.C. Revision Date: January 2017

Appendix E. Chemical Analysis of Effluent and Receiving Water

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 13:15	Effluent Grab	AGP/LN	Algal Growth Potential	135	mg DryWt/L	0.300	0.900
1/11/2021 13:15	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.90 U	µg/L	0.90	2.7
1/11/2021 13:15	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.2	µg/L	0.82	2.5
1/11/2021 13:15	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	3.3	µg/L	0.60	1.8
1/11/2021 13:15	Effluent Grab	Microbiology	Fecal Coliforms-Membrane Filter	2 U	cfu/100 mL	2	2
1/11/2021 13:15	Effluent Grab	Microbiology	Escherichia Coli-Quanti-Tray	1.0 U	MPN/100 mL	1.0	1.0
1/11/2021 13:15	Effluent Grab	Nutrients	Total Alkalinity	67	mg CaCO3/L	0.65	2.5
1/11/2021 13:15	Effluent Grab	Nutrients	Chloride	24	mg Cl/L	0.20	0.50
1/11/2021 13:15	Effluent Grab	Nutrients	Ammonia-N	0.64	mg N/L	0.020	0.050
1/11/2021 13:15	Effluent Grab	Nutrients	NO2NO3-N	7.9	mg N/L	0.20	0.50
1/11/2021 13:15	Effluent Grab	Nutrients	Organic Carbon	2.1	mg C/L	0.50	1.0
1/11/2021 13:15	Effluent Grab	Nutrients	Total-P	1.2	mg P/L	0.025	0.25
1/11/2021 13:15	Effluent Grab	Nutrients	Color (true)	5.3 I	PCU	2.5	6.0
1/11/2021 13:15	Effluent Grab	Nutrients	Kjeldahl Nitrogen	1.2	mg N/L	0.080	0.20
1/11/2021 13:15	Effluent Grab	Nutrients	Fluoride	0.087 I	mg F/L	0.035	0.10
1/11/2021 13:15	Effluent Grab	Nutrients	Turbidity	2.3	NTU	0.10	0.13
1/11/2021 13:15	Effluent Grab	Nutrients	O-Phosphate-P	0.99	mg P/L	0.040	0.10
1/11/2021 13:15	Effluent Grab	Nutrients	Sulfate	21	mg SO4/L	0.20	0.50
1/11/2021 13:15	Effluent Grab	Pesticides	Terbuthylazine	0.41 U	ng/L	0.41	1.6
1/11/2021 13:15	Effluent Grab	Pesticides	Sucralose	19	µg/L	0.010	0.040
1/11/2021 13:15	Effluent Grab	Pesticides	Difenoconazole	0.57 U	ng/L	0.57	2.3
1/11/2021 13:15	Effluent Grab	Pesticides	Fenbuconazole	0.12 U	ng/L	0.12	0.48
1/11/2021 13:15	Effluent Grab	Pesticides	Flutolanil	0.096 U	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Fonofos	0.19 U	ng/L	0.19	0.77
1/11/2021 13:15	Effluent Grab	Pesticides	Imazalil	0.72 U	ng/L	0.72	2.9
1/11/2021 13:15	Effluent Grab	Pesticides	Mevinphos	1.0 U	ng/L	1.0	4.0
1/11/2021 13:15	Effluent Grab	Pesticides	Molinate	0.29 U	ng/L	0.29	1.1
1/11/2021 13:15	Effluent Grab	Pesticides	Atrazine Desethyl	1.4 U	ng/L	1.4	5.7
1/11/2021 13:15	Effluent Grab	Pesticides	Butylate	0.38 U	ng/L	0.38	1.5
1/11/2021 13:15	Effluent Grab	Pesticides	Propiconazole	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Sulfentrazone	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.048 U	ng/L	0.048	0.19

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 13:15	Effluent Grab	Pesticides	Diazinon	0.15 I	ng/L	0.12	0.48
1/11/2021 13:15	Effluent Grab	Pesticides	Dimethenamid	0.096 U	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Ethion	0.14 U	ng/L	0.14	0.57
1/11/2021 13:15	Effluent Grab	Pesticides	Fluazifop-P-butyl	0.096 U	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Metribuzin	3.1 U	ng/L	3.1	12
1/11/2021 13:15	Effluent Grab	Pesticides	Norflurazon	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Oxyfluorfen	0.14 U	ng/L	0.14	0.57
1/11/2021 13:15	Effluent Grab	Pesticides	Parathion Ethyl	0.24 U	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Pyriproxyfen	0.12 U	ng/L	0.12	0.48
1/11/2021 13:15	Effluent Grab	Pesticides	Cyanazine	3.1 U	ng/L	3.1	12
1/11/2021 13:15	Effluent Grab	Pesticides	Fipronil	0.67 I	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Oxadiazon	0.29 U	ng/L	0.29	1.1
1/11/2021 13:15	Effluent Grab	Pesticides	Simazine	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Disulfoton	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Dithiopyr	0.17 U	ng/L	0.17	0.67
1/11/2021 13:15	Effluent Grab	Pesticides	EPTC	1.2 U	ng/L	1.2	4.8
1/11/2021 13:15	Effluent Grab	Pesticides	Fipronil Sulfone	0.63	ng/L	0.14	0.57
1/11/2021 13:15	Effluent Grab	Pesticides	Hexazinone	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Metalaxyl	0.72 U	ng/L	0.72	2.9
1/11/2021 13:15	Effluent Grab	Pesticides	Bromacil	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Terbufos	0.096 U	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Naproxen	0.0080 U	µg/L	0.0080	0.032
1/11/2021 13:15	Effluent Grab	Pesticides	Fenamiphos	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Metolachlor	0.34 U	ng/L	0.34	1.3
1/11/2021 13:15	Effluent Grab	Pesticides	Prodiamine	0.17 UJ	ng/L	0.17	0.67
1/11/2021 13:15	Effluent Grab	Pesticides	Prometryn	0.19 U	ng/L	0.19	0.77
1/11/2021 13:15	Effluent Grab	Pesticides	Atrazine	0.28 I	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Azoxystrobin	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Ametryn	0.57 U	ng/L	0.57	2.3
1/11/2021 13:15	Effluent Grab	Pesticides	Fipronil Sulfide	0.15 I	ng/L	0.14	0.57
1/11/2021 13:15	Effluent Grab	Pesticides	Fludioxonil	0.12 U	ng/L	0.12	0.48
1/11/2021 13:15	Effluent Grab	Pesticides	Iprodione	0.57 U	ng/L	0.57	2.3
1/11/2021 13:15	Effluent Grab	Pesticides	Naled	1.4 U	ng/L	1.4	5.7
1/11/2021 13:15	Effluent Grab	Pesticides	Prometon	0.86 U	ng/L	0.86	3.4

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 13:15	Effluent Grab	Pesticides	Azinphos Methyl	1.9 U	ng/L	1.9	7.7
1/11/2021 13:15	Effluent Grab	Pesticides	Carfentrazone Ethyl	0.096 U	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.24 U	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Fluxapyroxad	0.13 I	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Myclobutanil	0.24 U	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Phorate	0.50 U	ng/L	0.50	2.0
1/11/2021 13:15	Effluent Grab	Pesticides	Carbophenothion	0.48 U	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Pesticides	Ibuprofen	0.020 U	µg/L	0.020	0.080
1/11/2021 13:15	Effluent Grab	Pesticides	Acetochlor	0.24 U	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Alachlor	0.24 U	ng/L	0.24	0.96
1/11/2021 13:15	Effluent Grab	Pesticides	Demeton	1.4 UJ	ng/L	1.4	5.7
1/11/2021 13:15	Effluent Grab	Pesticides	Ethoprop	0.096 U	ng/L	0.096	0.38
1/11/2021 13:15	Effluent Grab	Pesticides	Fipronil Desulfinyl	0.12 U	ng/L	0.12	0.48
1/11/2021 13:15	Effluent Grab	Pesticides	Flumioxazin	1.7 U	ng/L	1.7	6.7
1/11/2021 13:15	Effluent Grab	Pesticides	Malathion	0.34 U	ng/L	0.34	1.3
1/11/2021 13:15	Effluent Grab	Pesticides	Parathion Methyl	0.53 U	ng/L	0.53	2.1
1/11/2021 13:15	Effluent Grab	Pesticides	Pendimethalin	0.96 U	ng/L	0.96	3.8
1/11/2021 13:15	Effluent Grab	Pesticides	Pronamide	0.14 U	ng/L	0.14	0.57
1/11/2021 13:15	Effluent Grab	Pesticides	Tebuconazole	1.2 I	ng/L	0.48	1.9
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.020	0.080
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Acenaphthylene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	µg/L	0.94	3.8
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Phenanthrene	0.094 U	µg/L	0.094	0.38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	9.4 U	µg/L	9.4	38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	4-Nitrophenol	9.4 U	µg/L	9.4	38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Acenaphthene	0.024 U	µg/L	0.024	0.094

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	µg/L	1.9	7.5
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Di-n-butyl phthalate	1.9 U	µg/L	1.9	7.5
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Naphthalene	0.094 U	µg/L	0.094	0.38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Pyrene	0.094 U	µg/L	0.094	0.38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2-Chlorophenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	µg/L	2.8	11
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2,4-Dimethylphenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Dimethyl phthalate	0.19 U	µg/L	0.19	0.75
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Hexachloroethane	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Chrysene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Hexachlorobutadiene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Pentachlorophenol	0.47 U	µg/L	0.47	1.9
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Phenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Benzidine	9.4 U	µg/L	9.4	38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Fluorene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Hexachlorobenzene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Nitrobenzene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.024 U	µg/L	0.024	0.094
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2-Nitrophenol	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrophenol	9.4 U	µg/L	9.4	38
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Anthracene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Diethyl phthalate	1.9 U	µg/L	1.9	7.5

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	4.7 U	µg/L	4.7	19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Fluoranthene	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Priority Organic Pollutants	Isophorone	0.047 U	µg/L	0.047	0.19
1/11/2021 13:15	Effluent Grab	Nutrients	Specific Conductance	347.9	µmhos/cm		
1/11/2021 13:15	Effluent Grab	Nutrients	Total Residual Chlorine	.01	mg/L		
1/11/2021 13:15	Effluent Grab	Nutrients	Dissolved Oxygen	89.9	%Sat		
1/11/2021 13:15	Effluent Grab	Nutrients	pH	7.01			
1/11/2021 13:15	Effluent Grab	Nutrients	Temperature	15.3	C		
1/11/2021 7:00	Effluent Composite	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	13	mg/L		
1/11/2021 7:00	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	100	NOEC		
1/11/2021 7:00	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	100 L	IC25		
1/11/2021 7:00	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	No result	IC25		
1/11/2021 7:00	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	No result	NOEC		
1/11/2021 7:00	Effluent Composite	Metals	Calcium	32.5	mg/L	0.075	0.30
1/11/2021 7:00	Effluent Composite	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
1/11/2021 7:00	Effluent Composite	Metals	Silver	0.010 U	µg/L	0.010	0.040
1/11/2021 7:00	Effluent Composite	Metals	Nickel	0.79 I	µg/L	0.50	2.0
1/11/2021 7:00	Effluent Composite	Metals	Chromium	0.40 U	µg/L	0.40	1.6
1/11/2021 7:00	Effluent Composite	Metals	Selenium	0.75 I	µg/L	0.20	0.80
1/11/2021 7:00	Effluent Composite	Metals	Lead	0.20 U	µg/L	0.20	0.40
1/11/2021 7:00	Effluent Composite	Metals	Arsenic	0.64	µg/L	0.050	0.20
1/11/2021 7:00	Effluent Composite	Metals	Aluminum	135	µg/L	5.0	20
1/11/2021 7:00	Effluent Composite	Metals	Sodium	43.8	mg/L	0.50	2.0
1/11/2021 7:00	Effluent Composite	Metals	Iron	170	µg/L	30	120
1/11/2021 7:00	Effluent Composite	Metals	Hardness	111	mg/L	0.35	1.4
1/11/2021 7:00	Effluent Composite	Metals	Copper	3.44	µg/L	0.40	0.80
1/11/2021 7:00	Effluent Composite	Metals	Magnesium	7.24	mg/L	0.040	0.16
1/11/2021 7:00	Effluent Composite	Metals	Zinc	11 I	µg/L	5.0	20
1/11/2021 7:00	Effluent Composite	Metals	Potassium	3.9	mg/L	0.30	1.2
1/11/2021 7:00	Effluent Composite	Nutrients	Organic Carbon	2.2	mg C/L	0.50	1.0
1/11/2021 7:00	Effluent Composite	Nutrients	Total-P	1.4	mg P/L	0.025	0.25
1/11/2021 7:00	Effluent Composite	Nutrients	Ammonia-N	0.56	mg N/L	0.020	0.050
1/11/2021 7:00	Effluent Composite	Nutrients	Kjeldahl Nitrogen	2.0	mg N/L	0.080	0.20

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 7:00	Effluent Composite	Nutrients	NO2NO3-N	7.7	mg N/L	0.20	0.50
1/11/2021 7:00	Effluent Composite	Nutrients	TSS	2 I	mg/L	2.0	10
1/11/2021 15:45	Test Site	AGP/LN	Algal Growth Potential	6.36	mg DryWt/L	0.300	0.900
1/11/2021 15:45	Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.82 U	µg/L	0.82	2.5
1/11/2021 15:45	Test Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.90 U	µg/L	0.90	2.7
1/11/2021 15:45	Test Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.2 J	mg/L		
1/11/2021 15:45	Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	0.84 I	µg/L	0.60	1.8
1/11/2021 15:45	Test Site	Microbiology	Escherichia Coli-Quanti-Tray	78.9 Q	MPN/100 mL	1.0	1.0
1/11/2021 15:45	Test Site	Microbiology	Fecal Coliforms-Membrane Filter	60 Q	cfu/100 mL	2	2
1/11/2021 15:45	Test Site	Metals	Lead	0.29 I	µg/L	0.20	0.40
1/11/2021 15:45	Test Site	Metals	Iron	730	µg/L	30	120
1/11/2021 15:45	Test Site	Metals	Calcium	5.89	mg/L	0.075	0.30
1/11/2021 15:45	Test Site	Metals	Sodium	2.4	mg/L	0.50	2.0
1/11/2021 15:45	Test Site	Metals	Potassium	1.0 I	mg/L	0.30	1.2
1/11/2021 15:45	Test Site	Metals	Aluminum	370	µg/L	5.0	20
1/11/2021 15:45	Test Site	Metals	Silver	0.010 U	µg/L	0.010	0.040
1/11/2021 15:45	Test Site	Metals	Selenium	0.20 U	µg/L	0.20	0.80
1/11/2021 15:45	Test Site	Metals	Copper	0.87	µg/L	0.40	0.80
1/11/2021 15:45	Test Site	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
1/11/2021 15:45	Test Site	Metals	Hardness	26.4	mg/L	0.35	1.4
1/11/2021 15:45	Test Site	Metals	Nickel	0.50 U	µg/L	0.50	2.0
1/11/2021 15:45	Test Site	Metals	Chromium	0.54 I	µg/L	0.40	1.6
1/11/2021 15:45	Test Site	Metals	Arsenic	0.31	µg/L	0.050	0.20
1/11/2021 15:45	Test Site	Metals	Magnesium	2.84	mg/L	0.040	0.16
1/11/2021 15:45	Test Site	Metals	Zinc	5.0 U	µg/L	5.0	20
1/11/2021 15:45	Test Site	Nutrients	Total Alkalinity	18	mg CaCO3/L	0.65	2.5
1/11/2021 15:45	Test Site	Nutrients	Organic Carbon	5.2	mg C/L	0.50	1.0
1/11/2021 15:45	Test Site	Nutrients	NO2NO3-N	0.87	mg N/L	0.0080	0.020
1/11/2021 15:45	Test Site	Nutrients	Total-P	0.038	mg P/L	0.0020	0.0050
1/11/2021 15:45	Test Site	Nutrients	O-Phosphate-P	0.019 Y	mg P/L	0.0040	0.010
1/11/2021 15:45	Test Site	Nutrients	Fluoride	0.047 I	mg F/L	0.035	0.10
1/11/2021 15:45	Test Site	Nutrients	TSS	2 U	mg/L	2.0	10
1/11/2021 15:45	Test Site	Nutrients	Turbidity	8.2	NTU	0.10	0.13
1/11/2021 15:45	Test Site	Nutrients	Kjeldahl Nitrogen	0.34	mg N/L	0.080	0.20

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 15:45	Test Site	Nutrients	Ammonia-N	0.017	mg N/L	0.0020	0.0050
1/11/2021 15:45	Test Site	Nutrients	Chloride	5.0	mg Cl/L	0.20	0.50
1/11/2021 15:45	Test Site	Nutrients	Color (true)	65 A	PCU	2.5	6.0
1/11/2021 15:45	Test Site	Nutrients	Sulfate	1.1	mg SO4/L	0.20	0.50
1/11/2021 15:45	Test Site	Pesticides	Sucralose	0.042	µg/L	0.010	0.040
1/11/2021 15:45	Test Site	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.020	0.080
1/11/2021 15:45	Test Site	Nutrients	pH	5.5			
1/11/2021 15:45	Test Site	Nutrients	Dissolved Oxygen	10.86	mg/L		
1/11/2021 15:45	Test Site	Nutrients	Temperature	9.43	C		
1/11/2021 15:45	Test Site	Nutrients	Specific Conductance	65.3	µmhos/cm		
1/11/2021 15:45	Test Site	Nutrients	Sample Depth	0.25	m		
1/11/2021 15:45	Test Site	Nutrients	pH	5.5			
1/11/2021 15:45	Test Site	Nutrients	Temperature	9.43	C		
1/11/2021 15:45	Test Site	Nutrients	Sample Depth	0.25	m		
1/11/2021 15:45	Test Site	Nutrients	Specific Conductance	65.3	µmhos/cm		
1/11/2021 15:45	Test Site	Nutrients	Dissolved Oxygen	10.86	mg/L		
1/11/2021 15:45	Test Site	Nutrients	Sample Depth	0.25	m		
1/11/2021 15:45	Test Site	Nutrients	Specific Conductance	65.3	µmhos/cm		
1/11/2021 15:45	Test Site	Nutrients	pH	5.5			
1/11/2021 15:45	Test Site	Nutrients	Temperature	9.43	C		
1/11/2021 15:45	Test Site	Nutrients	Dissolved Oxygen	10.86	mg/L		
1/11/2021 15:45	Test Site	Nutrients	pH	5.5			
1/11/2021 15:45	Test Site	Nutrients	Temperature	9.43	C		
1/11/2021 15:45	Test Site	Nutrients	Sample Depth	0.25	m		
1/11/2021 15:45	Test Site	Nutrients	Specific Conductance	65.3	µmhos/cm		
1/11/2021 15:45	Test Site	Nutrients	Dissolved Oxygen	10.86	mg/L		
1/11/2021 15:55	Control Site	AGP/LN	Algal Growth Potential	6.38	mg DryWt/L	0.300	0.900
1/11/2021 15:55	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	0.74 I	µg/L	0.60	1.8
1/11/2021 15:55	Control Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.3	mg/L		
1/11/2021 15:55	Control Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.90 U	µg/L	0.90	2.7
1/11/2021 15:55	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.82 U	µg/L	0.82	2.5
1/11/2021 15:55	Control Site	Microbiology	Fecal Coliforms-Membrane Filter	38 BQ	cfu/100 mL	2	2
1/11/2021 15:55	Control Site	Microbiology	Escherichia Coli-Quanti-Tray	93.3 Q	MPN/100 mL	1.0	1.0
1/11/2021 15:55	Control Site	Metals	Zinc	5.0 U	µg/L	5.0	20

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 15:55	Control Site	Metals	Aluminum	337	µg/L	5.0	20
1/11/2021 15:55	Control Site	Metals	Arsenic	0.32	µg/L	0.050	0.20
1/11/2021 15:55	Control Site	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
1/11/2021 15:55	Control Site	Metals	Calcium	5.99	mg/L	0.075	0.30
1/11/2021 15:55	Control Site	Metals	Magnesium	2.86	mg/L	0.040	0.16
1/11/2021 15:55	Control Site	Metals	Sodium	2.5	mg/L	0.50	2.0
1/11/2021 15:55	Control Site	Metals	Silver	0.010 U	µg/L	0.010	0.040
1/11/2021 15:55	Control Site	Metals	Potassium	1.0 I	mg/L	0.30	1.2
1/11/2021 15:55	Control Site	Metals	Copper	0.84	µg/L	0.40	0.80
1/11/2021 15:55	Control Site	Metals	Hardness	26.7	mg/L	0.35	1.4
1/11/2021 15:55	Control Site	Metals	Nickel	0.50 U	µg/L	0.50	2.0
1/11/2021 15:55	Control Site	Metals	Lead	0.27 I	µg/L	0.20	0.40
1/11/2021 15:55	Control Site	Metals	Iron	700	µg/L	30	120
1/11/2021 15:55	Control Site	Metals	Selenium	0.20 U	µg/L	0.20	0.80
1/11/2021 15:55	Control Site	Metals	Chromium	0.50 I	µg/L	0.40	1.6
1/11/2021 15:55	Control Site	Nutrients	TSS	2 U	mg/L	2.0	10
1/11/2021 15:55	Control Site	Nutrients	Total Alkalinity	18	mg CaCO3/L	0.65	2.5
1/11/2021 15:55	Control Site	Nutrients	Total-P	0.039	mg P/L	0.0020	0.0050
1/11/2021 15:55	Control Site	Nutrients	NO2NO3-N	0.87	mg N/L	0.0080	0.020
1/11/2021 15:55	Control Site	Nutrients	Kjeldahl Nitrogen	0.43	mg N/L	0.080	0.20
1/11/2021 15:55	Control Site	Nutrients	Turbidity	8.1	NTU	0.10	0.13
1/11/2021 15:55	Control Site	Nutrients	Sulfate	1.1	mg SO4/L	0.20	0.50
1/11/2021 15:55	Control Site	Nutrients	Fluoride	0.047 I	mg F/L	0.035	0.10
1/11/2021 15:55	Control Site	Nutrients	Color (true)	66	PCU	2.5	6.0
1/11/2021 15:55	Control Site	Nutrients	O-Phosphate-P	0.018 Y	mg P/L	0.0040	0.010
1/11/2021 15:55	Control Site	Nutrients	Chloride	4.9	mg Cl/L	0.20	0.50
1/11/2021 15:55	Control Site	Nutrients	Ammonia-N	0.017	mg N/L	0.0020	0.0050
1/11/2021 15:55	Control Site	Nutrients	Organic Carbon	5.3	mg C/L	0.50	1.0
1/11/2021 15:55	Control Site	Pesticides	Sucralose	0.040	µg/L	0.010	0.040
1/11/2021 15:55	Control Site	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.020	0.080
1/11/2021 15:55	Control Site	Nutrients	Temperature	9.44	C		
1/11/2021 15:55	Control Site	Nutrients	Dissolved Oxygen	10.9	mg/L		
1/11/2021 15:55	Control Site	Nutrients	pH	5.7			
1/11/2021 15:55	Control Site	Nutrients	Sample Depth	0.15	m		

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 15:55	Control Site	Nutrients	Specific Conductance	65.8	µmhos/cm		
1/11/2021 15:55	Control Site	Nutrients	pH	5.7			
1/11/2021 15:55	Control Site	Nutrients	Dissolved Oxygen	10.9	mg/L		
1/11/2021 15:55	Control Site	Nutrients	Specific Conductance	65.8	µmhos/cm		
1/11/2021 15:55	Control Site	Nutrients	Sample Depth	0.15	m		
1/11/2021 15:55	Control Site	Nutrients	Temperature	9.44	C		
1/11/2021 15:55	Control Site	Nutrients	Sample Depth	0.15	m		
1/11/2021 15:55	Control Site	Nutrients	Temperature	9.44	C		
1/11/2021 15:55	Control Site	Nutrients	pH	5.7			
1/11/2021 15:55	Control Site	Nutrients	Dissolved Oxygen	10.9	mg/L		
1/11/2021 15:55	Control Site	Nutrients	Specific Conductance	65.8	µmhos/cm		
1/11/2021 15:55	Control Site	Nutrients	pH	5.7			
1/11/2021 15:55	Control Site	Nutrients	Temperature	9.44	C		
1/11/2021 15:55	Control Site	Nutrients	Dissolved Oxygen	10.9	mg/L		
1/11/2021 15:55	Control Site	Nutrients	Sample Depth	0.15	m		
1/11/2021 15:55	Control Site	Nutrients	Specific Conductance	65.8	µmhos/cm		
1/11/2021 15:55	Control Site	Nutrients	Temperature	9.44	C		
1/11/2021 15:55	Control Site	Nutrients	Specific Conductance	65.8	µmhos/cm		
1/11/2021 15:55	Control Site	Nutrients	pH	5.7			
1/11/2021 15:55	Control Site	Nutrients	Dissolved Oxygen	10.9	mg/L		
1/11/2021 15:55	Control Site	Nutrients	Sample Depth	0.15	m		
1/11/2021 12:00	Blank	Metals	Sodium	0.50 U	mg/L	0.50	2.0
1/11/2021 12:00	Blank	Metals	Selenium	0.20 U	µg/L	0.20	0.80
1/11/2021 12:00	Blank	Metals	Copper	1.91	µg/L	0.40	0.80
1/11/2021 12:00	Blank	Metals	Nickel	0.50 U	µg/L	0.50	2.0
1/11/2021 12:00	Blank	Metals	Silver	0.010 U	µg/L	0.010	0.040
1/11/2021 12:00	Blank	Metals	Lead	0.50	µg/L	0.20	0.40
1/11/2021 12:00	Blank	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
1/11/2021 12:00	Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.30
1/11/2021 12:00	Blank	Metals	Zinc	5.0 U	µg/L	5.0	20
1/11/2021 12:00	Blank	Metals	Arsenic	0.050 U	µg/L	0.050	0.20
1/11/2021 12:00	Blank	Metals	Hardness	0.35 U	mg/L	0.35	1.4
1/11/2021 12:00	Blank	Metals	Iron	30 U	µg/L	30	120
1/11/2021 12:00	Blank	Metals	Potassium	0.30 U	mg/L	0.30	1.2

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 12:00	Blank	Metals	Aluminum	5.0 U	µg/L	5.0	20
1/11/2021 12:00	Blank	Metals	Magnesium	0.040 U	mg/L	0.040	0.16
1/11/2021 12:00	Blank	Metals	Chromium	0.40 U	µg/L	0.40	1.6
1/11/2021 12:00	Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
1/11/2021 12:00	Blank	Nutrients	Turbidity	0.10 U	NTU	0.10	0.13
1/11/2021 12:00	Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.20	0.50
1/11/2021 12:00	Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.10
1/11/2021 12:00	Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.080	0.20
1/11/2021 12:00	Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.20	0.50
1/11/2021 12:00	Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.0020	0.0050
1/11/2021 12:00	Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.0040	0.010
1/11/2021 12:00	Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.50	1.0
1/11/2021 12:00	Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6.0
1/11/2021 12:00	Blank	Nutrients	Total-P	0.002 U	mg P/L	0.0020	0.0050
1/11/2021 12:00	Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.0040	0.010
1/11/2021 12:00	Blank	Pesticides	Ethoprop	0.099 U	ng/L	0.099	0.40
1/11/2021 12:00	Blank	Pesticides	Fipronil Sulfide	0.15 U	ng/L	0.15	0.60
1/11/2021 12:00	Blank	Pesticides	Imazalil	0.74 U	ng/L	0.74	3.0
1/11/2021 12:00	Blank	Pesticides	Fenbuconazole	0.12 U	ng/L	0.12	0.50
1/11/2021 12:00	Blank	Pesticides	Iprodione	0.60 U	ng/L	0.60	2.4
1/11/2021 12:00	Blank	Pesticides	Prodiamine	0.17 UJ	ng/L	0.17	0.70
1/11/2021 12:00	Blank	Pesticides	Simazine	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Tebuconazole	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Acetochlor	0.25 U	ng/L	0.25	0.99
1/11/2021 12:00	Blank	Pesticides	Alachlor	0.25 U	ng/L	0.25	0.99
1/11/2021 12:00	Blank	Pesticides	Atrazine	0.25 U	ng/L	0.25	0.99
1/11/2021 12:00	Blank	Pesticides	Azinphos Methyl	2.0 U	ng/L	2.0	7.9
1/11/2021 12:00	Blank	Pesticides	Demeton	1.5 U	ng/L	1.5	6.0
1/11/2021 12:00	Blank	Pesticides	Fipronil Desulfinyl	0.12 U	ng/L	0.12	0.50
1/11/2021 12:00	Blank	Pesticides	Metribuzin	3.2 U	ng/L	3.2	13
1/11/2021 12:00	Blank	Pesticides	Fludioxonil	0.12 U	ng/L	0.12	0.50
1/11/2021 12:00	Blank	Pesticides	Ametryn	0.60 U	ng/L	0.60	2.4
1/11/2021 12:00	Blank	Pesticides	Dimethenamid	0.099 U	ng/L	0.099	0.40
1/11/2021 12:00	Blank	Pesticides	Fipronil	0.25 U	ng/L	0.25	0.99

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
1/11/2021 12:00	Blank	Pesticides	Fipronil Sulfone	0.15 U	ng/L	0.15	0.60
1/11/2021 12:00	Blank	Pesticides	Malathion	0.35 U	ng/L	0.35	1.4
1/11/2021 12:00	Blank	Pesticides	Carfentrazone Ethyl	0.099 U	ng/L	0.099	0.40
1/11/2021 12:00	Blank	Pesticides	Difenoconazole	0.60 U	ng/L	0.60	2.4
1/11/2021 12:00	Blank	Pesticides	Prometryn	0.20 U	ng/L	0.20	0.79
1/11/2021 12:00	Blank	Pesticides	Terbuthylazine	0.42 U	ng/L	0.42	1.7
1/11/2021 12:00	Blank	Pesticides	Carbophenothion	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Fonofos	0.20 U	ng/L	0.20	0.79
1/11/2021 12:00	Blank	Pesticides	Naled	1.5 U	ng/L	1.5	6.0
1/11/2021 12:00	Blank	Pesticides	Ibuprofen	0.020 U	µg/L	0.020	0.080
1/11/2021 12:00	Blank	Pesticides	Phorate	0.52 U	ng/L	0.52	2.1
1/11/2021 12:00	Blank	Pesticides	Prometon	0.89 U	ng/L	0.89	3.5
1/11/2021 12:00	Blank	Pesticides	Pronamide	0.15 U	ng/L	0.15	0.60
1/11/2021 12:00	Blank	Pesticides	Terbufos	0.099 U	ng/L	0.099	0.40
1/11/2021 12:00	Blank	Pesticides	Flumioxazin	1.7 U	ng/L	1.7	7.0
1/11/2021 12:00	Blank	Pesticides	Mevinphos	1.0 U	ng/L	1.0	4.2
1/11/2021 12:00	Blank	Pesticides	Parathion Ethyl	0.25 U	ng/L	0.25	0.99
1/11/2021 12:00	Blank	Pesticides	Butylate	0.40 U	ng/L	0.40	1.6
1/11/2021 12:00	Blank	Pesticides	Chlorpyrifos Ethyl	0.25 U	ng/L	0.25	0.99
1/11/2021 12:00	Blank	Pesticides	Disulfoton	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	EPTC	1.2 U	ng/L	1.2	5.0
1/11/2021 12:00	Blank	Pesticides	Ethion	0.15 U	ng/L	0.15	0.60
1/11/2021 12:00	Blank	Pesticides	Hexazinone	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Metolachlor	0.35 U	ng/L	0.35	1.4
1/11/2021 12:00	Blank	Pesticides	Norflurazon	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Naproxen	0.0080 U	µg/L	0.0080	0.032
1/11/2021 12:00	Blank	Pesticides	Fluazifop-P-butyl	0.099 U	ng/L	0.099	0.40
1/11/2021 12:00	Blank	Pesticides	Pyriproxyfen	0.12 U	ng/L	0.12	0.50
1/11/2021 12:00	Blank	Pesticides	Atrazine Desethyl	1.5 U	ng/L	1.5	6.0
1/11/2021 12:00	Blank	Pesticides	Cyanazine	3.2 U	ng/L	3.2	13
1/11/2021 12:00	Blank	Pesticides	Fenamiphos	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Metalaxyl	0.74 U	ng/L	0.74	3.0
1/11/2021 12:00	Blank	Pesticides	Sucralose	0.010 U	µg/L	0.010	0.040
1/11/2021 12:00	Blank	Pesticides	Flutolanil	0.099 U	ng/L	0.099	0.40

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1/11/2021 12:00	Blank	Pesticides	Fluxapyroxad	0.099 U	ng/L	0.099	0.40
1/11/2021 12:00	Blank	Pesticides	Myclobutanil	0.25 U	ng/L	0.25	0.99
1/11/2021 12:00	Blank	Pesticides	Oxyfluorfen	0.15 U	ng/L	0.15	0.60
1/11/2021 12:00	Blank	Pesticides	Pendimethalin	0.99 U	ng/L	0.99	4.0
1/11/2021 12:00	Blank	Pesticides	Sulfentrazone	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Bromacil	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Chlorpyrifos Methyl	0.050 U	ng/L	0.050	0.20
1/11/2021 12:00	Blank	Pesticides	Dithiopyr	0.17 U	ng/L	0.17	0.70
1/11/2021 12:00	Blank	Pesticides	Molinate	0.30 U	ng/L	0.30	1.2
1/11/2021 12:00	Blank	Pesticides	Oxadiazon	0.30 U	ng/L	0.30	1.2
1/11/2021 12:00	Blank	Pesticides	Parathion Methyl	0.55 U	ng/L	0.55	2.2
1/11/2021 12:00	Blank	Pesticides	Azoxystrobin	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Propiconazole	0.50 U	ng/L	0.50	2.0
1/11/2021 12:00	Blank	Pesticides	Diazinon	0.12 U	ng/L	0.12	0.50
1/11/2021 12:00	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	Fluorene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Isophorone	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Naphthalene	0.098 U	µg/L	0.098	0.39
1/11/2021 12:00	Blank	Priority Organic Pollutants	Pyrene	0.098 U	µg/L	0.098	0.39
1/11/2021 12:00	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	9.8 U	µg/L	9.8	39
1/11/2021 12:00	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	1,4-Dioxane	0.020 U	µg/L	0.020	0.080
1/11/2021 12:00	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Benzidine	9.8 U	µg/L	9.8	39
1/11/2021 12:00	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	µg/L	2.0	7.8
1/11/2021 12:00	Blank	Priority Organic Pollutants	Dimethyl phthalate	0.20 U	µg/L	0.20	0.78
1/11/2021 12:00	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Acenaphthylene	0.025 U	µg/L	0.025	0.098

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1/11/2021 12:00	Blank	Priority Organic Pollutants	Diethyl phthalate	2.0 U	µg/L	2.0	7.8
1/11/2021 12:00	Blank	Priority Organic Pollutants	2-Chlorophenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Pentachlorophenol	0.49 U	µg/L	0.49	2.0
1/11/2021 12:00	Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Fluoranthene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Phenanthrene	0.098 U	µg/L	0.098	0.39
1/11/2021 12:00	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	4-Nitrophenol	9.8 U	µg/L	9.8	39
1/11/2021 12:00	Blank	Priority Organic Pollutants	Anthracene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Hexachlorobenzene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Hexachlorobutadiene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	µg/L	2.0	7.8
1/11/2021 12:00	Blank	Priority Organic Pollutants	Nitrobenzene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Hexachloroethane	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Phenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	µg/L	2.9	12
1/11/2021 12:00	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Acenaphthene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	4.9 U	µg/L	4.9	20
1/11/2021 12:00	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.98 U	µg/L	0.98	3.9
1/11/2021 12:00	Blank	Priority Organic Pollutants	Chrysene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.025 U	µg/L	0.025	0.098
1/11/2021 12:00	Blank	Priority Organic Pollutants	2-Nitrophenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	0.049 U	µg/L	0.049	0.20
1/11/2021 12:00	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	9.8 U	µg/L	9.8	39
1/11/2021 12:00	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.025 U	µg/L	0.025	0.098