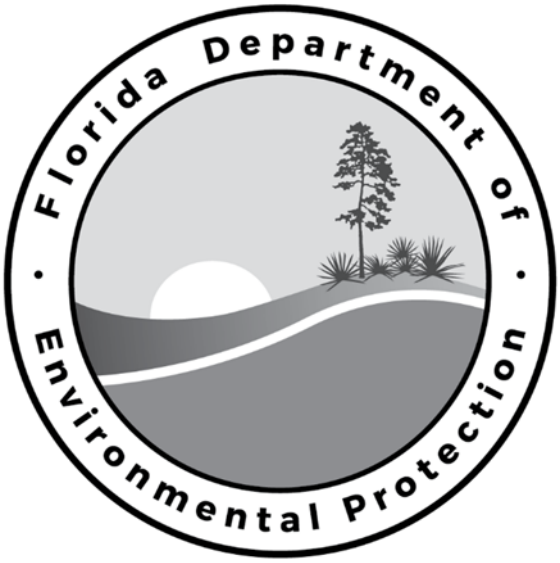


Biological Assessment of

Noma WWTF

Holmes County

NPDES # FL0040207

Sampled May 22, June 5, and July 6, 2017

March 2018

Biology Program

DEP Laboratory

Division of Environmental Assessment and Restoration

DEP Laboratory Quality Manual

NELAC Certification No. E31780

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EPA End Sheet

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 as listed on the Florida Department of State website, https://www.flrules.org/gateway/ruleno.asp?id=62-302.530. New limits for *Escherichia coli* (*E. coli*), enterococci, and total ammonia nitrogen have been approved but the updates will not be used in this report as the sampling occurred prior to their approval.

Facility Overview

The Noma Wastewater Treatment Facility is a Municipal Domestic Wastewater Treatment Facility. The effluent is discharged via pipe into Wrights Creek, a Class III Fresh Water. The permitted design flow of the wastewater system is 0.025 million gallons per day (MGD). The annual daily average flow for June 2016 to May 2017 for monitoring location D-001 was 0.028 MGD. The plant discharges intermittently using a sequencing batch reactor (SBR). The flow measured during this survey was 0.043 MGD (per NOMA facility staff). Both the annual average daily flow, and the flow during the survey exceeded the permitted capacity.

See the Facility Summary (Appendix B) for a description of the facility, summary of permit limits, and Discharge Monitoring Report (DMR) information.

Methods

Chemical and biological comparisons were made between a Control Site (located in Wrights Creek beginning 250m upstream of the point of discharge and ending 150m upstream of the point of discharge) and a Test Site (located in Wrights Creek beginning 10m downstream of the point of discharge and ending 110m downstream of the point of discharge) (see map Appendix A). Biological sampling was conducted on July 6, 2017. On May 22, 2017 effluent samples were taken as grab samples from monitoring location EFF-01, prior to dechlorination. There was one grab sample collected at EFD-01 for analysis of Total Residual Chlorine. Ammonia, nitrate-nitrite, total phosphorus, total kjeldahl nitrogen, and total organic carbon were re-sampled on 06/05/2017 due to improper preservation during the 05/22/17 sampling event. Test Site sample values may not reflect the 5/22/17 effluent water quality because they were collected on a different day. Toxicity testing was not required because Noma WWTF is considered a minor facility.

All field and laboratory methods followed DEP Standard Operating Procedures (see https://floridadep.gov/dear/florida-dep-laboratory/content/dep-laboratory-quality-assurance-manual-and-sops and https://floridadep.gov/dear/quality-assurance/content/dep-sops for details) and met DEP quality assurance/quality control standards (see http://www.dep.state.fl.us/water/sas/qa/index.htm). Explanations of specific methods and measurements can be found in Appendix C.

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

Results

Physical and Chemical Parameters (See Table 1 and Appendices C, D, E, and F)

- Habitat Assessment scores were different between the Control Site (125) and Test Site (97), which places the Control Site in the Optimal category and the Test Site in the Suboptimal category (category from Appendix C). Both the Control and Test Sites had similar water velocity, substrate diversity, and habitat smothering. The Control Site had much better availability of habitat and bank stabilization. While the Test Site had good sinuosity, it was more artificially channelized than the Control Site. The Test Site had less of a riparian zone buffer than the Control Site.
- It was noted by the samplers that sediments at Test Site had a sewage odor which was not observed at the Control Site. Sediment oils were also noted at the Test Site and none at the Control Site.
- The pH and the dissolved oxygen of the effluent, Test Site, and Control Site complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or effluent permit limits.
- The specific conductance of the Test and Control Sites complied with Class III Freshwater Quality Criteria. Effluent specific conductance was not measured.

Organic Constituents (See Appendix F)

- 2,4-D was detected in the effluent sample.

Nutrients (See Table 2 and Appendix F)

- Wrights Creek falls within the Panhandle West Nutrient Watershed Region for Numeric Nutrient Criteria (NNC). For this region, the NNC thresholds, expressed as annual geometric means, are 0.06 mg/L for total phosphorus and 0.67 mg/L for total nitrogen. This Fifth Year Inspection (FYI) event can only provide single sample results; therefore, compliance should be determined with additional sampling events. http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria
- Ortho-phosphate levels were similar between the Test and Control Site samples. The amount detected in the effluent sample was over 90 times higher than the instream values. Total phosphorus detected in both the Test and Control Site samples was an order of magnitude lower than the effluent value. Total Nitrogen detected in both Test and Control Site samples was 18 times lower than effluent values.

Analytical Water Chemistry (See Table 2 and Appendix F)

- Total Residual Chlorine measured at EFD-01 complied with Class III Water Quality Criteria and effluent permit limits.
- Total suspended solids (TSS) and carbonaceous biochemical oxygen demand (CBOD) of the effluent samples complied with permit limits.
- Chlorophyll *a* (corrected) was undetected in the effluent sample and was detected at low levels in both the Test and Control Site samples.

Microbiology (See Table 2 and Appendix F)

- Fecal coliforms were detected in the effluent, Test, and Control Sites samples at levels which complied with Class III Freshwater Quality Criteria and/or facility permit limits.

Metals (See Table 3 and Appendix F)

- All metals detected in the effluent grab samples were present at levels that complied with Class III Freshwater Quality Criteria.
- Iron and lead detected in the Test Site and the Control Site samples exceeded Class III Freshwater Quality Criterion (62-302.530(38) F.A.C.) and (62-302.530(39) F.A.C.), respectively.

Algal Growth Potential (See Table 4 and Appendix F)

- The AGP samples collected from the effluent, Test Site, and Control Site were not analyzed because sample holding times were exceeded.
- Predicted AGP values indicate that effluent sample and the Test Site sample were likely co-limited while the Control Site sample was likely nitrogen limited, however, the nitrogen to phosphorus ratios for all three samples were relatively similar.

Flora (See Appendices C and E)

- This FYI event can only provide single sample results; therefore, Numeric Nutrient Criteria (NNC) compliance should be determined with additional sampling events. Two temporally independent Rapid Periphyton Survey (RPS) samplings with ≤ 25% rank 4-6 (algae >6mm thick) coverage are needed to achieve NNC floral metrics.
- The RPS was performed at the Test and Control Sites. The canopy cover was less at the Test Site (30% in some areas) than at the Control Site, where cover did not drop below 70%. Both sites had water that was tannic and turbid, which are inhibitors of algal growth. Thick algal growth is not expected at moderately shaded sites. RPS did not indicate nutrient enrichment at the Test Site.

Macroinvertebrates (See Table 5)

- Quantitative macroinvertebrate data were not analyzed because the samples were not deployed using the correct size disc per Standard Methods.
- Stream Condition Index (SCI) scores calculated from qualitative macroinvertebrate dipnet collections for the Test Site and Control Site were similar but the community composition differed. The Test Site scored 64 A on the SCI and the Control Site scored 76 A, both indicative of well-balanced faunal communities (see Appendix C for an

explanation of SCI). Both sites had similar numbers of clinger taxa, % tanytarsini taxa, and number of total taxa. The Control Site had slightly higher numbers of Ephemeropterans, long-lived taxa, suspension feeders and filterers, sensitive taxa, which are indicative of good water quality. The Control Site also had a lower percentage of very tolerant individuals. The Test Site had a higher percentage of Trichopteran taxa and lower number of long-lived taxa. The dominant taxon at the Test Site was of the order Gastropoda which are generally pollution tolerant organisms. The Test Site also had an absence of Plecopterans, which are sensitive to pollution. There appears to be some evidence of a community shift from a higher number of taxa indicative of good water quality at the Control Site to a higher number of taxa that are tolerant of pollution at the Test Site.

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

Conclusion

Analytical chemistry results from effluent samples were within permit and Class III Freshwater Quality Criteria. Lead and iron in the Test and Control Site samples exceeded Freshwater Criteria (62-302.530 F.A.C.), however, potential sources were not observed or identified by field staff. Effluent nutrient sample values were higher than the instream sample nutrient amounts. Test Site sample values were similar to Control Site values. Despite similar water chemistry above and below the discharge as measured in this sampling event, macroinvertebrate communities show some evidence of degradation at the Test Site in comparison to the Control Site. The lower Stream Condition Index (SCI) score at the Test Site reflects the greater percentage of pollution tolerant taxa and a lower percentage of taxa that are indicative of good water quality. The lower Habitat Assessment score of the Test Site is due to increased artificial channelization, reduced riparian buffer zone width, lower habitat availability, and less bank stabilization. While both habitat and water quality affect SCI score, the influence of each cannot be quantitatively separated. Sampling SBR pulsed releases makes detection of downstream influence more difficult to capture when compared to a continuously discharging system.

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

Noma WWTF	Units	Class III Criteria	Effluent Permit Limits	EFF-01 5/22/17	EFF-01 6/5/17	Test Site	Control Site
Habitat Assessment	-	-	-	-	-	97	125
Sample Depth	m	-	-	-	-	0.3	0.3
Temperature	C	-	Report	25.5	25.7	22.1	22.2
pH	SU	6.0 - 8.5 s	6.0 - 8.5 s	6.8	7.6	6.4	6.5
Specific Conductance	µmhos/cm	≤ 1,275	-	-	-	67	65
Salinity	-	-	-	-	-	0.0	0.03
Dissolved Oxygen	% Saturation	> 67%	-	-	-	80.2 c	80.3 c
Dissolved Oxygen	mg/L	-	-	-	-	7.0	7.0
Total Residual Chlorine	mg/L	≤ 0.01	-	≤ 0.01	≤ 0.01	-	-
Flow	MGD	-	-	0.043	-	-	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
s - Single sample

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

Noma WWTF	Units	Class III Criteria	Effluent Permit Limits	EFF-01 5/22/17	EFF-01 6/5/17	Test Site	Control Site
Ortho-phosphate	mg P/L	-	-	0.96	-	0.012	0.010
Total Phosphorus	mg P/L	-	Report	-	2.0	0.062	0.060
Total Ammonia	mg N/L	-	Report	-	0.010 UA	0.019	0.017
Un-ionized Ammonia (calculated salinity)	-	≤ 0.02 s	-	-	< 0.02 c	< 0.02 c	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	-	11 A	0.11	0.10
Total Kjeldahl Nitrogen	mg N/L	-	≤ 10.0 s	-	0.42 J	0.55 Q	0.49
Organic Nitrogen	mg N/L	-	-	-	0.41 c	0.53 c	0.47 c
Total Nitrogen	mg N/L	-	Report	-	11 c	0.66 c	0.59 c
Total Organic Carbon	mg C/L	-	-	-	2.5	6.0	6.2
Chlorophyll *a* - Corrected	µg/L	-	-	0.55 U	-	2.1	2.6 I
Phaeophytin	µg/L	-	-	0.40 U	-	0.66 I	1.3 U
CBOD, 5 day, N - inhibited	mg/L	-	≤ 60.0 s	1.4 IJ	-	2.2 J	1.4 IJ
Hardness	mg/L	-	-	95.8 c	-	30 c	30 c
Total Suspended Solids	mg/L	-	≤ 60.0 s	4 I	-	16	16
Turbidity	NTU	< 29 t	-	3.1	-	30 A	31
Color (true)	PCU	-	-	5.7 I	-	37	37 A
Alkalinity	mg CaCO3/L	≥ 20	-	57	-	23	23
Chloride	mg Cl/L	-	-	20	-	3.3	3.3
Fluoride	mg F/L	≤ 10.0	-	0.076 I	-	0.038 I	0.039 I
Sulfate	mg SO4/L	-	-	13	-	1.9	1.9
Microbiology							
Fecal Coliforms[1]	cfu/100 mL	≤ 800 s	≤ 800 s	7 B	-	580	570

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

c - Value is calculated

s - Single sample

t - Shall not exceed 29 NTUs above background

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
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
1 - Fecal coliform analysis performed by the University of West Florida, Overflow Laboratory

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

Noma WWTF	Units	Class III Criteria	Effluent Permit Limits	EFF-01 Class III Criteria	EFF-01	Test Site Class III Criteria	Test Site	Control Site Class III Criteria	Control Site
Hardness		-	-	-	95.8 c	-	30 c	-	30 c
Aluminum	µg/L	-	-	-	81	-	1020	-	1010
Arsenic	µg/L	≤ 50	-	-	0.92	-	0.69	-	0.70
Cadmium	µg/L	-	-	≤ 0.262 b	0.020 U	≤ 0.111 b	0.020 U	≤ 0.111 b	0.021 I
Calcium	mg/L	-	-	-	31.2	-	9.79	-	9.78
Chromium, Total [2]	µg/L	-	-	≤ 83.2 b	0.40 U	≤ 32.1 b	1.9	≤ 32.1 b	2.0
Copper	µg/L	-	-	≤ 8.99 b	2.31	≤ 3.33 b	0.60 I	≤ 3.33 b	0.59 I
Iron	µg/L	≤ 1,000	-	-	110 I	-	1880 e	-	1870 e
Lead	µg/L	-	-	≤ 3.01 b	0.18 I	≤ 0.686 b	0.72 e	≤ 0.687 b	0.73 e
Magnesium	mg/L	-	-	-	4.34	-	1.34	-	1.35
Nickel	µg/L	-	-	≤ 50.3 b	0.72 I	≤ 18.8 b	0.43 I	≤ 18.8 b	0.44 I
Potassium	mg/L	-	-	-	3.3	-	1.3	-	1.3
Selenium	µg/L	≤ 5.0	-	-	0.20 U	-	0.20 U	-	0.20 U
Silver	µg/L	≤ 0.07	-	-	0.010 U	-	0.010 U	-	0.010 U
Sodium	mg/L	-	-	-	13.3	-	1.9 I	-	1.9 I
Zinc	µg/L	-	-	≤ 116 b	47	≤ 43.2 b	5.0 U	≤ 43.2 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, (62-302.530(3))
c - Value is calculated
e -Value exceeds the Class III Water Quality Criteria or permit limits
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
U - Material analyzed for but not detected; value reported is the method detection limit

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

Noma WWTF								
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**
EFF-01	*Pseudokirchneriella subcapitata*	No Result OQ	418.1 ± 83.6	412.8 ± 82.6	434 ± 86.8	473 ± 94.6	11.5	10.4
Control Site	*Pseudokirchneriella subcapitata*	No Result OQ	4.4 ± 0.9	4.3 ± 0.9	22.4 ± 4.5	25.8 ± 5.2	11.7	9.8
Test Site	*Pseudokirchneriella subcapitata*	No Result OQ	4.9 ± 1	5.2 ± 1	25.1 ± 5	26.7 ± 5.3	10.8	10.6

Freshwater species *Pseudokirchneriella subcapitata*

O - Sampled, but analysis lost or not performed

Q - Sample held beyond normal holding time

Table 5. Macroinvertebrate Dipnet Samples - Qualitative.

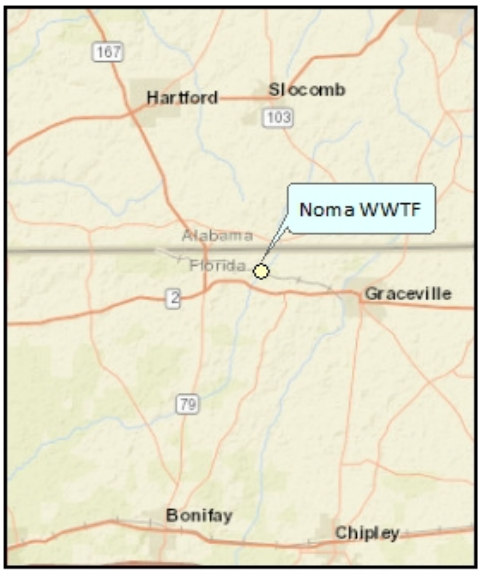
Noma WWTF	**Control Site**		**Test Site**	
Stream Condition Index 2012	**76 A**		**64 A**	
Replicate	Rep 1	Rep 2	Rep 1	Rep 2
Stream Condition Index Metrics				
Number of Total Taxa	39	44	39	39
Number of Ephemeroptera Taxa	6	6	4	4
Number of Trichoptera Taxa	3	6	8	5
Number of Clinger Taxa	10	13	12	11
Number of Long-lived Taxa	7	6	3	1
Number of Sensitive Taxa	11	12	8	10
Percent of Dominant Taxon	16.4	14.6	11.8	16.8
Percent Suspension Feeders and Filterers	19.2	20.5	11.5	15.2
Percent of Tanytarsini Individuals	2.1	1.4	2.1	4.5
Percent of Very Tolerant Individuals	0.0	1.4	3.5	3.2
Total Number of Individuals	146	144	144	155
Community Composition: Percent of total				
Dominant Taxon Name	*Macronychus glabratus* (Coleoptera)	*Macronychus glabratus* (Coleoptera)	*Pleurocera* sp. (Gastropoda)	*Pleurocera* sp. (Gastropoda)
Acariformes	0.7	1.4	0.0	0.0
Amphipoda	0.0	0.0	2.8	1.3
Bivalvia	3.4	2.1	2.8	4.5
Coleoptera	33.6	32.6	30.6	29.0
Decapoda	6.9	2.8	0.7	0.0
Diptera	13.0	20.8	22.2	26.5
Ephemeroptera	17.8	9.0	9.7	7.1
Gastropoda	2.1	4.9	12.5	17.4
Odonata	2.7	1.4	0.0	0.0
Oligochaeta	0.7	0.0	1.4	0.7
Plecoptera	2.1	3.5	0.0	0.0
Trichoptera	16.4	20.1	12.5	12.3
Other	0.7	1.4	4.9	1.3
Functional Feeding Groups: Percent of total				
Browser-Grazers	2.1	0.7	0.0	0.0
Burrowing Deposit Feeders	0.7	0.0	1.4	0.7
Piercers	0.0	0.0	4.5	4.5
Predators	12.7	12.2	10.4	6.8
Scavengers	4.1	1.7	0.4	0.0
Scrapers	14.4	14.2	27.1	25.5
Shredders	4.5	8.3	10.4	7.4
Surface Deposit Feeders	42.5	41.7	34.4	40.0
Suspension Feeders	19.2	20.5	11.5	15.2

A - Value reported is the mean of two determinations

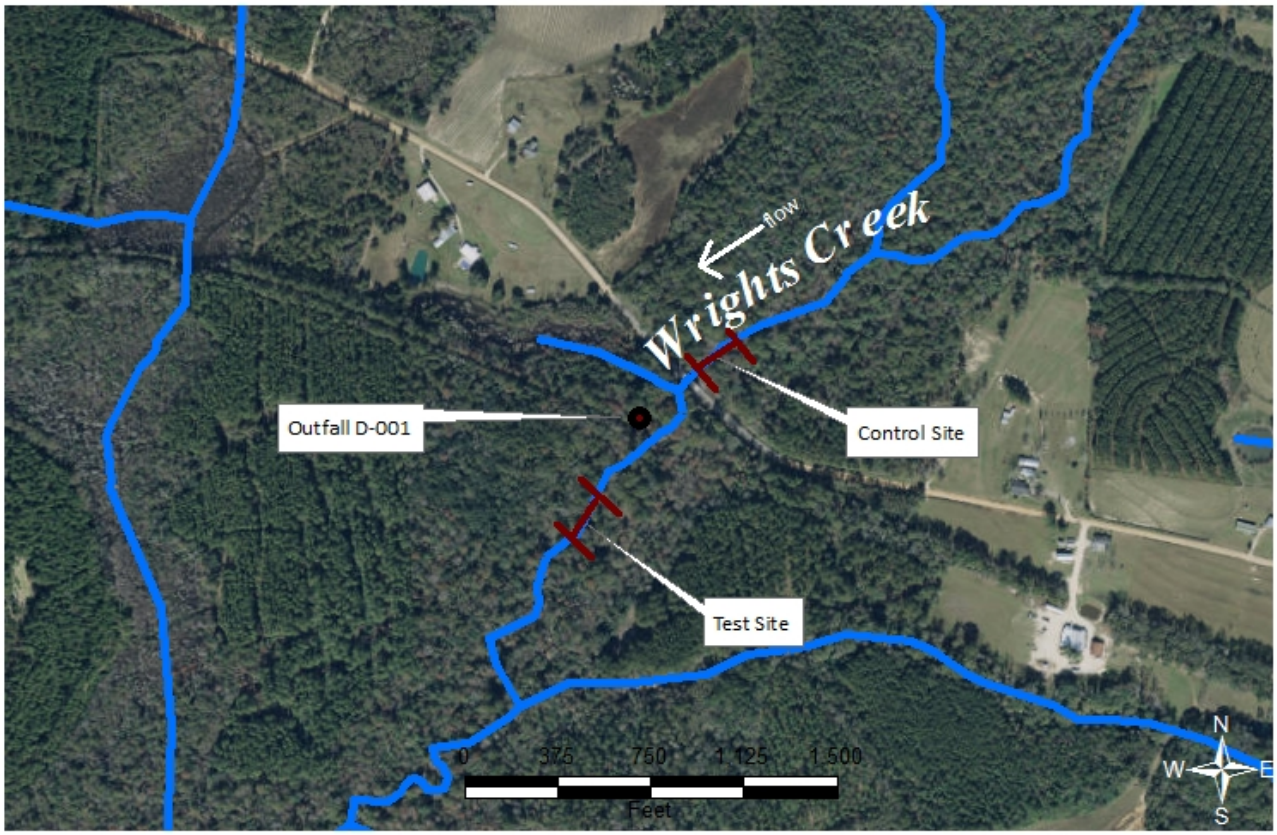
Appendix A
Map of Facility

Noma WWTF

Fifth Year Bioassessment Sampling Locations







Map prepared 2/7/2018.This map is for display purposes only and is not for analysis. DEP Laboratories, Biology Program.
Map Contact: Lisa Homann

Appendix B
State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Kevin Holler (04/11/2017)	**Contact Number:** (850)595-0701
Facility Name (as it appears on permit): **Noma WWTP**	**Former Names:**
NPDES Permit Number: FL0040207	**Permit Expiration Date:** September 8, 2018
Physical Address: 3488 Smalley Lane (off County Road 175), Noma, FL 32452	
District: NWD	**County:** Holmes
Function of Facility: Municipal wastewater treatment facility	
Facility Type: Domestic	**Permitted Capacity (MGD):** 0.025 MGD annual average daily flow
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): **.028 mgd annual average (6/16 – 5/17)**	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): **NA**	
Description of type of Discharge: ☐ **Continuous** ☒ **Intermittent*** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify** *This is a Sequencing Batch Reactor (SBR) type facility that discharges in batches	

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s):

FLW-01 Magnetic Flow Meter and Totalizer in line prior to Chlorine Contact Chamber
EFF-01 Chlorine Contact Chamber next to Effluent Weir
OTH-01 Calculation
EFF-02 Effluent Manhole at Exit Pipe
EFA-01 Chlorine Contact Chamber next to Effluent Weir
EFD-01 Effluent Manhole at Exit Pipe

** 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. *[62-302.530(3)]*

Description of Permitted Outfall(s):

Effluent is discharged to Wrights Creek, a Class III waters of the State, at an outfall (D-001) approximately 1.1 miles east of the WWTP, just north of the old railroad right-of-way. The point of discharge is located approximately at latitude 30° 58' 46" N, longitude -85° 35' 57" W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):

An existing 0.025 MGD AADF permitted capacity, 0.030 MGD AADF design capacity, extended aeration biological sequencing batch reactor type (SBR) package plant. The treatment system consists of a trash trap/sludge holding tank, a Surge Anoxic Mix (SAM) tank, a Sequencing Batch Reactor (SBR), a flow equalization tank, tertiary filters, an effluent meter, a tablet chlorinator, dual chlorine contact chambers, a tablet de-chlorinator, an effluent sampling manhole and effluent pump station with 4-inch effluent pipeline to the outfall

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
Flow	MGD	Max Max Max	0.025 Report Report	Annual Average Quarterly Average Monthly Average	5 Days/Week	Meter	FLW-01
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0 25.0 40.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Monthly	Grab	EFF-01
CBOD, % Removal, 5-day	percent	Min	85.0	Monthly Average	Monthly	Grab	OTH-01
Solids, Total Suspended	mg/L	Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Monthly	Grab	EFF-01
Solids, Total Suspended, % Removal	percent	Min	85.0	Monthly Average	Monthly	Grab	OTH-01
Nitrogen, Total	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-01
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	Monthly	Grab	EFF-01
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-01
pH	s.u.	Max Min	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFF-02
Coliform, Fecal	#/100m L	Max Max Max	200 200 800	Annual Average Monthly Geometric Mean Single Sample	Monthly	Grab	EFF-01
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	5 Days/Week	Grab	EFA-01
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Monthly	Grab	EFD-01
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-01
Ammonia, Unionized (as NH3)	mg/L	Max	Report	Single Sample	Monthly	Grab	OTH-01
Temperature (F), Water	Deg F	Max	Report	Single Sample	Monthly	Grab	EFF-01

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
Wrights Creek	Class III Fresh

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):
Not required.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):
None

Facility Mixing Zone Details (if applicable):

None

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

Monitoring Date	Parameter Code	Parameter Description	Data	Limit	Units	Statistical Base
2/28/2017	P 50050	Flow	0.034	0.025	MGD	AB - Annual Average
2/28/2017	P 80091	CBOD, % Removal, 5-day	63.6	85.0	percent	MJ - Monthly Average Minimum
2/28/2017	P 81011	Solids, Total Suspended, % Removal	84.4	85.0	percent	MJ - Monthly Average Minimum
1/31/2017	P 50050	Flow	0.062	0.025	MGD	AB - Annual Average
1/31/2017	P 81011	Solids, Total Suspended, % Removal	25	85.0	percent	MJ - Monthly Average Minimum
12/31/2016	P 50050	Flow	0.029	0.025	MGD	AB - Annual Average
11/30/2016	P 50050	Flow	0.027	0.025	MGD	AB - Annual Average
10/31/2016	P 50050	Flow	0.028	0.025	MGD	AB - Annual Average
9/30/2016	P 50050	Flow	0.03	0.025	MGD	AB - Annual Average
8/31/2016	P 50050	Flow	0.033	0.025	MGD	AB - Annual Average
7/31/2016	P 50050	Flow	0.033	0.025	MGD	AB - Annual Average
6/30/2016	P 50050	Flow	0.03	0.025	MGD	AB - Annual Average
5/31/2016	P 50050	Flow	0.04	0.025	MGD	AB - Annual Average
4/30/2016	P 50050	Flow	0.035	0.025	MGD	AB - Annual Average
4/30/2016	P 81011	Solids, Total Suspended, % Removal	73	85.0	percent	MJ - Monthly Average Minimum
3/31/2016	P 50050	Flow	0.035	0.025	MGD	AB - Annual Average

Describe previous or current Enforcement Actions (including WLs):

2011 NCLI for TKN violations. Current flow exceedances will be addressed in the inspection report

Describe any violations or problems noted in previous inspection:

TKN violations on 03/01/2011, 03/21/2011, 03/2011. Fecal Coliform violation on 04/05/11.

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

I & I is an issue with the facility. It is possible that at least two major sources have been discovered and addressed in April 2017. The flow trend at the facility is very slowly decreasing.

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

NA

PART II: Sampling Event Information

Date(s) sample collected: **05/22/2017 and 06/05/2017**	**Sampler(s):** **Kevin Holler, Amy Miller**
Temperature (Deg C): **05/22/17: 25.5° C; 06/05/2017 25.5° C**	**pH (SU):** **05/22/2017: 6.83 pH; 06/05/17: 7.57 pH**
Dissolved Oxygen (mg/L): **Not Tested**	**Conductivity (umhos/cm):** **Not Tested**
Total Residual Chlorine (mg/L): EFA-001 **05/22/2017: >2.2 mg/L; 06/05/2017: >2.2 mg/L**	**Total Residual Chlorine - after Disinfection (mg/L): EFD-001** **05/22/2017: ≤0.01 mg/L; 06/05/2017: ≤0.01 mg/L**
Method of Chlorination: **Tablet chlorination**	**Method of De-chlorination:** **Tablet de-chlorination**

Flow During Sample Collection for each outfall(MGD):

0.043 mgd

Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day):

.028 mgd annual average (6/16 – 5/17)

Describe Discharge during Sampling Event:

☒ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify**

Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:

- **Very large rain event (2.15") on the Saturday (05/20/17) prior to the 5/22/17 sampling event.**
- **Resampled for W-NH3, W-NO2-NO3, W-S-A-TP, W-TKN, W-TOC on 06/05/2017 due to improper preservation during the 05/20/17 sampling event.**

Appendix C

Explanation of Measurements

(1) Quality Assurance and Quality Control

DEP's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, F.A.C., Quality Assurance (QA Rule) and in internal Standard Operating Procedures (DEP SOPs). Methods for all analyses are on file at the DEP Central Laboratory in Tallahassee and may be viewed on the web at http://www.dep.state.fl.us/labs/library/lab_sops.htm and/or http://www.dep.state.fl.us/water/sas/qa/index.htm.

(2) Chemical Analyses of the Effluent

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

(3) Bacteriological Testing

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

(4) 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).

(5) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 5.0 mg dry weight/L represents a “problem” threshold for fresh receiving waters, implying nutrient enrichment. High AGP values may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C..

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

(6) 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 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C. and/or 62-302.530(61), 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 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C..

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 62-302.530(46) F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C. and/or 62-302.530(61), 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 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C. and/or 62-302.530(61), F.A.C..

Shannon-Weaver Diversity Index: This index is specified in the Florida Administrative Code 62-302 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 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 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 Chapter 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 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C., or of 62-302.530(61).

(7) 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 Chapter 62-302.531, F.A.C..

(8) Definition of Qualifiers

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given

N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
V - Analyte was detected in both sample and method blank.
X - Too few individuals to calculate SCI value.
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate
Z - Colonies were too numerous to count (TNTC)

Appendix D

Chain of Custody

Request Number: RQ-2017-05-22-16

FYI5 Noma WWTP Sampling Inspection (FL0040207)

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection

Central Laboratory Submittal Form

last revised Apr 7, 2016

Requester: Adrienne E. Pennington

Collected By: Nathan Miller

Field Report Prepared By: N. Makey

Sampling Agency: NWROC

Location: Wrights Creek below Bush Rd	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 5/22/17	Time 1107	Eastern Central	Composite end Date	Time				Bottle Group(s) (See pg 2) B/C
Field ID: Noma Test	Matrix (type, e.g., Salt, Fresh, etc)			Diss. Oxygen 7.0	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
STORET #	Temp (C) 22.1	pH 6.4		Sample Depth 0.3	☐ ft ☐ m	Sp. Conductance (umho/cm) 67				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments 2 of 4 HD colonies retrieved							
Location: Wrights Creek above Bush Rd	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 5/22/17	Time 1110	Eastern Central	Composite end Date	Time				Bottle Group(s) B/C
Field ID: Noma Control	Matrix (type, e.g., Salt, Fresh, etc)			Diss. Oxygen 7.0	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)				
STORET #	Temp (C) 22.2	pH 6.5		Sample Depth 0.3	☐ ft ☑ m	Sp. Conductance (umho/cm) 65				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments 4 of 4 HD colonies retrieved							
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)				
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)				
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
	5/22/17	Fed Ex	2	ARB	5-23-17 9:43

Request Number: RQ-2017-05-22-16

FYI5 Noma WWTP Sampling Inspection (FL0040207)

Customer: NW-DIST

Project ID: FYI5

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Apr 7, 2016

Requester: Adrienne E. Pennington

Collected By: Amy Miller

Field Report Prepared By: Kevin Holler

Sampling Agency: FDEP

Location: Noma WWTP-FL004027	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 5/22/17 Time 10:45	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2): A					
Field ID: Grab	Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) >2.20						
STORET #	Temp (C) 25.5	pH 6.83	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm) —						
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments								
Location: Noma WWTP-FL004027	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 05-22-17 Time 11:45	Eastern Central	Composite end Date	Time	Bottle Group(s): D					
Field ID: Blank	Matrix (type, e.g., Salt, Fresh, etc): D.I. Water		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
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)						
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)						
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
				ATP	5-23-17 9:43

Collection date and time from sample.
ATP 05-23-17.

Request Number: RQ-2017-05-22-16

FYI5 Noma WWTP Sampling Inspection FL0040207)

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Apr 7, 2016

Customer: NW-DIST

Project ID: FYI5

Requester: Adrienne E. Pennington

Collected By: Amy Miller

Field Report Prepared By: Kevin Holler

Sampling Agency: FDEP

Location: Town of Noma-FL0040027	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 6/5/17 Time 9:30	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2)				
Field ID: EFF-01 Wastewater Effluent	Matrix (type, e.g., Salt, Fresh, etc): WW-Effluent	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) 2.2						
STORET #	Temp (C) 25.7	pH 7.57	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)		A				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt) —	Comments							
Location: DI Water Town of Noma-FL0040027	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 6/5/17 Time 9:36	Eastern Central	Composite end Date	Time	Bottle Group(s)				
Field ID: Town of Noma-BLANK	Matrix (type, e.g., Salt, Fresh, etc): DI-Water	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
STORET #	Temp (C) —	pH —	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)		D				
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)						
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)						
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
				Tyler Reynolds	06/06/17 @ 9:45a

05-22-16

Request Number: RQ-2017-~~0420-80~~

~~ENP-S-WBID-548CD-738~~ Noma FYI

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Customer: NW-DIST

Project ID: ~~GMP~~ FYI

Requester: ~~Michael King~~

Collected By: Nathan Mulky

Field Report Prepared By: N. Mulky

Sampling Agency: NWROC

Location: Wrights Creek below Bush Road	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 7/6/17 Time 1107	Eastern (Central)	Composite end Date	Time	Bottle Group(s) (See pg 2): C				
Field ID: Noma Test	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)						
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments							
Location: Wrights Creek above Bush Road	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 7/6/17 Time 1110	Eastern (Central)	Composite end Date	Time	Bottle Group(s): C				
Field ID: Noma Control	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
STORET # 32020066	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)						
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)						
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
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Appendix E

Physical/Chemical and Habitat Assessment field sheets

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

SAMPLE ID _____ ORG ID 21FLANS LATITUDE 30.98038

COUNTY Holmes STORET # 32020066 LONGITUDE 85.69779

DATE 7/6/17 TIME 1110 SAMPLING AGENCY NWFROC

SITE NAME Wrights Creek above Bush Road

FIELD ID/NAME Nema Control RECEIVING BODY OF WATER Choctawhatchee River

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)
X		X		X			

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: 18 Right Bank: 15

Hydrologic Modification Score (per FT 3101)

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

4.0 m wide

1/4 m/s 1/4 m/s 1/4 m/s

.5 m deep .5 m deep .5 m deep

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

Artificially Impounded ☐ Yes ☑ No

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)			
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	0.3	22.2	6.5	7.0	80.3	65	0.03	
Mid:								☑ VOB
Bottom	0.8							TOTAL DEPTH
Meter ID:	113529							0.5

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: 7092010 Exp: 4/3/18

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 ☐

ABUNDANCE

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

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

AMBIENT FIELD CONDITIONS / NOTES:

☑ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM Nathan Melby, Mike King, Taylor Slade **SIGNATURE:** **DATE:** 7/6/17

62-160.800, F.A.C. Revision Date: March 1, 2014

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

SAMPLING AGENCY:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
FDEP NWROC	32020066	07/6/17	Choctawhatchee River
REMARKS:	**COUNTY:**	**LOCATION:**	**FIELD ID/NAME:**
Noma FYI	Holmes	Wrights Creek above Bush Rd	Noma Control

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 14	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 14	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 15	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 11 Primary Score 54	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** 18	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 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 9 Left Bank 9	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the 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 root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 8 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 8 Left Bank 9 Secondary Score 71	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

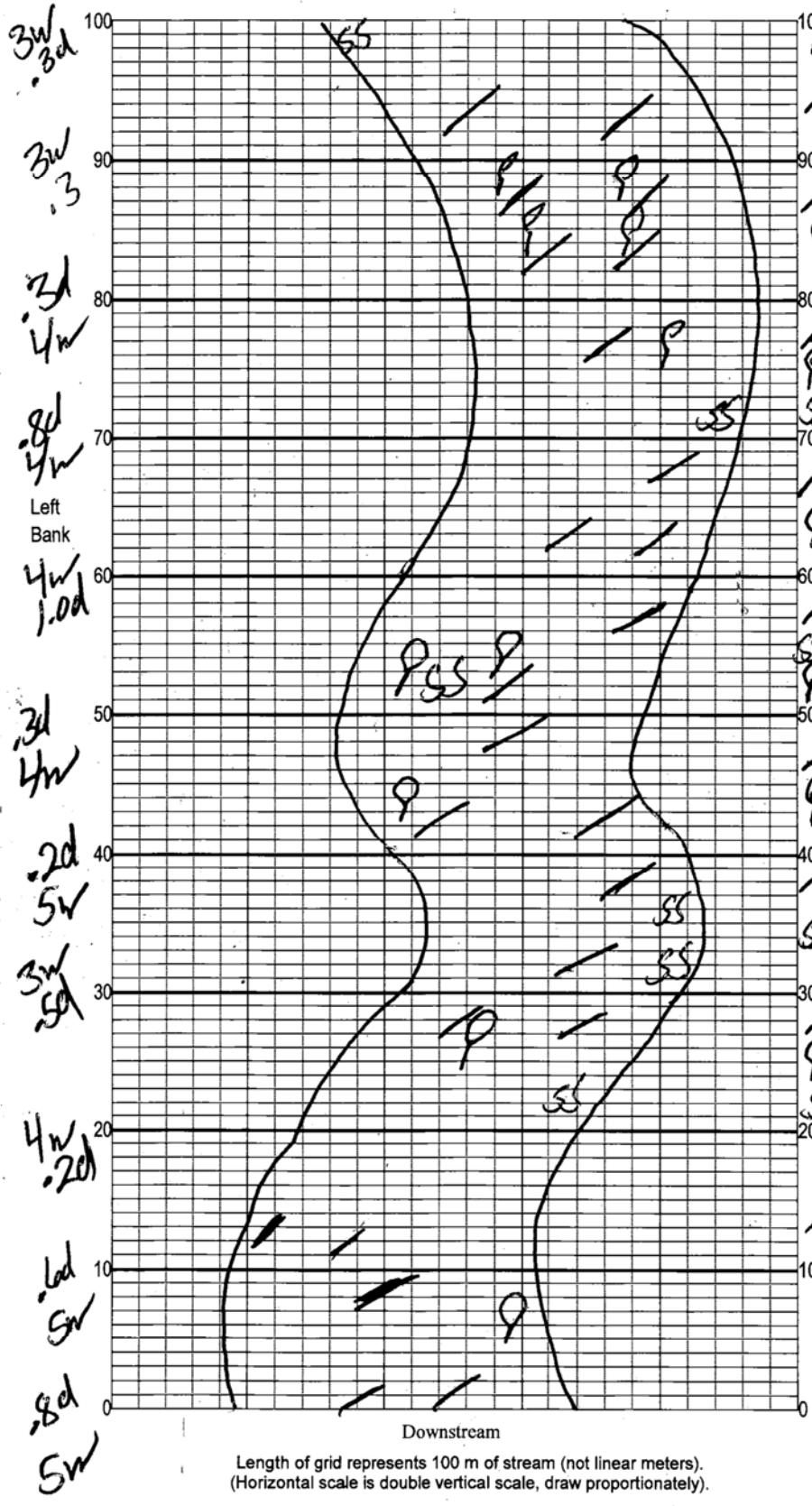
125 **TOTAL SCORE**

Date:	Analyst:	Signature:
7/6/17	Nathan Pulley	

62-160.800, F.A.C.

Revision Date: March 1, 2014

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: Wrights Creek adv Bush Rd

Date: 7/6/17

Sampler: Nathan Milke

100 m: Latitude 30.980[illegible]32

Longitude 85 59[illegible]01

0 m: Latitude 30.98038

Longitude 85.59779

Substrates: Code key, draw proportionate habitat abundance.		%
	Snags	15.5
SS	3.6 Roots/undercut banks	1.8
P	3.0 Leaf Packs (or mats)	1.5
	Aquatic Macrophytes	
	Total	19
	Pools total # observed = ____ # range expected = ____	

Average width 4.0 m

Average depth .25 m 200

Velocity measured at 100 meter mark. 1/4

WQ & chemistry taken at 0 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: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Noma Control/Wrights Creek | County: Holmes | Date: 7/6/17 | Investigators: Mike King

STORET Station Number: 320200 1dc

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N	N	
	2			
	3			
	4			
	5			70
	6			
	7			
	8			
	9			
10	1	N	N	
	2			
	3			
	4			
	5			70
	6			
	7			
	8			
	9			
20	1	N	N	
	2			
	3			
	4			
	5			70
	6			
	7			
	8			
	9			
30	1	3	N	
	2	N		
	3			
	4			
	5			84
	6			
	7			
	8			
	9			
40	1	N	N	
	2			
	3			
	4			
	5			60
	6			
	7			
	8			
	9			
50	1	N	N	
	2			
	3			
	4			
	5			95
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	N	
	2			
	3			
	4			
	5			76
	6			
	7			
	8			
	9			
70	1	N	N	
	2			
	3			
	4			
	5			84
	6			
	7			
	8	3		
	9	3		
80	1	N		
	2			
	3			
	4			
	5			80
	6			
	7			
	8			
	9			
90	1	N		
	2			
	3			
	4			
	5			76
	6			
	7			
	8			
	9			
100	1	N		
	2			
	3			
	4			
	5			80
	6			
	7			
	8			
	9			

Secchi depth	108
Estimated?	Yes

# points ranked 4-6	0
total points assessed	99
% points ranked 4-6	0

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

RQ-2017-0622-16

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

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: March 1, 2014

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

Zero Muck

SAMPLE ID _____ ORG ID 21FLPNS LATITUDE 30.97863
COUNTY Holmes STORET # _____ LONGITUDE 85.59885
DATE 7/6/17 TIME 1107 SAMPLING AGENCY NWROC
SITE NAME Wrights Creek below Bush Road
FIELD ID/NAME Nona Test RECEIVING BODY OF WATER Choctawhatchee River

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: 15 Right Bank: 10

Hydrologic Modification Score (per FT 3101): _____

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

1/4 m/s	1/4 m/s	1/4 m/s
.6 m deep	.5 m deep	.5 m deep

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

Artificially Impounded ☒ Yes ☐ No

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)			
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	0.3	22.1	6.4	7.0	80	67	0.0	
Mid:								☐ VOB
Bottom								TOTAL DEPTH

Meter ID: 113529 TOTAL DEPTH: >1

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: 7693010 Exp: 4/3/18

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 ☐

ABUNDANCE

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

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

AMBIENT FIELD CONDITIONS / NOTES: 11:07

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM Nathan Maltby / Mike King / Stephen Sikes SIGNATURE: _____ DATE: 7/6/17

62-160.800, F.A.C. Revision Date: March 1, 2014

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

SAMPLING AGENCY:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
FDEP NWROC		07/06/17	Choctawhatchee River
REMARKS:	**COUNTY:**	**LOCATION:**	**FIELD ID/NAME:**
Noma FYI	Holmes	Wrights Creek Victor Bush	Noma Test

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 12	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 15	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 11 Primary Score 44	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** 13	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 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 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 root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 5 Left Bank 8	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 7 Left Bank 10 Secondary Score 53	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

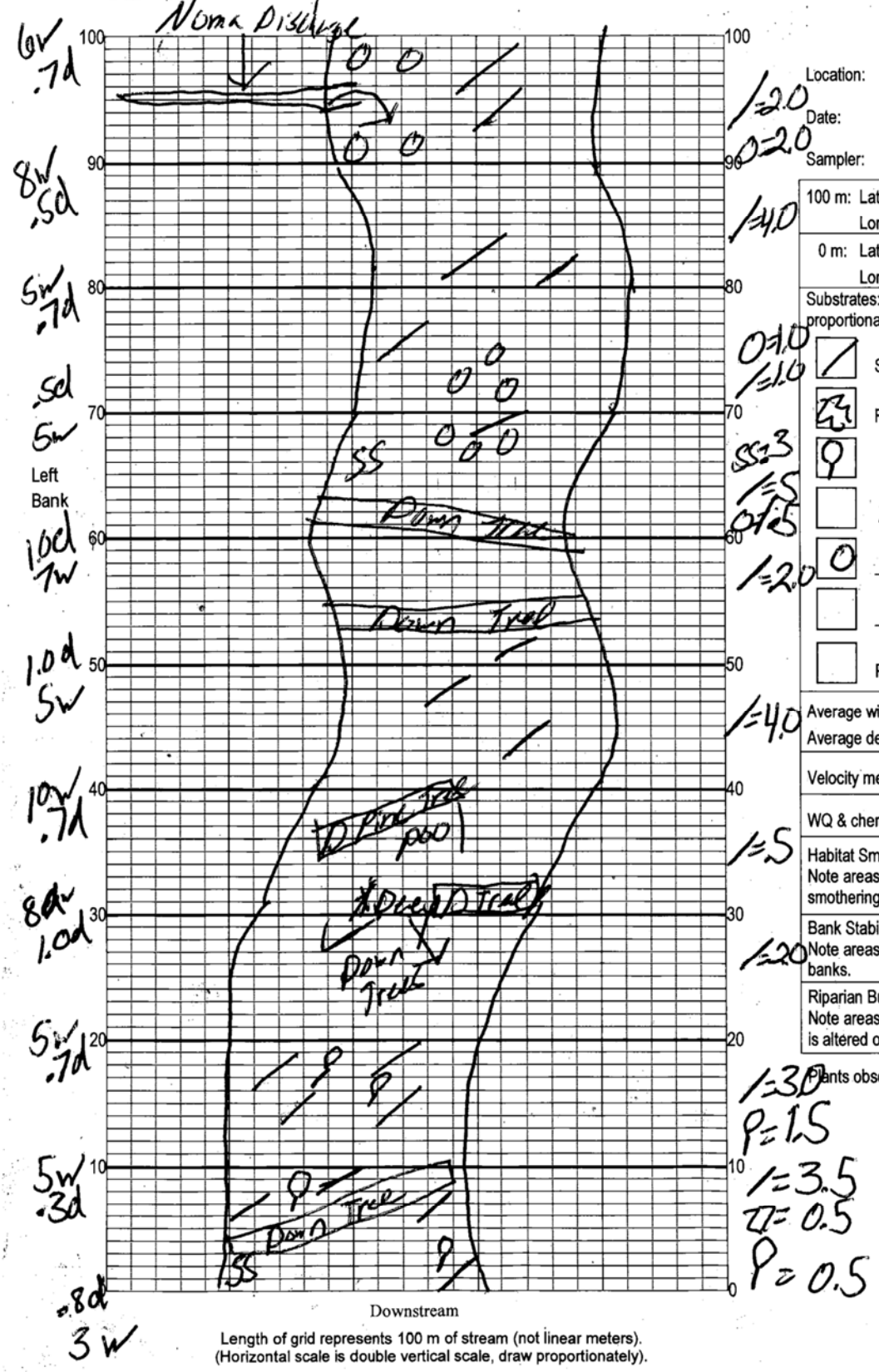
97 **TOTAL SCORE**

Date:	Analyst:	Signature:
7/6/17	Nathan Malloy	Nathan Malloy

62-160.800, F.A.C.

Revision Date: March 1, 2014

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



Location: Wrights Creek blw Bushnell

Date: 7/6/17

Sampler: Nathan Milby

100 m: Latitude 30 979 383
Longitude 85 597 11

0 m: Latitude 30.97863
Longitude 85.59885

Substrates: Code key, draw proportionate habitat abundance.		%
	Snags 22.5	5.3
	Roots/undercut banks 0.8	.19
	Leaf Packs (or mats) 2.0	0.5
	Aquatic Macrophytes	
	4.5 ROCK	1.1
	Total 7.1	
	Pools total # observed = ____ # range expected = ____	

Average width 6.1 m
Average depth 0.7 m

427

Velocity measured at 70 meter mark.

WQ & chemistry taken at 70 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:

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

62-160.800, F.A.C

427

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Noma Test/Wrights Creek | County: Holmes | Date: 7/6/17 | Investigators: Mike King | STORET Station Number:

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N	N	
	2			
	3			
	4			
	5			70
	6			
	7			
	8			
	9			
10	1	N	N	
	2	3		
	3	2		
	4			
	5			30
	6			
	7			
	8			
	9	3		
20	1	3		
	2	N		
	3			
	4			
	5			70
	6			
	7			
	8			
	9	3		
30	1	N		
	2			
	3			
	4			
	5			60
	6			
	7			
	8			
	9			
40	1	N		
	2			
	3			
	4			
	5			60
	6			
	7			
	8			
	9			
50	1	N		
	2			
	3			
	4			
	5			30
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	N	
	2	X	X	
	3	N		
	4			
	5			40
	6			
	7	X	X	
	8	N		
	9			
70	1	N		
	2	X	X	
	3			
	4			
	5			44
	6			
	7			
	8			
	9	3		
80	1	3		
	2	3		
	3	N		
	4	N		
	5	4		40
	6	4		
	7	N		
	8			
	9			
90	1	N		
	2	3		
	3	N		
	4	X	X	
	5	3		70
	6	X	X	
	7	X	X	
	8	N		
	9	3		
100	1	3		
	2	N		
	3	X	X	
	4		X	
	5		X	30
	6		X	
	7		X	
	8		X	
	9	N		

Secchi depth	
Estimated?	
# points ranked 4-6	2
total points assessed	
% points ranked 4-6	

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	X
SCI/Biorecon	X
Water sample	X
RQ-2017-05-22-16	

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

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: March 1, 2014

Appendix F

Chemical analysis of effluent and receiving water

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
6/5/2017 10:30	EFF-01	Nutrients	Ammonia-N	0.010 UA	mg N/L	0.01	0.025
6/5/2017 10:30	EFF-01	Nutrients	Kjeldahl Nitrogen	0.42 J	mg N/L	0.16	0.4
6/5/2017 10:30	EFF-01	Nutrients	Organic Carbon	2.5	mg C/L	0.5	1
6/5/2017 10:30	EFF-01	Nutrients	Total-P	2.0	mg P/L	0.025	0.25
6/5/2017 10:30	EFF-01	Nutrients	NO2NO3-N	11 A	mg N/L	0.2	0.5
6/5/2017 10:30	EFF-01	Nutrients	Total Residual Chlorine	72.2	mg/L		
6/5/2017 10:30	EFF-01	Nutrients	Temperature	25.7	C		
6/5/2017 10:30	EFF-01	Nutrients	pH	7.57			
5/22/2017 11:45	EFF-01	AGP/LN	Algal Growth Potential	No Result OQ	mg DryWt/L		
5/22/2017 11:45	EFF-01	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.4 IJ	mg/L	0.2	2
5/22/2017 11:45	EFF-01	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	0.40 U	ug/L	0.4	1.2
5/22/2017 11:45	EFF-01	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
5/22/2017 11:45	EFF-01	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	ug/L	0.55	1.7
5/22/2017 11:45	EFF-01	Chlorophyll/Grain Size/BOD	Chlorophyll/Phaeophytin Ratio	0.99		0	0
5/22/2017 11:45	EFF-01	Overflow	Fecal Coliforms-Membrane Filter	7 B	cfu/100 mL	2	2
5/22/2017 11:45	EFF-01	Metals	Iron	110 I	ug/L	30	120
5/22/2017 11:45	EFF-01	Metals	Arsenic	0.92	ug/L	0.05	0.2
5/22/2017 11:45	EFF-01	Metals	Nickel	0.72 I	ug/L	0.2	0.8
5/22/2017 11:45	EFF-01	Metals	Cadmium	0.020 U	ug/L	0.02	0.08
5/22/2017 11:45	EFF-01	Metals	Calcium	31.2	mg/L	0.075	0.3
5/22/2017 11:45	EFF-01	Metals	Magnesium	4.34	mg/L	0.04	0.16
5/22/2017 11:45	EFF-01	Metals	Selenium	0.20 U	ug/L	0.2	0.8
5/22/2017 11:45	EFF-01	Metals	Chromium	0.40 U	ug/L	0.4	1.6
5/22/2017 11:45	EFF-01	Metals	Lead	0.18 I	ug/L	0.05	0.2
5/22/2017 11:45	EFF-01	Metals	Sodium	13.3	mg/L	0.5	2
5/22/2017 11:45	EFF-01	Metals	Potassium	3.3	mg/L	0.3	1.2
5/22/2017 11:45	EFF-01	Metals	Copper	2.31	ug/L	0.2	0.8
5/22/2017 11:45	EFF-01	Metals	Aluminum	81	ug/L	3	12
5/22/2017 11:45	EFF-01	Metals	Zinc	47	ug/L	5	20
5/22/2017 11:45	EFF-01	Metals	Silver	0.010 U	ug/L	0.01	0.04
5/22/2017 11:45	EFF-01	Nutrients	Turbidity	3.1	NTU	0.1	0.1
5/22/2017 11:45	EFF-01	Nutrients	O-Phosphate-P	0.96	mg P/L	0.04	0.1

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 11:45	EFF-01	Nutrients	Color (true)	5.7 I	PCU	2.5	6
5/22/2017 11:45	EFF-01	Nutrients	Total Alkalinity	57	mg CaCO3/L	0.65	2.5
5/22/2017 11:45	EFF-01	Nutrients	TSS	4 I	mg/L	2	10
5/22/2017 11:45	EFF-01	Nutrients	Chloride	20	mg Cl/L	0.2	0.5
5/22/2017 11:45	EFF-01	Nutrients	Total-P	1.1 Y	mg P/L	0.025	0.25
5/22/2017 11:45	EFF-01	Nutrients	Organic Carbon	3.0 Y	mg C/L	0.5	1
5/22/2017 11:45	EFF-01	Nutrients	Sulfate	13	mg SO4/L	0.2	0.5
5/22/2017 11:45	EFF-01	Nutrients	Fluoride	0.076 I	mg F/L	0.035	0.1
5/22/2017 11:45	EFF-01	Nutrients	Ammonia-N	0.003 IY	mg N/L	0.002	0.005
5/22/2017 11:45	EFF-01	Pesticides	Phorate	0.0047 U	ug/L	0.0047	0.019
5/22/2017 11:45	EFF-01	Pesticides	Triclopyr	0.0040 U	ug/L	0.004	0.016
5/22/2017 11:45	EFF-01	Pesticides	Butylate	0.019 U	ug/L	0.019	0.076
5/22/2017 11:45	EFF-01	Pesticides	Fenamiphos	0.028 UJ	ug/L	0.028	0.11
5/22/2017 11:45	EFF-01	Pesticides	Prometon	0.019 U	ug/L	0.019	0.076
5/22/2017 11:45	EFF-01	Pesticides	Atrazine Desethyl	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Disulfoton	0.0047 U	ug/L	0.0047	0.019
5/22/2017 11:45	EFF-01	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.076
5/22/2017 11:45	EFF-01	Pesticides	Alachlor	0.057 U	ug/L	0.057	0.23
5/22/2017 11:45	EFF-01	Pesticides	Fonofos	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Metalaxyl	0.038 U	ug/L	0.038	0.15
5/22/2017 11:45	EFF-01	Pesticides	Mevinphos	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Chlorpyrifos Ethyl	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Demeton	0.023 UJ	ug/L	0.023	0.091
5/22/2017 11:45	EFF-01	Pesticides	Ethion	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Metolachlor	0.057 U	ug/L	0.057	0.23
5/22/2017 11:45	EFF-01	Pesticides	Norflurazon	0.028 U	ug/L	0.028	0.11
5/22/2017 11:45	EFF-01	Pesticides	2,4-D	0.0094	ug/L	0.0008	0.0032
5/22/2017 11:45	EFF-01	Pesticides	Atrazine Desisopropyl	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Atrazine	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Chlorpyrifos Methyl	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Ethoprop	0.0047 U	ug/L	0.0047	0.019
5/22/2017 11:45	EFF-01	Pesticides	Malathion	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.076
5/22/2017 11:45	EFF-01	Pesticides	Parathion Methyl	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Carbamazepine	4.0E-04 UJ	ug/L	0.0004	0.0016
5/22/2017 11:45	EFF-01	Pesticides	MCPP	0.0020 U	ug/L	0.002	0.008
5/22/2017 11:45	EFF-01	Pesticides	Ametryn	0.0095 U	ug/L	0.0095	0.038

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 11:45	EFF-01	Pesticides	Hexazinone	0.028 UJ	ug/L	0.028	0.11
5/22/2017 11:45	EFF-01	Pesticides	Parathion Ethyl	0.019 UJ	ug/L	0.019	0.076
5/22/2017 11:45	EFF-01	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.076
5/22/2017 11:45	EFF-01	Pesticides	Bromacil	0.038 UJ	ug/L	0.038	0.15
5/22/2017 11:45	EFF-01	Pesticides	Diazinon	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Naled	0.038 UJ	ug/L	0.038	0.15
5/22/2017 11:45	EFF-01	Pesticides	Simazine	0.0095 U	ug/L	0.0095	0.038
5/22/2017 11:45	EFF-01	Pesticides	Acetaminophen	0.0080 UJ	ug/L	0.008	0.032
5/22/2017 11:45	EFF-01	Pesticides	Sucralose	10	ug/L	0.01	0.04
5/22/2017 11:45	EFF-01	Pesticides	Bentazon	8.0E-04 U	ug/L	0.0008	0.0032
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Diethyl phthalate	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Isophorone	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 UJ	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Hexachloroethane	3.1 U	ug/L	3.1	12
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	61
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	3,3'-Dichlorobenzidine	41 UJ	ug/L	41	160
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Acenaphthene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Anthracene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Hexachlorobutadiene	3.1 U	ug/L	3.1	12
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2,4-Dimethylphenol	10 UJ	ug/L	10	41
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Benzo(a)anthracene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Benzo(a)pyrene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Pyrene	0.20 UJ	ug/L	0.2	0.82

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.1 UJ	ug/L	3.1	12
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Phenol	1.0 UJ	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 UJ	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Acenaphthylene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Benzidine	100 UJ	ug/L	100	410
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.1 U	ug/L	3.1	12
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Pentachlorophenol	1.0 UJ	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	1,4-Dioxane	0.23	ug/L	0.02	0.08
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2-Chlorophenol	1.0 UJ	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.1 U	ug/L	3.1	12
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	2-Nitrophenol	1.0 UJ	ug/L	1	4.1
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	8.2
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	4-Nitrophenol	15 UJ	ug/L	15	61
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 UJ	ug/L	0.2	0.82
5/22/2017 11:45	EFF-01	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.1 U	ug/L	3.1	12
5/22/2017 11:45	EFF-01	Nutrients	Total Residual Chlorine	2.20	mg/L		
5/22/2017 11:45	EFF-01	Nutrients	pH	6.83			
5/22/2017 11:45	EFF-01	Nutrients	Temperature	25.5	C		
5/22/2017 12:10	Control Site	AGP/LN	Algal Growth Potential	No Result OQ	mg DryWt/L		
5/22/2017 12:10	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll/Phaeophytin Ratio	1.7		0	0
5/22/2017 12:10	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.6 I	ug/L	1.8	5.7
5/22/2017 12:10	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	2.8 I	ug/L	1.3	4
5/22/2017 12:10	Control Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.3 U	ug/L	1.3	4
5/22/2017 12:10	Control Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.4 IJ	mg/L	0.2	2
5/22/2017 12:10	Control Site	Overflow	Fecal Coliforms-Membrane Filter	570	cfu/100 mL	2	2

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:10	Control Site	Metals	Lead	0.73	ug/L	0.05	0.2
5/22/2017 12:10	Control Site	Metals	Magnesium	1.35	mg/L	0.04	0.16
5/22/2017 12:10	Control Site	Metals	Calcium	9.78	mg/L	0.075	0.3
5/22/2017 12:10	Control Site	Metals	Sodium	1.9 I	mg/L	0.5	2
5/22/2017 12:10	Control Site	Metals	Silver	0.010 U	ug/L	0.01	0.04
5/22/2017 12:10	Control Site	Metals	Selenium	0.20 U	ug/L	0.2	0.8
5/22/2017 12:10	Control Site	Metals	Cadmium	0.021 I	ug/L	0.02	0.08
5/22/2017 12:10	Control Site	Metals	Arsenic	0.70	ug/L	0.05	0.2
5/22/2017 12:10	Control Site	Metals	Aluminum	1.01E+03	ug/L	3	12
5/22/2017 12:10	Control Site	Metals	Nickel	0.44 I	ug/L	0.2	0.8
5/22/2017 12:10	Control Site	Metals	Chromium	2.0	ug/L	0.4	1.6
5/22/2017 12:10	Control Site	Metals	Zinc	5.0 U	ug/L	5	20
5/22/2017 12:10	Control Site	Metals	Iron	1.87E+03	ug/L	30	120
5/22/2017 12:10	Control Site	Metals	Copper	0.59 I	ug/L	0.2	0.8
5/22/2017 12:10	Control Site	Metals	Potassium	1.3	mg/L	0.3	1.2
5/22/2017 12:10	Control Site	Nutrients	Total-P	0.060	mg P/L	0.005	0.05
5/22/2017 12:10	Control Site	Nutrients	Kjeldahl Nitrogen	0.49	mg N/L	0.08	0.2
5/22/2017 12:10	Control Site	Nutrients	Organic Carbon	6.2	mg C/L	0.5	1
5/22/2017 12:10	Control Site	Nutrients	Total Alkalinity	23	mg CaCO3/L	0.65	2.5
5/22/2017 12:10	Control Site	Nutrients	Ammonia-N	0.017	mg N/L	0.002	0.005
5/22/2017 12:10	Control Site	Nutrients	Chloride	3.3	mg Cl/L	0.2	0.5
5/22/2017 12:10	Control Site	Nutrients	Color (true)	37 A	PCU	2.5	6
5/22/2017 12:10	Control Site	Nutrients	TSS	16	mg/L	2	10
5/22/2017 12:10	Control Site	Nutrients	O-Phosphate-P	0.010	mg P/L	0.004	0.01
5/22/2017 12:10	Control Site	Nutrients	NO2NO3-N	0.10	mg N/L	0.004	0.01
5/22/2017 12:10	Control Site	Nutrients	Fluoride	0.039 I	mg F/L	0.035	0.1
5/22/2017 12:10	Control Site	Nutrients	Sulfate	1.9	mg SO4/L	0.2	0.5
5/22/2017 12:10	Control Site	Nutrients	Turbidity	31	NTU	0.1	0.1
5/22/2017 12:10	Control Site	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.04
5/22/2017 12:10	Control Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2,4-Dinitrophenol	16 U	ug/L	16	66
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2-Chloronaphthalene	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	44 U	ug/L	44	180
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Benzo(a)pyrene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Hexachlorobenzene	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Hexachloroethane	3.3 U	ug/L	3.3	13
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Isophorone	1.1 U	ug/L	1.1	4.4

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:10	Control Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.3 U	ug/L	3.3	13
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Phenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.3 U	ug/L	3.3	13
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Butyl benzyl phthalate	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Diethyl phthalate	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	N-Nitrosodimethylamine	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Phenanthrene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2,4-Dichlorophenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2-Chlorophenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Anthracene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Di-n-butyl phthalate	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Dimethyl phthalate	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Fluoranthene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Hexachlorobutadiene	3.3 U	ug/L	3.3	13
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.3 U	ug/L	3.3	13
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.3 U	ug/L	3.3	13
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Chrysene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Di-n-octyl phthalate	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Fluorene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Naphthalene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Nitrobenzene	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2,4-Dimethylphenol	11 U	ug/L	11	44
5/22/2017 12:10	Control Site	Priority Organic Pollutants	4-Nitrophenol	16 U	ug/L	16	66
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Acenaphthene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Benzidine	110 U	ug/L	110	440

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.2 U	ug/L	2.2	8.8
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Pentachlorophenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	2-Nitrophenol	1.1 U	ug/L	1.1	4.4
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Acenaphthylene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Benzo(a)anthracene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	Pyrene	0.22 U	ug/L	0.22	0.88
5/22/2017 12:10	Control Site	Priority Organic Pollutants	1,4-Dioxane	0.050 U	ug/L	0.05	0.2
5/22/2017 12:10	Control Site	Nutrients	Sample Depth	0.3	m		
5/22/2017 12:10	Control Site	Nutrients	Specific Conductance	65	umhos/cm		
5/22/2017 12:10	Control Site	Nutrients	Dissolved Oxygen	7.0	mg/L		
5/22/2017 12:10	Control Site	Nutrients	pH	6.5			
5/22/2017 12:10	Control Site	Nutrients	Temperature	22.2	C		
5/22/2017 12:07	Test Site	AGP/LN	Algal Growth Potential	No Result OQ	mg DryWt/L		
5/22/2017 12:07	Test Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.66 I	ug/L	0.4	1.2
5/22/2017 12:07	Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.1	ug/L	0.55	1.7
5/22/2017 12:07	Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll/Phaeophytin Ratio	1.5		0	0
5/22/2017 12:07	Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	2.6	ug/L	0.4	1.2
5/22/2017 12:07	Test Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.2 J	mg/L	0.2	2
5/22/2017 12:07	Test Site	Overflow	Fecal Coliforms-Membrane Filter	580	cfu/100 mL	2	2
5/22/2017 12:07	Test Site	Metals	Aluminum	1.02E+03	ug/L	3	12
5/22/2017 12:07	Test Site	Metals	Arsenic	0.69	ug/L	0.05	0.2
5/22/2017 12:07	Test Site	Metals	Calcium	9.79	mg/L	0.075	0.3
5/22/2017 12:07	Test Site	Metals	Chromium	1.9	ug/L	0.4	1.6
5/22/2017 12:07	Test Site	Metals	Nickel	0.43 I	ug/L	0.2	0.8
5/22/2017 12:07	Test Site	Metals	Cadmium	0.020 U	ug/L	0.02	0.08
5/22/2017 12:07	Test Site	Metals	Sodium	1.9 I	mg/L	0.5	2
5/22/2017 12:07	Test Site	Metals	Silver	0.010 U	ug/L	0.01	0.04
5/22/2017 12:07	Test Site	Metals	Selenium	0.20 U	ug/L	0.2	0.8
5/22/2017 12:07	Test Site	Metals	Potassium	1.3	mg/L	0.3	1.2
5/22/2017 12:07	Test Site	Metals	Magnesium	1.34	mg/L	0.04	0.16
5/22/2017 12:07	Test Site	Metals	Lead	0.72	ug/L	0.05	0.2
5/22/2017 12:07	Test Site	Metals	Copper	0.60 I	ug/L	0.2	0.8
5/22/2017 12:07	Test Site	Metals	Iron	1.88E+03	ug/L	30	120
5/22/2017 12:07	Test Site	Metals	Zinc	5.0 U	ug/L	5	20
5/22/2017 12:07	Test Site	Nutrients	Chloride	3.3	mg Cl/L	0.2	0.5

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:07	Test Site	Nutrients	O-Phosphate-P	0.012	mg P/L	0.004	0.01
5/22/2017 12:07	Test Site	Nutrients	Ammonia-N	0.019	mg N/L	0.002	0.005
5/22/2017 12:07	Test Site	Nutrients	NO2NO3-N	0.11	mg N/L	0.004	0.01
5/22/2017 12:07	Test Site	Nutrients	TSS	16	mg/L	2	10
5/22/2017 12:07	Test Site	Nutrients	Total-P	0.062	mg P/L	0.005	0.05
5/22/2017 12:07	Test Site	Nutrients	Fluoride	0.038 I	mg F/L	0.035	0.1
5/22/2017 12:07	Test Site	Nutrients	Organic Carbon	6.0	mg C/L	0.5	1
5/22/2017 12:07	Test Site	Nutrients	Turbidity	30 A	NTU	0.1	0.1
5/22/2017 12:07	Test Site	Nutrients	Total Alkalinity	23	mg CaCO3/L	0.65	2.5
5/22/2017 12:07	Test Site	Nutrients	Kjeldahl Nitrogen	0.55 Q	mg N/L	0.08	0.2
5/22/2017 12:07	Test Site	Nutrients	Sulfate	1.9	mg SO4/L	0.2	0.5
5/22/2017 12:07	Test Site	Nutrients	Color (true)	37	PCU	2.5	6
5/22/2017 12:07	Test Site	Pesticides	Sucralose	0.019 I	ug/L	0.01	0.04
5/22/2017 12:07	Test Site	Priority Organic Pollutants	1,4-Dioxane	0.020 UQ	ug/L	0.02	0.08
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Hexachloroethane	3.2 U	ug/L	3.2	13
5/22/2017 12:07	Test Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.2 U	ug/L	3.2	13
5/22/2017 12:07	Test Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Chrysene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Isophorone	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.2 U	ug/L	3.2	13
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Anthracene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Acenaphthylene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2-Chloronaphthalene	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2-Nitrophenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2-Chlorophenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2 U	ug/L	3.2	13
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Di-n-butyl phthalate	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Fluorene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2,4-Dimethylphenol	11 U	ug/L	11	43
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2,4-Dinitrophenol	16 U	ug/L	16	64
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Butyl benzyl phthalate	1.1 U	ug/L	1.1	4.3

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Hexachlorobenzene	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Hexachlorobutadiene	3.2 U	ug/L	3.2	13
5/22/2017 12:07	Test Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Nitrobenzene	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Pentachlorophenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2,4-Dichlorophenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Benzidine	110 U	ug/L	110	430
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Benzo(a)anthracene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Dimethyl phthalate	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Fluoranthene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Phenol	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	43 U	ug/L	43	170
5/22/2017 12:07	Test Site	Priority Organic Pollutants	4-Nitrophenol	16 U	ug/L	16	64
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Di-n-octyl phthalate	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Pyrene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Acenaphthene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Benzo(a)pyrene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Diethyl phthalate	2.1 U	ug/L	2.1	8.5
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.2 U	ug/L	3.2	13
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Naphthalene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	Phenanthrene	0.21 U	ug/L	0.21	0.85
5/22/2017 12:07	Test Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1 U	ug/L	1.1	4.3
5/22/2017 12:07	Test Site	Nutrients	Specific Conductance	67	umhos/cm		
5/22/2017 12:07	Test Site	Nutrients	Sample Depth	0.3	m		
5/22/2017 12:07	Test Site	Nutrients	Dissolved Oxygen	7.0	mg/L		
5/22/2017 12:07	Test Site	Nutrients	Temperature	22.1	C		
5/22/2017 12:07	Test Site	Nutrients	pH	6.4			
6/5/2017 10:36	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
6/5/2017 10:36	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
6/5/2017 10:36	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
6/5/2017 10:36	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
6/5/2017 10:36	Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
5/22/2017 12:45	Field Blank	Overflow	Fecal Coliforms-Membrane Filter	1 U	cfu/100 mL	1	1
5/22/2017 12:45	Field Blank	Metals	Silver	0.010 U	ug/L	0.01	0.04
5/22/2017 12:45	Field Blank	Metals	Arsenic	0.050 U	ug/L	0.05	0.2
5/22/2017 12:45	Field Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
5/22/2017 12:45	Field Blank	Metals	Nickel	0.20 U	ug/L	0.2	0.8
5/22/2017 12:45	Field Blank	Metals	Copper	0.20 U	ug/L	0.2	0.8
5/22/2017 12:45	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
5/22/2017 12:45	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
5/22/2017 12:45	Field Blank	Metals	Iron	30 U	ug/L	30	120
5/22/2017 12:45	Field Blank	Metals	Zinc	5.0 U	ug/L	5	20
5/22/2017 12:45	Field Blank	Metals	Cadmium	0.020 U	ug/L	0.02	0.08
5/22/2017 12:45	Field Blank	Metals	Lead	0.050 U	ug/L	0.05	0.2
5/22/2017 12:45	Field Blank	Metals	Aluminum	3.0 U	ug/L	3	12
5/22/2017 12:45	Field Blank	Metals	Chromium	0.40 U	ug/L	0.4	1.6
5/22/2017 12:45	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
5/22/2017 12:45	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
5/22/2017 12:45	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
5/22/2017 12:45	Field Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
5/22/2017 12:45	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
5/22/2017 12:45	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
5/22/2017 12:45	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
5/22/2017 12:45	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
5/22/2017 12:45	Field Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
5/22/2017 12:45	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
5/22/2017 12:45	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
5/22/2017 12:45	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
5/22/2017 12:45	Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
5/22/2017 12:45	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
5/22/2017 12:45	Field Blank	Pesticides	Demeton	0.025 UJ	ug/L	0.025	0.098
5/22/2017 12:45	Field Blank	Pesticides	Metolachlor	0.061 U	ug/L	0.061	0.25
5/22/2017 12:45	Field Blank	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.082
5/22/2017 12:45	Field Blank	Pesticides	MCPP	0.0020 U	ug/L	0.002	0.008
5/22/2017 12:45	Field Blank	Pesticides	Butylate	0.020 U	ug/L	0.02	0.082
5/22/2017 12:45	Field Blank	Pesticides	Naled	0.041 UJ	ug/L	0.041	0.16

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:45	Field Blank	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Bentazon	8.0E-04 U	ug/L	0.0008	0.0032
5/22/2017 12:45	Field Blank	Pesticides	Fenamiphos	0.031 UJ	ug/L	0.031	0.12
5/22/2017 12:45	Field Blank	Pesticides	Malathion	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	2,4-D	8.0E-04 U	ug/L	0.0008	0.0032
5/22/2017 12:45	Field Blank	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Carbamazepine	4.0E-04 U	ug/L	0.0004	0.0016
5/22/2017 12:45	Field Blank	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.082
5/22/2017 12:45	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Disulfoton	0.0051 U	ug/L	0.0051	0.02
5/22/2017 12:45	Field Blank	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Simazine	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Ethion	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Metalaxyl	0.041 U	ug/L	0.041	0.16
5/22/2017 12:45	Field Blank	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.041
5/22/2017 12:45	Field Blank	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.082
5/22/2017 12:45	Field Blank	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.04
5/22/2017 12:45	Field Blank	Pesticides	Bromacil	0.041 UJ	ug/L	0.041	0.16
5/22/2017 12:45	Field Blank	Pesticides	Ethoprop	0.0051 U	ug/L	0.0051	0.02
5/22/2017 12:45	Field Blank	Pesticides	Phorate	0.0051 U	ug/L	0.0051	0.02
5/22/2017 12:45	Field Blank	Pesticides	Acetaminophen	0.0080 U	ug/L	0.008	0.032
5/22/2017 12:45	Field Blank	Pesticides	Triclopyr	0.0040 U	ug/L	0.004	0.016
5/22/2017 12:45	Field Blank	Pesticides	Alachlor	0.061 U	ug/L	0.061	0.25
5/22/2017 12:45	Field Blank	Pesticides	Hexazinone	0.031 UJ	ug/L	0.031	0.12
5/22/2017 12:45	Field Blank	Pesticides	Norflurazon	0.031 U	ug/L	0.031	0.12
5/22/2017 12:45	Field Blank	Pesticides	Parathion Ethyl	0.020 UJ	ug/L	0.02	0.082
5/22/2017 12:45	Field Blank	Pesticides	Prometon	0.020 U	ug/L	0.02	0.082
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	4-Nitrophenol	17 U	ug/L	17	67
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Phenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1 U	ug/L	1.1	4.5

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Hexachloroethane	3.4 U	ug/L	3.4	13
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Anthracene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	3.4 U	ug/L	3.4	13
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Pentachlorophenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Phenanthrene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	1,4-Dioxane	0.020 UQ	ug/L	0.02	0.08
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.2 U	ug/L	2.2	9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2-Chlorophenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Acenaphthene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Fluoranthene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.4 U	ug/L	3.4	13
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	11 U	ug/L	11	45
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	17 U	ug/L	17	67
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.2 U	ug/L	2.2	9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.4 U	ug/L	3.4	13
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	2.2 U	ug/L	2.2	9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Diethyl phthalate	2.2 U	ug/L	2.2	9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Isophorone	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Naphthalene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	45 U	ug/L	45	180
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.2 U	ug/L	2.2	9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.4 U	ug/L	3.4	13
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Pyrene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Benzidine	110 U	ug/L	110	450
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Fluorene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Nitrobenzene	2.2 U	ug/L	2.2	9

Date Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.2 U	ug/L	2.2	9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.4 U	ug/L	3.4	13
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	2-Nitrophenol	1.1 U	ug/L	1.1	4.5
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.22 U	ug/L	0.22	0.9
5/22/2017 12:45	Field Blank	Priority Organic Pollutants	Chrysene	0.22 U	ug/L	0.22	0.9

The Priority Pollutants Analysis of the Noma WWTF effluent sampled on June 5, 2017 NPDES #FL0040207

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

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N	2 5	3 FL0040207	11 12	170605		# X	# S	# 1

Remarks

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Biological Analyses of the Noma WWTF effluent sampled on July 6, 2017, NPDES #FL0040207

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

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N	2 5	3 FL0040207	11 12	170706		# S	# S	# 1

Remarks